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Information and Communication Technology (ICT) And Administrative Performance of Principals': A Survey of Public Secondary Schools in Ilorin Metropolis, Nigeria

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Abstract

As, information and communication technology (ICT) is sweeping through the global world, there is the need for Nigeria and her educational administrators to keep abreast of the innovations and applications of ICT for performance of their daily administrative task and duties. However, studies directed in this regard were constraint in content and geographical scope. This study therefore examined the impact of ICT on secondary schools' principals' administrative performance in Ilorin metropolis, Kwara State. This study was anchored on the Technology Acceptance Model. The study was a descriptive research of a survey type. Stratified random sampling technique was used to select 135 participants (45 principals and 90 vice-principals) from 45 sampled public secondary schools. Data were collected using a structured questionnaire. Data collected were statistically treated with percentages, mean and Pearson product moment correlation (PPMC) statistics. Result obtained revealed that, the extent of ICT usage by secondary school principals was moderate (grand mean value of 2.90), while the level of principals' performance in the discharge of their routine administrative duties was also moderate (grand mean value of 2.65). Finding also revealed a significant relationship between the usage of ICT facilities and administrative performance of secondary school principals (r-cal 0.631 > r-tab 0.195). The study concluded that, although ICT has significant influence on performance of principals' administrative duties, its level of availability and usage led the researcher to conclude that secondary school principals in Nigeria are not yet ready for technological advancement or development.

Keywords: *Information and Communication Technology, Principals', Administrative Performance.*

Introduction

Globally, socio-economic and political developments are increasingly being driven by the advancement and application of knowledge (education). The structure of formal education in Nigeria is made up of Pre-Primary (Early Childhood), Basic (lower basic education: primary 1-3; middle basic education: primary 4-6; and upper basic education: JSS 1-3), Senior Secondary and tertiary education. However, the secondary level occupies a strategic position in the educational system, as it serves as the level of education that children obtain after primary education but before the tertiary education (Federal Republic of Nigeria -FRN, 2013, p.18). In the light of this, secondary education is of six years duration, given in two stages: a junior secondary school stage; and a senior secondary school stage; which is three years duration each. The broad goal of secondary education is to prepare the individual for useful living within the society and higher education. The achievement of the above stated goals is however dependent on the extent to which secondary school principals who as the custodian are capable of implementing the needful processes in school administrative operations.

Apparently, the principal does not work in quarantine, as he/she is in a continuous harmony with the relevant education stakeholders like the Ministry of Education, Teaching Service Commission, school-based management board, teachers, parents and students. This is occasioned by the fact that the school is an interoperable system that is in constant association with the immediate environment. That is, the school receives its inputs from the external environment in the form of human and material resources, processes them and produces same into the environment. This makes the traditional management functions/tasks of the principal a complex dilemma. these functions, which include: planning, organising, communicating, decision making, coordinating/directing and evaluating (Shah, 2014) later metamorphose to curriculum development, staff professional development, instructional supervision, staff and student personnel management, Financial management, record management, conflict management, community relations, procurement and Management of facilities as well as support and referral services.

At this juncture, it is germane to note that, the principal cannot perform the aforementioned duties without accurate, timely, sufficient and relevant information. This is because of the cumbersome managerial processes associated with the storage, preservation and presentation of large volumes of the information in hard copy or paper form. Also, in all spheres of administrative task of the principal, technological advances are now needed (Ghavifekr, Afshare, Saedah, & Seger, 2013). Therefore, alternative techniques and methods provided by Information and Communication Technology (ICT) became very imperative.Specificity, for the principal to perform efficiently and effectively in this present computer evolution, he/she must rise up to the demur of adopting new technological infrastructures and equipment's (that is, ICT facilities) in the administration or management of the school. Corroborating, Ugwoke, Onu, Agangan and Ugwanyi (2015) stated that discovery of ICT has proven to be a very powerful tool in education reform; and that, in the present world, ICT can increase school efficiency/effectiveness and reduce unnecessary bottleneck in school administration.

With ICT, the secondary school head (principal) can discharge his/her duties by using computers, accessories and Internet in solving overall school administrative problems especially in carrying out his/her day-to-day managerial assignments. Specifically, ICT can play a major part in diminishing the work load of the administrator and his/her staff especially in keeping daily records of staff and students, providing prompt communication, analyzing students' attendance records, recording students results and analyzing overall students' performance. Through this, much time is saved and utilized in other directions for effective school administration. Despite the importance and innovation of ICT in the administration of schools, the administrative process in most Nigerian secondary schools, inclusive of those in Ilorin metropolis, Kwara State, is still slow and cumbersome, indicating possible unavailability and ineffective usage of ICT. In view of this, the researcher is curious to ascertain the extent to which ICT facilities are available and utilized for the effective discharge of statutory administrative tasks and duties by secondary school principals in Ilorin metropolis, Kwara State.

Statement of the problem

The state of administration in secondary schools in Ilorin metropolis and Kwara State in general has been a source of concern to its educational stakeholders. This concern has been hinged on the inability of the school principal to carry out their administrative routinely duties effectively as a result of the enormous increase in student enrolment, class size, students and teacher data, stringent resources and complex goals/objectives inherent in Nigeria secondary schools (Okon, Ekaette & Ameh, 2015; Salisu, 2014). All this called for the use of sophisticated equipment and facilities such as ICT for the processing of administrative task in schools. However, of much greater concern is whether or not Information and Communication Technology (ICT) facilities are readily available and adequately utilized for effective secondary school administration? This is not unconnected with the shortfall in the allocation of funds to Nigerian education sector by the government, the inability of secondary school administrators to keep up with the pace of development in ICT, the lack of the staff with appropriate skills to

manage ICT both at the strategic and operational levels (Adeyemi & Olaleye, 2010; Muchiri, 2014), epileptic electricity supply or complete absence of it in schools, and the weak institutional policies to support and guide the use of ICT. Observations in our secondary schools showed that, this shortfall could have serious consequences on the administrative effectiveness of secondary school principals'. This therefore, attracts the question: what extent does ICT facilities availability and utilization influence administrative performance of public secondary school principals in Ilorin metropolis, Kwara State?

Objectives of the study

Specifically, this study:

1. determined the level of availability of ICT facilities in secondary school in Ilorin metropolis;
2. examined the extent of ICT facilities usage for administrative purposes among secondary school principals' in Ilorin metropolis;
3. ascertained the level of principals' performance in the discharge of their routine administrative duties in secondary schools in Ilorin metropolis; and
4. Determine the relationship between the usage of ICT facilities and principals' administrative effectiveness in Ilorin metropolis secondary schools.

Research questions

In addressing the problem of this study, the following research questions were raised:

1. What is the level of availability of ICT facilities in secondary school in Ilorin metropolis?
2. What is the extent of usage of ICT facilities for administrative purposes among secondary school principals' in Ilorin metropolis?
3. What is the level of principals' performance in the discharge of their routine administrative duties in secondary schools in Ilorin metropolis?
4. Does the usage of ICT facilities have a significant relationship with administrative performance of secondary school principals' in Ilorin metropolis?

Literature review

Conceptualization of ICT

A number of scholars have viewed the concept of ICT from different perspectives and standpoints. The term information and communications technology (ICT) was said to have been introduced in the early 1990s to replace that of information technology (IT) in recognition of the communicating abilities and facilities offered by the computer. Egoeze, Misra, Akman and Colomo-Palacios (2014) reiterated this fact by stating that information and communication technology (ICT) is the convergence of communication, information and media technologies, which are based on the common digital technology. ICT can therefore be described as electronic device, equipment, or tool used for collection, processing, storage, retrieval or transfer of information, and its associated services. Salisu (2014) refers to ICT infrastructure as the hardware or equipment, software applications, and services associated with ICTs, including telecom networks. In view of this, Atunde (2011), and Egoeze, Misra, Akman and Colomo-Palacios (2014) categorized ICT into four (4) types, namely; communication technologies, network technologies, computer technologies and mobile technologies. Communication technologies include all media employed in transmitting audio, video, data or multimedia such as cable satellite, fibre optics, wireless (radio, infra – red, Bluetooth, Wi-Fi). Network technologies include: Personal Area Networks (PAN), Campus Area Network (CAN), intranets, extranets, Local Area Networks (LANs), Wide Area Networks (WANs) and the internet. Computer technologies are all the removable media such as optical discs, disks, flash memories, video books, multimedia projectors, interactive electronic boards, and continuously emerging state-of-the art personal computers (PCs). Mobile technologies such as mobile phones, Personal Digital Assistants (PDAs), palmtops, etc which have information as their material object are also used in e – learning.

Brinda, Mavengere Lewin and Passey (2016)

further categorized ICT into five groups as follows: computing facilities and services; film/tape-based facilities which include microfiche reader, micro card reader, microprint reader, slide projector, reel to reel recorder, tape recorder, and video machine; reproduction facilities like photocopying machine, and duplicating machine; telecommunication facilities e.g. telephone, GSM, telex, telegram, fax machine, and satellite; and broadcasting facilities like radio, television, cable transmission (e.g. Al-jazeera, BBC, CNN, Fox News, NTA Parliament). However, the extents to which an institution (secondary school) can provide all the necessary ICT facilities are a measure of the status of the institution. Unfortunately, recent report emanated that the readiness of ICT in the Sub-Saharan Africa is still very low with most countries experiencing strong lags in procurement of facilities because of the insufficient funds. The report also indicated that African countries suffer from severe weaknesses in all components of the index of ICT which ranges from poor connectivity caused by expensive and poor-quality ICT infrastructure to very low levels of basic skills and a weak framework for technology (Oyedemi, 2015). Generally speaking, a number of factors are said to have militated against the use of ICT in education in Nigeria. These have included such factors as lack of funding to support the purchase of the technology, lack of training, lack of motivation on the part of lecturers to adopt ICTs as teaching tools in the classroom instruction and so on (Adesina, 2015; Oluwalola, 2017).

Principal administrative performance

The term 'principals' administrative performance' and the instruments for its measurement have generated a lot of controversy the world over. Thus, in order to understand the concept, it is foremost to understand these three concepts, namely: 'principal' 'administration' and 'effectiveness'. At the head of every secondary school in Nigeria is the Principal, who is regarded as the Chief Executive and responsible for all that happens in the school. According to Anukam, Okunamiri and Ogbonna (2012), the principal is the individual who plans and implements the daily routines within an education setting. A principal is also an individual who has a hand in government grants and funding acquisitions and is in the best position to know all the materials the school needs and the best ways in which to obtain these materials from governmental entities. In specific terms, Arikewuyo (2009, p.35) adduced that the functions of the Principal are to: manage and deploy school resources efficiently; allocate school accommodation appropriately; ensure satisfactory standards of maintenance and cleanliness of school facilities; organize staff development in school; guide curriculum implementation and change; and create a professional ethos within the school. In carrying out these functions, Adeniyi and Omoteso (2014) contended that principals are to demonstrate his/her ability to lead through: professional knowledge; organizational and administrative competence; ability to work out a good school policy and put it into effect; skill in the management of the school.

Administration is a global concept of universal importance. According to Adeniyi and Omoteso (2014), administration as the co-ordination of human being and materials within an organization for the accomplishment of identified purposes. Administration also connotes such activities as implementation of organizational decisions and goals as well as the systematic study of these activities.

The National Open University of Nigeria (2014) posited that administration consists of those activities that are related to the general administrative operations and services of an institution. These activities include: the administration of personnel, programme, facilities and space management, purchase and maintenance of supplies and materials, communication and transportation services, health and safety. Thus, administration involves the mobilization, deployment and direction of human and material resources to attain the specified objectives.

The concept of performance is not easy to define and to understand. With the term effectiveness, other terms like effectiveness, efficiency, productivity and competency are generally used as synonyms. As noted by Atunde (2011), performance is the extent to which desired outcomes have been produced through duties exercised by the headship of an institution. Oyedeji (2012) considered performance as an end product in terms of results and productivity. Okon, Akpan and

Ukpong (2013) referred to performance as the level of achievement based on the available resources, time and situation. Performance therefore implies the discharge of prescribed statutory duties or functions by principals, which are geared towards the attainment of school set objectives. From the foregoing, administrative performance is described as the positive response to administrative efforts and actions with the intention to accomplish stated goal; the administrative performance in decision making; delegation of duties to subordinates; and setting good examples and motivating the staff (academic and non academic) and students alike in an effort to create a conducive working environment to accomplish school goal and objective (Ereh & Okon (2015).

This implies that effective administration involves the achievement in many of the day-to-day management issues which are of practical and paramount importance to the school. In view of this, the tasks of proactive secondary school administrators include among other things, coordinating both human and material resources available and using them systematically for the achievement of educational objectives.

Thus, principal's administrative performance is the systematic coordination of human, material and financial resources by principals for the achievement of the day-to-day administrative issues in order to achieve the predetermined goals of secondary education.

Studies on ICT and principal's administrative performance

Several surveys have been designed in recent years to gather information on the extent to which schools are developing the capacity to integrate ICT into learning, teaching, and management processes. Oboegbulem and Ugwu (2013) identified the role of ICT in school among 30 schools in the south eastern states, comprising Abia, Anambra, Ebonvi, Enugu, and Imo states with ICT and Internet facilities.

The findings showed among others that the use of ICT in school administration is a necessity and worthwhile venture especially in this era of globalization, but the extent of their application in secondary schools is very slow as school administrators are incompetent in handling ICT facilities for effective administration of schools. An ex-post facto research (Okon, Ekaette & Ameh, 2015) conducted among 255 principals from eighty-five (85) public secondary schools in Akwa Ibom State, Nigeria reported that a significant relationship between ICT usage in the communication process and record keeping, and principals' administrative effectiveness.

Findings from another study conduct in similar study setting by Oyedemi (2015) on the perspective of 120 administrators' towards using ICT for effective school management in Ilesa Local Government area in Osun State indicated that school administrators have a positive perspective towards the use of ICT tools in effective school management by solving the problem of poor communication in schools and achieving effective planning. In another similar study conducted in Osun State, Subair and Bada (2014) among 100 principals in public secondary schools, it was reported that school administrators are aware of the importance of ICT in school administration, but the major challenge is the lack of the required skill and knowledge to use these facilities.

Also, it was revealed that majority of the schools lacked the required ICT resources hence very few principals could apply the ICT resources for administrative purposes. In addition, the study found that majority of the principals relied on print technology for various administrative purposes. Etudor-Eyo, Ante, and Emah (2012) studied the use of ICT and communication effectiveness among 396 secondary school administrators in Akwa Ibom State, Nigeria.

The findings were that the extent of administrators' use of ICT and the extent of administrators' effectiveness in communication are high; there is a significant positive relationship between administrators' use of ICT and administrators' effectiveness in communication; the effectiveness of secondary school administrators in communication is significantly predicted by the use of ICT. From the foregoing empirical review, a small body of knowledge exists alluding to ICT and administrative performance in the study area (Ilorin metropolis) and the geo-political region (North-Central geo-political zone), it is situated in Nigeria. Besides, one of the major limitations of existing research, which warrant the need for further research, is the content coverage of these studies.

In addition, the literature surveyed shows that even though there are a lot of studies on this research endeavour, the results do not show any cohesiveness regarding the association between the variables under study. These observations indicate a clear gap in the literature, which this current study intends to fill.

Theoretical underpinning

This study was therefore hinged on the Technology Acceptance Model (TAM) proposed by Fred Davis in 1985 at the MIT Sloan School of Management. TAM is one of the models that have been developed to provide a better understanding of the usage and adoption of information communication and technology. It is presently a prominent theory used in modeling technology acceptance and adoption in Information systems research. TAM is an information systems theory that models how users come to accept and use a technology that will encourage economic growth. The model suggests that when users are presented with a new technology, a number of factors influence their decision about how and when they will use it.

The factors are; perceived usefulness (PU) and perceived ease-of-use (PEOU). According to TAM, one's actual use of a technology system is influenced directly or indirectly by the user's behavioral intentions, attitude, perceived usefulness of the system, and perceived ease of the system, all which have evolution on previous organization's process.

Methodology

The design of this study is a descriptive research of survey type, aimed at ascertaining influence of ICT on principals' administrative performance. This is in line with Atunde (2011) who remarked that descriptive research gives the researcher the opportunity of sampling the opinions of significant large number of samples from the study population so as to make inferences and generalization with the responses obtained. The area of study is Ilorin Metropolis, Kwara State. The study was carried out among principals' and vice-principals' in secondary schools in Ilorin Metropolis. The Metropolis is made up of three Local Ggovernment Areas (LGAs) namely: Ilorin West, Ilorin South and Ilorin East. Ilorin Metropolis has a total of 75 public secondary schools (Kwara State Ministry of Education and Human Capital, 2018).

The population of this study was 292 comprising of 75 principals 217 vice-principals in all the 75 public secondary schools in Ilorin Metropolis. By means of stratified random sampling technique, 45 out of the 75 public secondary schools (that is 15 schools were selected from each of the LGAs) in Ilorin Metropolis were sampled. Also, the Principal and two vice-principals were selected from each of the 45 public secondary schools used for this study. This brought the total of respondents that was used to 135.

The instrument for data collection was a structured, validated and pretested (reliability coefficient values of 0.85, 0.74 and 0.71 were obtained for sections B, C, and D respectively) questionnaire titled "Information Communication Technology and Principal's Administrative Effectiveness Questionnaire (ICTPAEQ). The questionnaire is made up of two parts, part A and B. Part A consist of items seeking the personal information of the respondents. Part B consists of four sections (A – D). Section A consists of 15 items, which was used to know the availability of ICT equipment in the schools. Section B consists of 10 items used to obtain information on the extent of ICT usage by principals. Section C contains items soliciting information from respondents on how effective they are in carrying out their administrative duties with the use of ICT equipment's. Section D comprises items for gathering information on the constraints to the effective usage of ICT in secondary schools. The responses on the questionnaire were structured on 'Available', 'Not Available' for section A; 'Frequently Used', 'Occasionally Used', 'Seldom Used' and 'Not Used' for section B; and "Strongly Agree", "Agree", "Disagree", "Strongly Disagree" for sections C and D.

The researcher, with the help of three research assistants, administered the questionnaire directly on the subjects. The direct approach gave room for timely completion and return of the completed copies of the questionnaire. This questionnaire administration gave a 96.3% response rate (that is 130 out of 135 administered questionnaires were returned and filled correctly). Data collected from the field was analyzed using relevant descriptive

statistics such as percentages, mean and standard deviation to answer research questions 1, 2, 3 respectively, while Pearson Production Moment Correlation (PPMC) statistics was used to answer research question 4.

Results and discussion of findings

The results of this study were presented in tables according to the individual research questions.

Research question 1. What is the level of availability of ICT facilities in secondary school in Ilorin metropolis?

In interpreting the response of respondents on the level of availability; if the overall percentage score is between 75% and 100%, it is interpreted as High; if the overall percentage score is between 50% to 74%, it is interpreted as Moderate; and if the overall percentage score is < 50.0%, it is interpreted as Low.

Table 1. The level of availability of ICT facilities in secondary school in Ilorin metropolis

S/N	Items	Available	n = 130
		F & %	Not Available
			F & %
1.	Computer (Desktop)	84(64.6%)	46(35.4%)
2.	Printer	78(60.0%)	52(40.0%)
3	Internet Services	72(55.4%)	58(44.6%)
4	Projector	24(18.5%)	106(81.5%)
5	Projector Screen	24(18.5%)	106(81.5%)
6	Xerox Machines/Photocopying machine	70(53.8%)	60(46.2%)
7	Scanning Machine	48(36.9%)	82(63.1%)
8	Computer Accessories	79(60.8%)	51(39.2%)
9	Software	33(25.4%)	97(74.4%)
10	Radio	104(80.0%)	26(20.0%)
11	Television	37(28.5%)	93(71.5%)
12	Satellite Disc	31(23.8%)	99(76.2%)
13	Handset/Mobile Phone	130(100.0%)	-
14	Laptop	38(29.2%)	92(70.8%)
15	Fax Machine	-	130(100.0%)
	Overall	**43.7%**	**56.3%**

Source: Field Survey, 2019

As indicated in Table 1, the level of availability of Information and Communication Technology (ICT) facilities in the sampled secondary schools was low (43.7%). Most of the ICT facilities were in short supply in majority of secondary schools. The short fall varied from 0% for Fax Machine to 18.5% for projector and projector screen to 25.4% for software program and 23.8% for Satellite Disc. Desktop computer set which should be a common feature in all administrative offices was found to be unavailable in 35.4% of the secondary schools. However, of all the ICT facilities available in public secondary school in Ilorin metropolis, the mobile phone (130 or 100.0%) and radio (80.0%) were the most available.

Research Question 2. What is the extent of usage of ICT facilities for administrative purposes among secondary school principals' in Ilorin metropolis?

In analyzing research question 2, mean computation was utilized. Based on this, means score of above 2.5 were regarded as accepted responses while below Mean score below 2.5 were classified as non-accepted responses (rejected). The individual and grand mean score were interpreted as follows: 3.25 – 4.00 were classified as High Extent (HE), 2.50 – 3.24, indicated Moderate Extent (ME); and mean values < 2.50 were classified as Low Extent (LE).

Table 2. Extent of usage of ICT for administrative purposes among secondary school principals' in Ilorin metropolis

S/N	Items	n = 130		
		Mean	**S. D**	**Decision**
16	Computer for processing and storage of data for effective management	3.30	0.78	HE
17	Printers for printing of documents	2.75	0.75	ME
18	Internet services for browsing	2.64	0.73	ME
19	Handset for passing information on latest update on school issues to staff, parents and students.	3.96	0.94	HE
20	Scanners for scanning passport, documents etc.	2.19	1.12	LE
21	Radio for assessing the current and up-to-date happenings or information across the globe	3.50	0.85	HE
22	Computer accessories like flash drive for storage of data and information.	2.89	0.78	ME
23	Satellite disc for distance viewing of foreign programmes	2.46	1.03	LE
24	Photocopy machine for reproduction of staff, students and school documents	3.27	0.85	HE
25	Software like Microsoft Office and Corel Draw for typing and designing.	1.98	1.07	LE
	Overall Mean	**28.95**	**8.90**	
	Grand Mean	**2.90**	**0.89**	**Moderate Extent**

Source: Field Survey, 2019

Table 2 indicates the extent of usage of ICT for administrative purposes among secondary school principals' in Ilorin metropolis. The table shows that the mean scores 3.96, 3.50, 3.30 and 3.27 on items 19, 21, 16 and 24 respectively indicates that to an high extent principals use: handset for communication between principal and staff, principal and students as well as staff and students; radio for listening to latest happenings around the globe; computer for typing, processing and storage of data for effective management; and photocopy machine for reproduction of documents. Also, the mean values of 2.89, 2.75 and 2.64 on items 22, 17, and 18 respectively indicates that to a moderate extent principals use: computer accessories for processing data; printers for printing of documents; Internet services for browsing. However, mean values of 2.46, 2.19 and 1.98 on items 23, 20 and 25 respectively indicates that to a low extent principals use: satellite disc for distance viewing of foreign programmes; scanners for scanning passport, documents etc.; and software of different types. Consequently, the grand mean value of 2.90 revealed that principals in public secondary schools in Ilorin metropolis to a moderate extent utilize ICT for administrative purposes.

Research Question 3. What is the level of principals' performance in the discharge of their routine administrative duties in secondary schools in Ilorin metropolis?

In analyzing research question 3, mean computation was utilized. Based on this, means score of above 2.5 were regarded as accepted responses while below Mean score below 2.5 were classified as non-accepted responses (rejected). The individual and grand mean score were interpreted as follows: 3.25 - 4.00 were classified as Highly Level (HL); 2.50 - 3.24, indicated Moderately Level (ML); and mean values < 2.50 were classified as Low Level (LL).

Table 3. Level of principals' performance in the discharge of their routine administrative duties in secondary schools in Ilorin metropolis

S/N	Items	n = 130		
		Mean	**S. D**	**Decision**
26	Storing information that can be updated on personal data of staff/ or students.	2.60	0.81	ML
27	Writing and dispatching mails	3.09	0.60	ML
28	Browsing the Internet for up-to-date information	3.29	0.74	HL
29	Storing of inventory of school properties that can be updated at any point in time	1.75	1.04	LL
30	Designing/ or printing of students' results and testimonial.	2.42	0.91	LL
31	Admission and registration of new and existing students.	2.95	0.69	ML
32	Online registration of students for public examinations.	2.64	0.71	ML
33	Early preparation of school budget.	2.56	0.73	ML
34	Storage and retrieval of students' disciplinary records.	2.80	0.82	ML
35	Preparation of school internal memos	2.63	0.78	ML
36	Preparing teachers work load	2.75	0.75	ML
37	Preparation of school time table	2.70	0.81	ML
38	Dissemination of information within and outside the school.	2.85	0.78	ML
39	Compilation of student academic results	2.66	0 .77	ML
40	Maintenance of accurate academic records of students.	2.24	1.02	LL
	Overall Mean	**39.79**	**11.26**	
	Grand Mean	**2.65**	**0.75**	**ML**

Source: Field Survey, 2019

Findings from table 3 revealed that the grand mean value of 2.65 is above the criterion limits of 2.50. This indicates that the performance of secondary school principals' in the discharge of their routine administrative duties was at moderate level.

Research Question 4. Does the usage of ICT facilities have a significant relationship with administrative performance of secondary school principals' in Ilorin metropolis?

Table 4. Correlations between usage of ICT facilities and administrative performance

Descriptive Statistics			
	Mean	**Std Deviation**	**N**
Usage of ICT	28.9523	8.90304	130
Administrative Performance	39.7853	11.25708	130
Correlations			
		Usage of ICT	**Administrative Performance**
Usage of ICT	Pearson Correlation	1	631
	Sig. (2-tailed)		000
	N	130	130
Administrative Performance	Pearson Correlation	631	1
	Sig. (2-tailed)	000	
	N	130	130
**Correlation is significant at the 0.05 level (2-tailed).			

As indicated in table 4, the calculated r- value (0.631) is greater than the critical r-table value (0.195) at 0.05 significance levels for 128 degree of freedom. Hence, the null hypothesis is rejected. This shows that there was significant positive relationship between the usage of ICT facilities and administrative performance of

secondary school principals' in Ilorin metropolis.

Discussion of findings

Findings of this study show that, the level of availability of information communication and technology (ICT) facilities in public secondary schools in Ilorin metropolis was low. This finding was consistent with an earlier study by Adeyemi and Olaleye (2010) who found out that the level of provision of ICT equipment to secondary schools in the Ekiti State was low. This finding also corresponds with that of Subair and Bada (2014) who reported that majority of public secondary schools in Osun State lacked the required ICT resources hence very few principals could apply the ICT resources for administrative purposes.

Findings from the second research question revealed that usage of ICT for administrative purposes by secondary school principals in Ilorin metropolis was to a moderate extent (grand mean value of 2.90). This finding might be attributed to the availability of these ICT facilities which were in short supply in most of the schools. The study of Adeyemi and Olaleye (2010) who reported that the level of usage of ICT equipment by secondary school principals in Ekiti State was low negates the findings of this study.

The present study also discovered that the performance of principals' in discharging their prescribed administrative responsibilities was moderately. This finding might not have been unconnected with the problem of shortage of ICT equipment in the schools as well as their moderate usage of the available ICT facilities. This finding is therefore was consistent with those of earlier researchers (Makewa, Eremo, Role & Role, 2013) but contradicts that of Adeyemi and Olaleye (2010) who observed that the level of management of secondary schools in Ekiti State Nigeria was low.

In furtherance, findings indicated that, the utilization of Information and Communication Technology (ICT) facilities had a significant association with administrative performance of principals. This suggested that, the more secondary school principals utilize of ICT facilities, the better their performance administratively. This further suggests that, without ICT effective management of secondary schools could be in jeopardy. This finding is in line with that of Oboegbulem and Ugwu (2013) who reported that, the application of ICT in school administration is a necessity and worthwhile venture especially in this era of globalization, but the extent of their application in secondary schools is very slow as school administrators are incompetent in handling ICT facilities for effective administration of schools in the South Eastern states of Nigeria. This finding also agreed with those of Etudor-Eyo, Ante, and Emah (2012), Okon, Ekaette and Ameh (2015) and Oyedemi (2015) which reported a considerable influence of ICT on the effective management of secondary schools.

Conclusion and recommendations

Considering the findings of this study, it was concluded that, Information and Communication Technology (ICT) has significant influence on secondary school principals' administrative performance in Ilorin metropolis. This suggested that, ICT is a critical variable in the effective management of secondary schools. However, the level of availability and usage of ICT facilities which were found to be moderate has led the researcher to conclude that secondary schools in Nigeria are not yet ready for technological development.

Based on the findings of this study, the following recommendations were made

1. Government should make ICT tools available in all secondary schools in order to enhance it proficiency and usage among secondary school administrators (principals).
2. Improved training should be organized from time to time by the Governments and NGOs (Non-Governmental Organizations) for school administrators who are not yet ICT literate. This can be delivered by organizing workshops, seminars and conferences. In such workshops/seminars, the principals should be advised to come with their own lap tops to enhance practical-oriented training and skill acquisitions.

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Financial Fraud: Enablers and Response. Empirical Evidence from NGOs in Uganda

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Abstract

This paper provides an empirical analysis of Financial fraud from NGOs in Uganda. Financial fraud was measured using assets misrepresentation, fraudulent statements and corruption. The study anchored on fraud triangle and fraud diamond theories. The population was 1,264 NGOs in central region with valid permits. The study used primary data collected from 302 NGOs out of 304. A cross sectional descriptive design was used in the study while data was analysed using descriptive statistics. The study finds that; the key enabler of financial fraud is opportunity, area most prone to financial fraud is corruption while financial fraud could be managed through prevention. The study recommends that; ethical values, statements and standards be developed and made available to NGOs stakeholders while policies on kickbacks should be developed. Pre-employment check should continue as a preventive measure. It is further recommended that this study be done for public organisations within the same area to have a full understanding of the nature of financial fraud in central Uganda. The same should be replicated in other regions of Uganda. While the prevention strategy of financial fraud is the most effective, there are other areas where opportunities to commit financial fraud exist and the attention of both development partners and NGOs should focus on them.

Keywords: *Financial Fraud, Enablers, Management, Uganda.*

Introduction

Of recent, some of the world's most prominent Non-Governmental Organizations (NGOs) have experienced large-scale frauds. The effects of these frauds have had very disturbing consequences on the economy of the world in addition to contributing unnecessary suffering and increased unemployment for the low- and middle-income class. With the aim of further understanding the key fundamental enablers of fraud, this paper takes an in-depth look at the areas in finance which are most prone to fraud and the appropriate ways in which organizations can respond to cases of financial fraud. These three key areas are important to assist anti-graft organizations, development partners and bodies in formulating practical strategies to prevent, detect and investigate financial frauds in organizations. The paper takes empirical approach by first examining the concept of financial fraud, highlighting key areas most prone to financial fraud and then recommending appropriate responses to cases of financial fraud. The study uses both primary and secondary sources of information obtained from journals, reports, internet and textbooks. The write up contributes to the understanding of financial frauds especially by forensic accountants, auditors, fraud examiners, Finance specialists and other antifraud bodies. The study also serves as guidance for further financial fraud related researches not just in Uganda but Africa and globally.

Corporate financial accounting including financial fraud scandals are no longer any unexpected news of the day as they have become the norm given the growing nature of E-commerce and Globalization. Take for instance, cases like that of Enron, WorldCom, Global Crossing and Tyco are notable and key among the most recent prominent scandals which suffered from the devastating impact of financial fraud. These financial scandals were not only costly but have as well increased global concerns about financial fraud, taking out billions of dollars of hard-earned shareholder value, and further, led to the erosion of investors and public confidence in the financial markets (Peterson and Buckhoff, 2004); (Rezaee, Crumbley and Elmore,

2004); (Bierstaker, Brody and Pacini, 2006). Many research studies have discussed fraud-related issues and the general agreement and feeling should be on prevention of fraud as the focus. It is less expensive and more effective to prevent financial fraud from happening than to detect it after the occurrence or put corrective measures when it occurs. normally, by the time fraud is uncovered, the money is lost and therefore, unrecoverable or the chance to recover the full amount of what has been lost is very limited. Furthermore, it is also very costly and time wasting if not consuming to investigate financial frauds especially involving large-scale operations. However, the focus now should be on fraud prevention so that all the monetary losses, effort and time to reconstruct fraudulent transactions, track down the perpetrator, and reclaim missing funds are not lost. (Thanasak, 2013) asserts that before any efforts are made in reducing financial fraud and as well manage the risks appropriately, it is important for organizations to identify the factors leading to fraudulent behaviour by understanding who the fraudsters are, areas most prone to fraud, when and why frauds are committed then appropriate respond mechanism can be put in place.

Financial Fraud has of recent become one of the deadlines threats to the world economy. It is a global problem which has to be fought, prevented and dealt with appropriately not only because of its impact on our major corporations and key financial institutions, but its effect on smaller organisations and ultimately the wider public who indirectly pay for the losses through increased costs of goods and services. some organisations fail to recognize that financial fraud can prove to be even more catastrophic than other forms of critical world threats like terrorism, floods, hurricane and fire. Cases involving these events that may cause serious disruption to the business but rarely are they insurmountable. However, a significant fraud against an organisation not only undermines financial stability but can ultimately result in such damage to the reputation and loss of investor's confidence that it proves irreparable. It is often to these reasons that organisation directors' write-off losses to financial fraud under the general heading of Bad debt rather than admit that there has been a failure to implement proper safeguards or managerial negligence in applying appropriate levels of oversight to routine business processes where the organisation cash and assets are at risk.

Globally, financial fraud is about 49% while in Africa as a continent, the percentage is higher than the global at 62% and within East Africa regional block, the case is much higher at 64% and in Uganda which is our reference point, it's even worse at 66% (PwC, 2018). This, therefore, signify that cases of financial fraud have not just become rampant, but it is becoming normal. The nature and mechanism have become even sophisticated.

The 2012 Office of the Prime Minister (OPM) and another in the ministry of Public Service financial fraud in the pension scandal prompted several development partners to reduce funding to Uganda as a country. This in turn affected not just the government but the NGOs and the resulting effect was that it became very difficult for Civil Society Organisations to get money. In 2010, a group of development partners providing direct budget support reduced funding after the 2007 Commonwealth Heads of Government Meeting (CHOGM) scandal, which involved US$ 2.4 million and allegations against a former vice president and three senior government ministers. The budget reduction was more than 10% of US$ 360 million in direct support to the budget at the time. In 2005, for example, development partners suspended US$ 200million in aid following an exposure that officials at Ministry of Health had embezzled over US$ 4.5 million from the Global Fund to fight HIV/Aids, Tuberculosis and Malaria (Daily Monitor, 2019).

Financial fraud in Uganda is not news. The anti-corruption court is overwhelmed with cases of financial fraud and other related anti-corruption crimes with some concluded while others are still under investigation. In June 2019 for example, the Democratic Governance Facility terminated funding to four NGOs after a forensic audit found massive financial fraud. The level and gravity of the fraud included direct theft, expenditures which could not be supported, using the same paperwork to provide accountabilities to different development partners and improper procurements which did not provide value for money (Daily Monitor, 2019). A report by Irish Aid entitled "interim report by evaluation and audit unit technical team to secretary general on misappropriation of funds in the office of the prime minister, Uganda 15 November 2012"

which was further reinforced by an independent body, the UN Office of Internal Oversight Services (OIOS, 2018) indicated massive financial fraud in management of refugees in Uganda and it has estimated the loses to be US$ 283,000 over payment of allowances to Office of the Prime Minister (OPM) staff, over payment of about US$ 7.7 million for supplies of water to the refugees.

In October 2017, Irish, British and Swedish donors stopped funding International Alert (IA), an NGO, after an investigation report unearthed massive financial fraud. For instance, in 2015, six employees of the giant telecom operator, MTN Uganda were before court for theft of US$ 3.4 million (Olga Morawczynski, 2015). In one of the complex and sophisticated case involving Caring for Orphans, Widows, and the Elderly (COWE), an NGO, whose aim is to uplift vulnerable people out of poverty and also running a micro finance paying a 54% interest monthly, asked people to invest in this and suddenly, the directors of the NGO collected money from people and in turn withdrew all the cash and disappeared with the money (The Guardian, 2019).

The objectives of the study were to; ascertain the enablers of financial fraud, examine areas most prone to financial fraud and assess how financial fraud can be managed. The associated questions were: What are the key enablers of financial fraud, which are the area's most prone to financial fraud? And how can financial fraud be managed?

Literature review

Fraud

Fraud has grown rapidly over the last few years and there is a growing trend for large organisations to consider hiring professionals such as forensic accountants to reduce the pressure and potential of occupational financial frauds. There is, however, concern on the general common definitions of fraud as many jurisdictions define it variedly.

Fraud, according to the Association of Certified Fraud Examiner (ACFE, 2010), is the use of one's occupation for personal enrichment through the deliberate misuse of or misapplication of the employing organization's resources or assets. notwithstanding the sector, many financial frauds either committed by employees or vendors of the organisation is fraud fraud (ACFE, 2010); (Duffield and Grabosky, 2001) and (Levi ,2008); (Kiragu, Wanjau, Gekara, and Kanali, 2013). However, according to Merriam Webster's Dictionary of Law (1996) as quoted in (Manurung and Hadian, 2013), fraud is defined as: "Any act, expression, omission, or concealment calculated to deceive another person to his or her disadvantage, specifically, a misrepresentation or concealment with reference to information or a fact relating to a transaction that is made with knowledge that its false. According to (Ernst and Young, 2009), fraud is said to be an act of deliberate action which is made by person or groups who knows that the error can result in some benefits that are not either to individuals or entities or other parties.

According to (Adeneji, 2004) and Institute of Chartered Accountants of Nigeria (ICAN, 2006), fraud is defined as an intentional act made by one or more individuals among management, employees or third parties who produce errors in financial reporting. Fraud can also be seen as misrepresentation, storage or negligence of a truth for the purpose of manipulating the financial statement to harm the company or organization, and that includes among others; theft, embezzlement stealing, abuse of authority asset misappropriation.

Fraud is also said to be a civil wrong as well as a criminal offence. In the following circumstances, an illustration is made on how fraud is seen from the two perfectives.

In common law jurisdictions, as a tort, fraud is a tort. While the precise definitions and desires of proof vary among jurisdictions, the requisite parts of fraud as a wrongful conduct usually area unit the intentional deception or concealment of a very important fact upon which the victim is meant to rely, and in fact does rely, to the harm of the victim (California Civil Jury Instructions, 1900). The remedies for fraud could embody recession (reversal) of a fraudulently obtained agreement or dealing, the recovery of a monetary award to compensate for the harm caused, punitive damages to penalize or deter the misconduct, and possibly others. In cases of a fraudulently elicited contract, fraud could function a defense during a action for breach of contract or carrying out of the contract.

In common law jurisdictions, as a criminal offence, fraud takes many alternative forms, some general (e.g., felony by false pretence) and a number of specific to specific categories of

victims or misconduct (e.g., bank fraud, insurance fraud, forgery).

The elements of fraud as a criminal offense equally vary. The requisite elements of perhaps the most general form of criminal fraud, theft by false pretence, are the intentional deception of a victim by false representation or pretence with the intent of persuading the victim to dispense with property and with the victim parting with property in reliance on the illustration or pretence and with the culprit aspiring to keep the property from the victim.

Fraud triangle theory

According to this theory, fraud is attributed to three key components which are: perceived incentive or the motivation to commit a fraud, opportunity to commit fraud and these are the circumstances which exist in organisations and they may include weak systems of Internal controls and the third element is rationalization for committing fraud. The subcomponents of rationalization include attitude, character and ethical values allowing committing a dishonest act (Mui & Mailley, 2015). The first version of the fraud triangle theory was referred to by (Cressey, 1953) who attributed the embezzlement behaviour to three primary factors and these are: Pressure to commit an embezzlement, an opportunity, and a rationalization or attitude to justify the embezzlement (Daigle, Hayes, & Morris, 2014). The fraud-triangle theory asserted that fraud occurs when a perpetrator has pressure to commit a fraud; exploits any opportunity of weak internal controls with a low risk of being caught; and be able to justify the fraud behaviour (Mui & Mailley, 2015). Multiple parties such as SAS 99, ACFE, and others recognized the importance of fraud-triangle model as a tool for addressing potential fraud risk factors.

The fraud- triangle model is used as a heuristic framework to explain fraudulent incidents (Schuchter & Levi, 2015). For example, (Dellaportas, 2012) interviewed a group of accountants who committed fraud to discover the root causes for their misconduct. They were asked about the reason for committing fraud, their expectation of getting away with fraud undetected, and the rationale behind their misconduct (Dellaportas, 2012). Therefore, the fraud triangle theory is very helpful to explain how accountants exploited their positions to deceive their clients, misappropriated fund, and committed fraud under perceived pressure, and exploited the available opportunity as well (Dellaportas, 2012). It is important to know that financial and non-financial pressures for example failed investments, poor performance, impending bankruptcy, distressed businesses, need for money, gambling and greed/anger were root causes for the fraudsters' behaviour (Dellaportas, 2012). The perpetrators of fraud acknowledged that their knowledge of systems and processes enable them to bypass controls and commit fraud without detection through trust, complex scheme, and concealment (Dellaportas, 2012). The offenders acknowledged that their behaviour is inappropriate and rationalized their fraud through denial of responsibility by putting any blame on other people, injury (no one is harmed, or money will be repaid) and victims (victim deserve it) (Dellaportas, 2012). The importance of opportunity factor as to influence the fraud decision through the exploitation of offenders' positions, trust or dependence, knowledge to bypass controls and deceive their client for personal gain was highly noted (Dellaportas, 2012).

Similarly, researchers like (Aghghaleh, Iskandar, and Mohamed, 2015) have examined the contributions of two of the fraud triangles models and these are; pressure and opportunity: Pressure and opportunity to the likelihood of fraud occurrence in the financial reporting of 40 fraud Malaysians public firms and 100 non-fraud firms. Fraud pressure was operationalized through the financial ratios of sale to accounts receivable and leverage ratio, whereas the fraud opportunity was operationalized through the financial ratio of the numbers of the audit committee and board members. The researchers used a logistic regression model to examine the relationship between pressure and opportunity factors and the level of fraud occurrence. They found that the probability of fraud occurrence was positively related to more leverages and more sale to accounts receivable percentage, and negatively related to the audit committee size and the board of directors' size (Aghghaleh, Iskandar, & Mohamed, 2015). However, the study was unable to operationalize the fraud rationalization (Aghghaleh, Iskandar, & Mohamed, 2015).

The fraud-triangle model attracted the attentions of many scholars, such as (Wolfe and Hermanson, 2004) who expanded it to fraud diamond by adding a fourth element of capability

which includes (skills, ability, and power) as more observer attribute than pressure or rationalization (Ruankaew, 2016). Other researchers proposed fraud scale by substituting personal integrity for rationalization, as it is more readily observable than rationalization (Lokanan, 2015). Additionally, researchers like (Dorminey, Fleming, Kranacher, and Riley, 2012) claimed that predator only seeks opportunity to commit a fraud, and requires no pressure or rationalization (Dorminey, Fleming, Kranacher, & Riley, 2012).

The fraud-triangle model was criticized as it does not address collusive behaviour and/or management override of internal controls for the organisations, limited fraud motivation to non-sharable financial need, non-observability of rationalization, and only focused on individual's decision making (Dorminey, Fleming, Kranacher, & Riley, 2012). It is also criticized for its narrow context, as it ignores other dimensions of fraud notably time and further ignores issues of power relations, and the wider macro social and economic dimensions (Cooper, Dacin, & Palmer, 2013). As such, another theory is advanced to explain the limitations of the fraud triangle theory.

Fraud diamond theory

This theory was presented by Wolfe and Hermanson in the CPA Journal of (December 2004) and it's kind of an expanded version of the Fraud Triangle Theory. In the fraud diamond theory, an additional element called capability has been added to the three original components of the Fraud Triangle Theory. Wolfe and Hermanson, 2004) argued that although perceived pressure might coexist with an opportunity to commit fraud and a rationalization for doing so, it is not possible for fraud to take place unless the added component which is capability is present together with the others. According to the researchers, the opportunity opens the doorway to fraud, and the incentive and rationalization can draw a person towards it. It is important to note that the person who wants to commit fraud must have the capability to recognize the open doorway as an opportunity and to take advantage of it by walking through, not just once, but repeatedly". With the additional element presented in the theory affecting individuals' decision to commit fraud, the organization and auditors need to understand employees' individual traits and abilities in order to assess the risk of fraudulent behaviours. The components of theory are interrelated to the extent that an employee cannot commit fraud until all the elements are present and further proposes that pressure can cause someone to seek opportunity while pressure and opportunity can encourage rationalization of fraud. Therefore, the additional element, which is capability is what differentiates the Fraud Diamond theory from the Fraud triangle theory.

According to the publication of (Bressler & Bressler, 2007) as cited by (Mackevicius & Giriunas, 2013), not all who possessed opportunities, motivation, and realization may necessarily commit fraud because they may not have the capability to do it. Meanwhile, authors like (Albrecht, Williams & Wernz, 1995) assert that capability component of the fraud diamond theory is very important when it comes to large-scale fraud. Furthermore, (Albrecht et al, 1995) believes that only people who have extremely high capacity are able to understand the controls so as to identify any weaknesses and to use them in planning the implementation of fraud. (Wolfe and Hermanson, 2004) state that someone's position within an organization may provide the ability to exploit an opportunity to commit fraud. (Beasley et al, 1999) and quoted by (Wolfe & Hermanson, 2004) reported that Chief Executives were implicated in more than 70% of accounting frauds.

(Wolfe and Hermanson, 2004) while quoting (Sutherland, 1977) entitled "Theory of White Collar Criminals" state that, "As fraudsters found themselves successful at this crime, they began to gain some secondary delight in the knowledge that they are fooling the world, that they are showing their superiority to others". As such, the people committing fraud do have strong ego and clear confidence that they will not be detected. A fraudstar who has been successful in the game can even coerce other people in committing and/or concealing fraud (Rudewicz, 2011). People with very persuasive personality can convince others to commit fraud or not to report fraud when it comes to their knowledge. In addition, it is a common personality type among fraudsters is the "bully," who "makes unusual demands of those who work under them, cultivates too much fear instead of respect and end up not being subjected to controls as others within the organisation" (Wolfe & Hermanson 2004). Generally, it ought to be on record that

many cases of financial frauds are committed by lower level staff reacting to an edict from the senior staff to "make your numbers at all costs, or else."(Wolfe and Hermanson 2004).

Materials and Methods

Design

The study adopted a descriptive design. This design was appropriate because it describes a situation the way it was (Mugenda, 2003). Descriptive design has further been applauded in the sense that it allows for collection of data from the population by use of the questionnaire (Micheni, 2011).

Study population and sample size

The population of the study included 1,264 registered and validated NGOs in Central regions of Uganda (Ministry of Internal Affairs, 2019). The choice of Central region was motivated by the fact that it hosts the largest number of NGOs than all the other regions in Uganda. The sample of the study was 304 arrived at using the formulae advanced by (Yamane, 1973). Simple random sampling method was used in selection of the samples. From the sample, the response rate was 97% which is representative of the population.

Data collection instruments

The instruments used for data collection was structured questionnaire. The questionnaire was used because it allows the detailed collection of information required.

Validity and reliability

To ensure validity of the research instruments, experts were used to review the questionnaire and the Content Validity Index (CVI) was calculated and overall, the results showed that the contents were 0.86 and as such were valid as per (Sakaran, 2000). For reliability, (Cronbach, 1951) alpha was used. As the rule of thumb, any coefficient of more than 0.5 is acceptable (Nannally, 1978). Therefore, the reliability overall was 0.87.

Data analysis and presentation

Data was analysed using descriptive statistics where frequencies and percentages were computed. Descriptive statistics was used because it allows presentation of data in a logical and easy to understand manner.

Results

Characteristics of the NGOs

A total of 302 out of the 304 sampled NGOs participated in the study. There were five background information required from each NGO participating in answering the questionnaire.

In terms of the period each NGO has been operating in Uganda, the results show that the NGOs that have been in Uganda for more than 15 years were more (64%, n= 192) than those that have been in Uganda between 5-9 years (20%, n=60) and those between 10 -14 years (17%, n=50). It is interesting to note that out of the 302 NGOs which took part in the study, none has been for less than 5 years in Uganda. Most of the NGOs were National (66%, n=200) compared to (34%, n=102) that were International. Many of the NGOs are working in other sectors (80%, n=242) while (20%, n=60) are working in Accountability sector. Of the 302 NGOs, more than half (76%, n=230) are non-faith based mean while only (24%, n=72) are faith based.

In terms of the nature of the organisations, the majority (90%, n=272) were nonprofit making whereas (10%, n=30) were social enterprises/profit making organisations. Regarding the areas of operations within central region, more than half (60%, n=180) works outside the greater Kampala which includes Mukono, Mityana, Wakiso, Luweero triangle and Kayunga, meanwhile (40%, n=122) works within Kampala metropolitan area.

Enablers of financial fraud

The study sought to in objective 1, examine the enablers of financial fraud. In this objective, the key question was stated thus “what are the key enablers of financial fraud?”. Enablers of fraud was divided into three categories namely, Motivators of fraud, Opportunity for fraud and Rationalization for fraud. To achieve this objective and answer the question, several questions were put to the NGOs to provide the extent to which they agree or disagree with the statements related to each categories of fraud enablers. The tables below are a presentation of the results for each category of fraud enabler.

Motivation for fraud

Five (5) questions related to what motivates NGOs staff to commit financial fraud were asked. Figure 1 shows the results of what motivates them to commit fraud.

From the figure, the results show that (30%) strongly agreed that pressure mounted by owners of the organisations to meet the revenue targets while another (30%) agreed that bonus payments to employees because of the need for additional resources mobilization were the two topmost motivators for committing financial fraud. This was followed closely by personal reasons and the need to earn more money (20%) and peer pressure from colleagues earning more money (20%). It is also very clear from the figure that (66%) strongly disagreed that less pay was the motivator of financial fraud.

Opportunity for fraud

Six (6) questions related to if a presentation of an opportunity was the reason why NGOs staff commit financial fraud were asked. Figure 2 shows the results.

As seen from the results in figure 2, it is very evident and clear that (64%) of the NGOs agreed that inadequate policies related to Accounting and Finance, followed by strong agreement (40%) that Board of Directors' commitment to being ethical and honesty in decisions which was the same with management commitment to being ethical and honesty in decisions (40%) were the top three areas where opportunity to commit financial fraud is ripe. However, it is further clear that poor documentation (44%), lack of or no supervision by Board and Management (44%) and weak internal controls and segregation of duties are areas where there could be no opportunity for fraudulent financial transactions to be seen.

Rationalization of fraud

Six (6) questions related to rationalization by NGOs staff to commit financial fraud were asked. Figure 3 shows the results.

As seen from figure 3, it is very evident and clear that (10%) of the NGOs strongly agreed that if one is about to lose a job, committing fraud is the only way to get a compensation meanwhile (20%) agreed that staff members have committed financial fraud and nothing was done to them and so others should also do it and go unpunished or unnoticed. However, the majority (80%) strongly disagreed that financial fraud is committed because the Board members also do it, (66%) strongly disagreed because someone was treated by the organisation badly.

Summary - enablers of financial fraud

Figure 4 presents an overall summary on the status of the key enablers of financial fraud.

From the results in figure 4 and from each individual figure presented on enablers of financial fraud, it can therefore be summarized that the top enablers of financial fraud among the NGOs in Uganda are as follows.

- Opportunity presents itself as the topmost number one enabler of financial fraud among NGOs in Uganda. The specific areas where opportunities are ripe for financial fraud are; Board commitment to ensuring ethical and honest standards (70%), Management Commitment to ensuring ethical and honest standards at (70%), inadequate accounting and financial policies (64%).
- Motivation is second after opportunity. The specific area to note as the motivator for committing financial fraud is the pressure from the owners of the organisation to meet the expectations in terms of resources targets (50%) which is very closely linked and connected to payment of bonuses to the staff who meet the resources mobilization targets of the organisations (30%).
- Rationalization is the least enabler of financial fraud among NGOs in Uganda. While this is the least enabler of financial fraud, there is some area which could be a potential for financial fraud and needs monitoring as Fraud is committed because staff have done it (20%).

Areas most prone to financial fraud

The study sought to in objective 2, assess areas most prone to financial fraud. In this objective, the key question was stated thus "which area is most prone to financial fraud?". Areas most prone to financial fraud was divided into three broad categories namely, assets misappropriation, Financial statements and Corruption. To achieve this objective and answer the question, several questions were put to the NGOs to provide the extent to which they agree or disagree with the statements related to each categories of areas

most prone to financial fraud. The tables below are a presentation of the results for each category.

Assets misappropriation

This sub section presents the areas within assets where misappropriation could occur causing financial fraud. To answer this sub section, seven (7) questions were put to the NGOs on possible areas where fraud could happen, and they were asked to provide the extent to which they agree or disagree with the statements. Presented in figure 5 is the feedback.

As seen in figure 5, it is clear that (10%) strongly agreed while a further (30%) agreed reflecting a total of (40%) overall agreement that theft of cash by staff including management and Board happens. This was followed very closely by (10%) strong agreement and (20%) agreement that false payment requests are made by staff, management and Board happens and this got the same number of feedbacks with billing schemes by using fictious vendors for false payment (10%) with strong agreement while (20%) in agreement. However, (36%) were in strong disagreement and a further (44%) disagreed that alteration of legitimate documents including Purchase Orders could happen. Further, (36%) strongly disagreed while a further (44%) agreed that inventories and fixed assets misuse by staff, management and Board could occur.

Financial statements

This sub section presents the areas within financial statements where financial fraud could. To answer this sub section, seven (7) questions were put to the NGOs on possible areas where misstatements could happen which leads to financial fraud, and they were asked to provide the extent to which they agree or disagree with the statements. Presented in figure 6 is the results.

As clearly seen in figure 6, (10%) strongly agreed while (20%) agreed reflecting a total of (30%) that misstatement of expenses in the financial statements specifically in the statement of Financial performance or statement of income is an area where financial fraud could occur. Meanwhile (30%) agreed with the statement that improper accounting related to intra organisation charges is another core area where financial fraud could occur among the NGOs. However, it is worth noting that there are areas where the majority, (70%) in total with (26%) strong disagreement while (44%) disagreement that improper revenue recognition is an area where financial fraud could occur, followed closely with falsified employment having (36%) strong disagreement and (30%) disagreement.

Corruption

This sub section presents the areas within corruption where financial fraud could. To answer this sub section, five (5) questions were put to the NGOs on possible areas where corruption could happen which leads to financial fraud, and they were asked to provide the extent to which they agree or disagree with the statements. Presented in the figure 7 is the results.

From figure 7, the results show that (10%) of the NGOs strong agreed while (40%) agreed with a total of (50%) agreement that kickback to employees of the organisations by a vendor in return for Favourable treatment is the top most factor facilitating corruption, this was closely followed by collusion between and/or among staff of the NGOs and customers or vendors (10%) strong agreement and (30%) agreement. Conflicts of interests by staff scored same with kicks. However, the majority (56%) disagreed that extortion which is the offering to help someone from harm in exchange for money or other considerations is a form of corruption which could lead to financial fraud among NGOs.

Summary- areas most prone to financial fraud

Figure 8 presents an overall summary on the status on the key enablers of financial fraud.

From figure 8 and from each individual figure presented on areas most prone to financial fraud, it can therefore be summarized that the most areas prone to financial fraud among the NGOs in Uganda are as follows.

- Corruption. Corruption is the topmost area which is ripe and prone to financial fraud among NGOs in Uganda. Corruption presents itself in many ways. However, the specific areas that are riper to financial fraud are; Kickback (50%), collusion (40%) and conflicts of interest (40%).
- Assets Misappropriation is second area after Corruption most prone to financial fraud. The specific areas to note within assets misappropriation are; theft of cash by staff

(40%), False payment (30%) and fictitious payment (30%) were second

- Financial Statement is the least most prone to financial fraud among NGOs in Uganda. While this is the least area where corruption can take place leading to fraud, there are some areas which could be a potential for financial fraud and as such, requires close monitoring. Expenses misappropriation (30%) and improper accounting (30%).

Management of financial fraud

The study sought to in objective 3, assess how financial fraud can be managed. In this objective, the key question was stated thus "How can financial fraud be managed?". Management of financial fraud was divided into three broad categories namely; Prevention, Detection and Response. To achieve this objective and answer the question, several questions were put to the NGOs to provide the extent to which they agree or disagree with the statements related to each categories of areas how financial fraud can be managed. Figure 9 is a presentation of the results for each category.

Prevention of fraud

This sub section presents the areas within prevention where financial fraud could be avoided and prevented at all costs. To answer this sub section, eight (8) questions were put to the NGOs on how financial fraud could be prevented and they were asked to provide the extent to which they agree or disagree with the statements. Presented in figure 9 is the results.

From the results in the figure 9, it can be seen that within prevention arm of fraud management, the majority (100%) who are both in strong agreement (40%) and a further (60%) in agreement believe that conducting pre-employment screening of candidates from the previous employers whether or not they committed financial fraud is the best in the prevention of fraud among NGOs. This was followed by regular staff trainings and awareness sessions (40%) strongly agree while (50%) agree. It scored the same percentage point with ensuring that the organisation puts up a statement of its ethical values, business principles and commitment to integrity (20%) in strong agreement while (70%) in agreement. It is important to note that whereas management of gifts (70%), vendors vetting (70%) and conflicts of interest declarations (70%) have a lower percentage, it is important to stress that they are as well very key in the prevention.

Detection of financial fraud

This presents the areas within detection where financial fraud could be detected. Eight (8) questions were put to the NGOs on how financial fraud could be detected by providing the extent to which they agree or disagree with the statements. Presented in the figure 10 is the results.

From the results in figure 10, it shows that internal audit (80%) in total with (10%) strong agreement while (70%) agreement complemented with a further (73%) with (19%) strong agreement and (54%) agreement that external audit helps in detection of financial fraud. Its, however, interesting to note that the majority (75%) with (40%) disagreeing while (35%) not sure that investigations can help detect financial fraud.

Management of financial fraud

This presents how financial fraud could be managed whenever it has been reported to have occurred. Five (5) questions were put to the NGOs on how they can respond to cases of reported financial fraud by providing the extent to which they agree or disagree with the statements. Presented in the figure 11 is the results.

As seen in figure 11, the results show that having a register which records all cases of reported financial fraud in an organisation with details of the nature, gravity of the fraud is key to responding to financial fraud (74%) which is followed by recovery of funds lost to financial fraud (70%) and having a clear reporting channel where anybody can report a case financial fraud (70%).

Summary- management of financial fraud

Figure 12 presents an overall summary on the status on the key enablers of financial fraud.

From figure12 and from each individual figure presented on response to financial fraud, it can therefore be summarized that response to financial fraud among the NGOs in Uganda is as follows.

- Prevention is the best mechanism in management of financial fraud. This can be done in many ways. However, the specific and most accepted areas include; pre-

employment checks which is assumed to be (100%) a good measure more than any other, regular staff trainings and awareness creation on fraud (90%) and the organisations having its ethical statements of values and business principles (90%).

- Detection. This can be managed through a combination of many theories. For instance, internal audits (83%), external audits (73%), while internal tip-off (70%) and change of personnel (70%) are equally good measures seen to be a detection and/or deterrent to financial fraud among NGOs in Uganda.

Response is the least method NGOs can use to manage financial fraud. While this is the least approach according to the results, there are, however, some ways it can prove to be helpful to management of financial fraud. For instance, having a register/record of all financial fraud cases may help in responding to the issue (74%) and recovery of funds lost (70%).

Discussion

This study investigated financial fraud among NGOs in central region of Uganda. The objectives were three and included; establishment of the key enablers of financial fraud, areas most prone to financial fraud and how financial fraud can be managed.

From objective one, the results show that when an opportunity to commit financial fraud presents itself, nobody can resist to miss the chance and therefore, this was the key enabler of financial fraud. From the findings, what is surprising though is that payment of low salaries to NGO staff is not a motivator to committing financial fraud as (86%) said so. Meanwhile (50%) said pressure from the owners of the organisation to meet the resource mobilization targets for the organisations were responsible for the financial fraud as the staff is forced to look for money to facilitate his mobilization targets. It is further surprising from the findings that weak internal controls, lack of or no supervision by management and Board including poor documentation are not opportunities which are seen by NGO staff to commit financial fraud, but rather ethical conduct of both the Board and Management are responsible. From the rationalization point of view, more surprises are recorded in that people in the NGOs commit financial fraud not because there are no other solutions, but because other staff within the organisation also do it as therefore, seen as a game of chance.

A few plausible reasons could be presented as to why low payment of salaries is not a motivator to committing financial fraud. First, a staff member might want to use his employment status and/or position to keep using other means like kickbacks to get money. Even collusion with vendors and other third parties to defraud the organisation. Weak internal controls, lack of or no supervision by management and Board including poor documentation are not opportunities to commit fraud because the other staff see the Board and Management with poor ethical values who might also be defrauding the organisation and as such, use those avenues to commit fraud after all, other staff have also done it before and nothing has happened. Most probably, those staff are shielded by Management or the Board or both. (Wood, 2011) in his study found that board members including some Divisional Managers were responsible for the fraud in organisations. This was further reinforced by (Arleen r. Thomas and Kim m. Gibson, 2003).

Objective two of the study was to examine the area(s) most prone to financial fraud among NGOs in Uganda. The results show that corruption is the most prone to financial fraud. This finding agrees with the report of (Larché, 1999). From the findings, what is surprising though is that theft of inventories like stationeries and other office consumables is not common. The possible reason probably is that those who commit fraud target high value items and not low value items like inventories. The possibility of committing cheque fraud is only up to (10%) chance meaning that this is less likely to happen. Bribes has a relatively low likelihood (20%) chance that it can be committed in the NGOs and close to it is extortion which is (34%) chance.

It is important to note that bribes and extortions have low scale in committing financial fraud because NGOs staff get kickback from the vendors (50%) as opposed to the traditional way of being bribed or extorting money from vendors. As such, what should have been taken in the form of bribes are still given as kickbacks but not necessarily extortions when a vendor is given an opportunity to do work with organisation.

Objective three of the study was to assess how financial fraud could be managed. The results show that prevention is the best approach to

management of financial fraud. This was confirmed by (CG, 2020) and reinforced further by (Lowers & Associates, 2014). From the findings, what is surprising is that carrying out investigations and production of the report does not in any way help in management of financial fraud as it is on record and confirmed by (75%) of the NGOs. What is, however, in conformity with this finding is that carrying out pre-employment screening which is (100%) very effective is one sure way to prevent financial fraud. Trainings and awareness sessions on fraud including organisations having ethical statements on its business principles significantly prevent financial fraud among NGOs in Uganda.

A variety of arguments could be provided giving some light on why even when investigations are carried out, it does not help manage financial fraud. First, investigations are more of a post facto intervention, done after the fraud has been committed and, in most cases, the fraudster immediately leaves the organisation and it becomes impossible to enforce organisation policies if someone has left the organisation. Secondly, the evidence will have been tempered with immediately fraud is committed and the person committing is not got red-handed. Further, pre-employment screening is very key and a tool which can prevent as well as manage fraud because if someone has been involved in fraudulent behaviour from previous employment, it is easy to discover and as such some criminal case could be registered against the person or some other actions can be taken to thwart the possibility of more financial fraud in the organisation.

Limitations of the study

The current study had the following limitations. Firstly, the study focused only on Non-Governmental Organisations (NGOs) and did not consider Public sector entities. Second, the study concentrated on NGOs within the Central region of Uganda meaning NGOs that are not operating in this area were not considered part of the study. Thirdly, the study concentrated only on financial fraud and left out programmatic and other related fraud.

Conclusion and recommendation

The following conclusions have been arrived at and the recommendations provided are for policy and practice for NGOs in Uganda.

From results of objective 1, it is concluded that the key enabler of financial fraud is when an opportunity presents itself to NGOs staff. One of the key findings is that the Board and management have some ethical issues to be addressed. It is as such, recommended that both the Board and Management should have ethical values, standards and statements of integrity be put in place and made known to all staff and vendors. The Board and Management should demonstrate these values in their deeds and be exemplary. It is further recommended that the owners (subscribers) of the NGOs including top management should not put too much pressure on the staff charged with roles related to resources mobilization for the organisation as this puts a strain on the staff to look for ways of getting cash to fund their resources mobilization strategies which organisations do not provide. Alternatively, organisations should provide some financial resources to facilitate resources mobilization drives.

From results of objective 2, it is concluded that the area most prone to financial fraud is corruption among the NGOs staff. Some of the key findings are that theft of cash and receiving kickbacks are the main areas within corruption that facilitates fraud. As such, it is recommended that for organisations that do not already have a policy framework on kickback should have a very strong one. For those that already have, considerations on reviewing and taking stock of what is happening given the context in Uganda. Kickback has become very sophisticated to the extent that bribes and collusion is taking a downward trend while kickback is rising. Furthermore, direct theft of cash has become rampant and as such, organisations should limit the use of physical cash for routine transactions. New and advanced technologies like use of Mobile Money, Vouchers and applicable methods should be considered other than use of physical cash.

From results of objective 3, it is concluded that prevention is the most effective way to manage financial fraud among NGOs in Uganda. Some of the key findings are that pre-employment checks, trainings on ethical values, Internal audits, internal tip-off and change of personnel are very key in management of fraud. As such, it is recommended that organisations should as a matter of urgency put in place mechanism to ensure that within HR policy, all potential new

staff should undergo fraud examinations before they are offered appointment letters. HR and management should ensure that there are planned and deliberate training to all staff on ethical issues and at the same time, design online courses on fraud and corruption prevention that all staff should undertake during the course of the year to ensure prevention is on high alert. Staff should be encouraged to report suspected cases of fraud immediately to the designated officials. As a matter of practice, there should be rotation and/or change of personnel from one duty station to another as this has proved very effective in Management of financial fraud.

Appendix

List of Figures

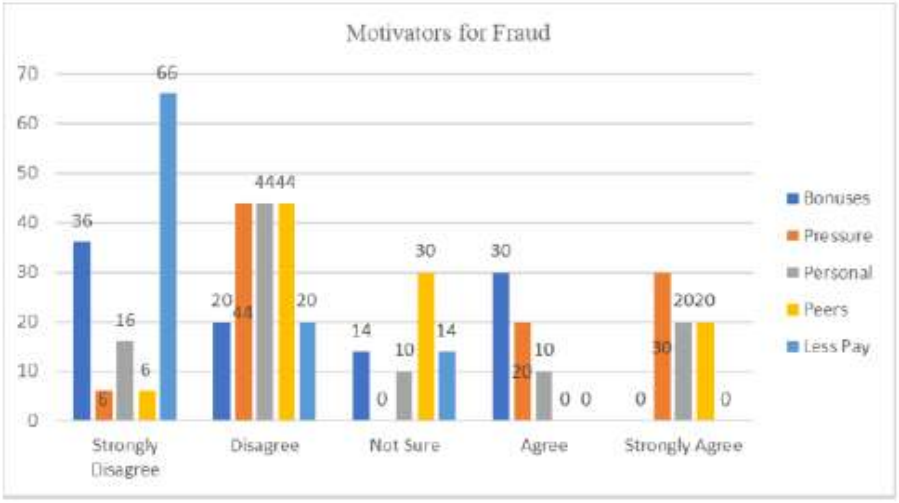

Figure 1. Motivators of Financial Fraud

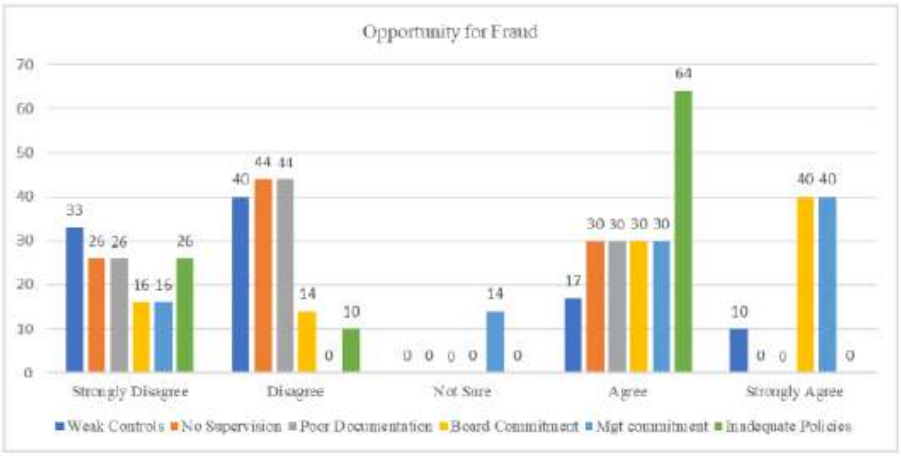

Figure 2. Where Opportunities can present itself for Financial Fraud

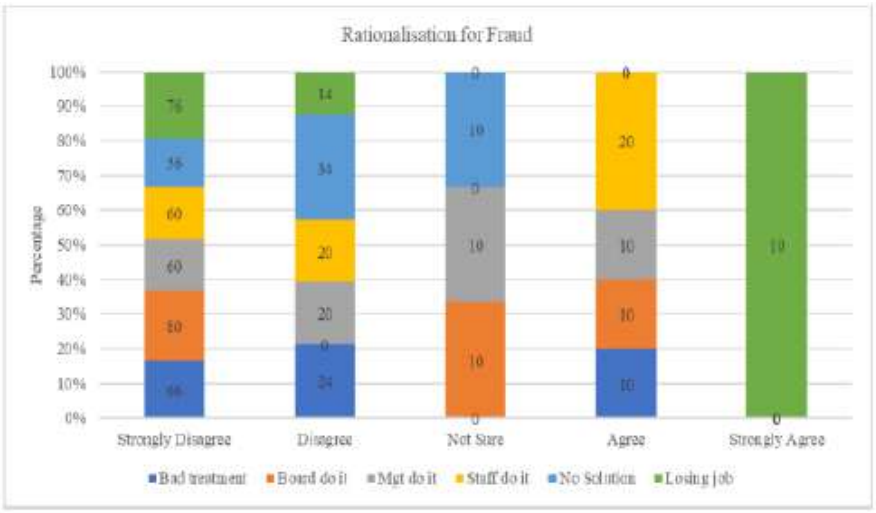

Figure 3. Rationalization for Financial Fraud

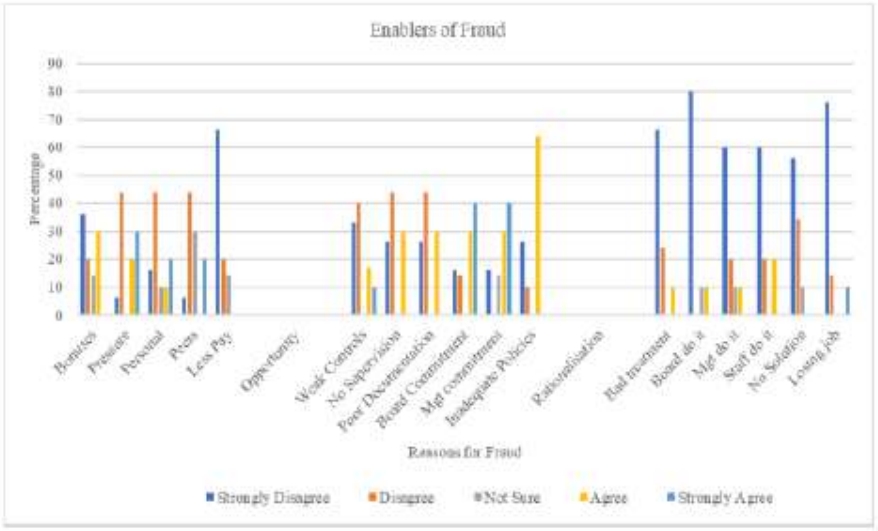

Figure 4. Summary of enablers of financial fraud

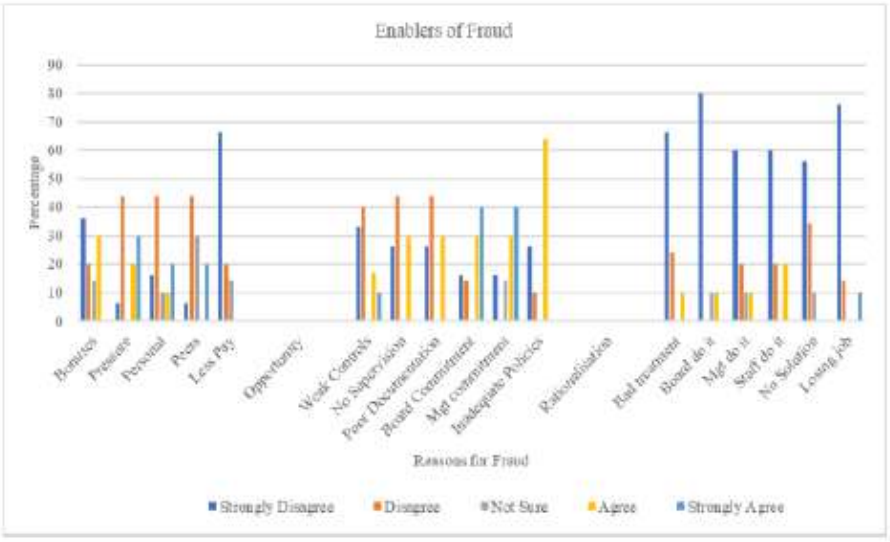

Figure 5. Where Assets Misappropriation can occur

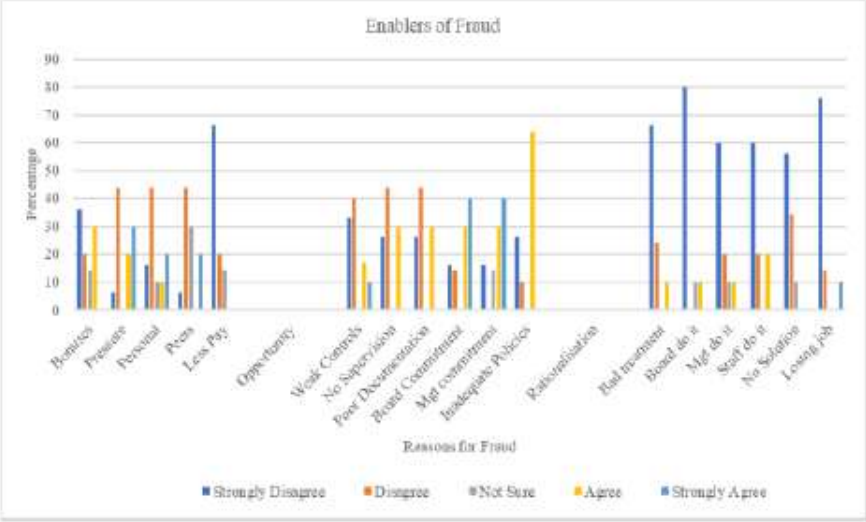

Figure 6. Areas Where Fraud Can Occur within Financial Statements

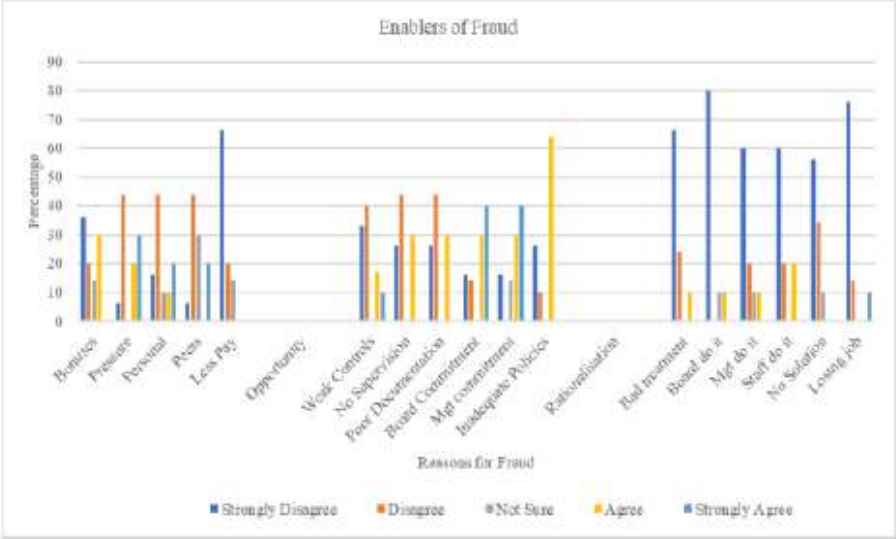

Figure 7. Areas most prone to corruption

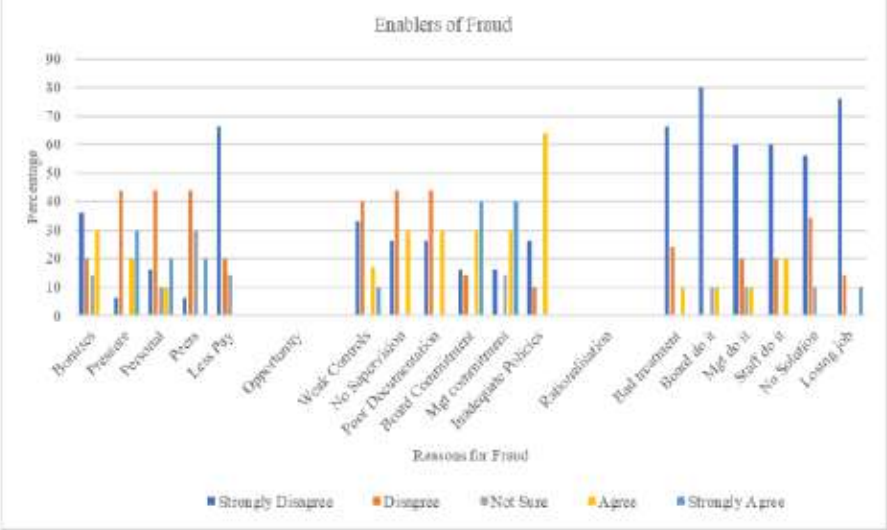

Figure 8. Areas Most Prone to Financial Fraud

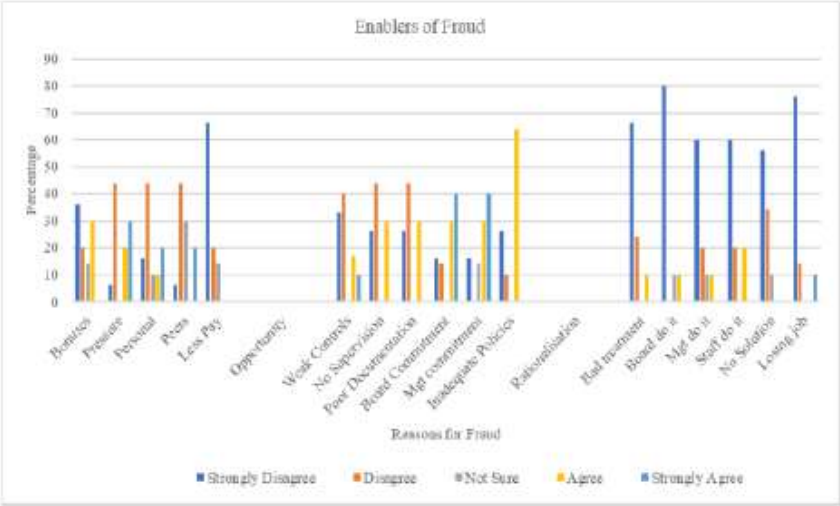

Figure 9. How to prevent Financial Fraud

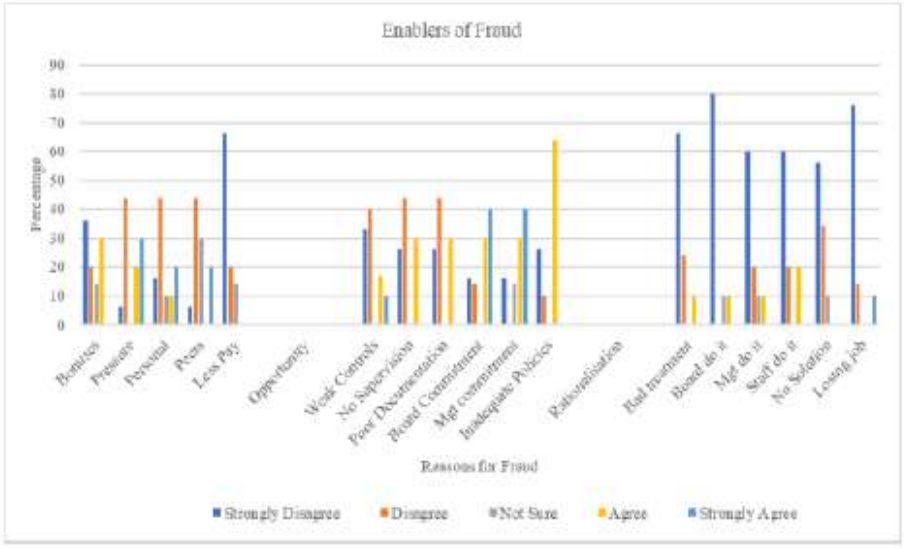

Figure 10. How to detect Financial Fraud

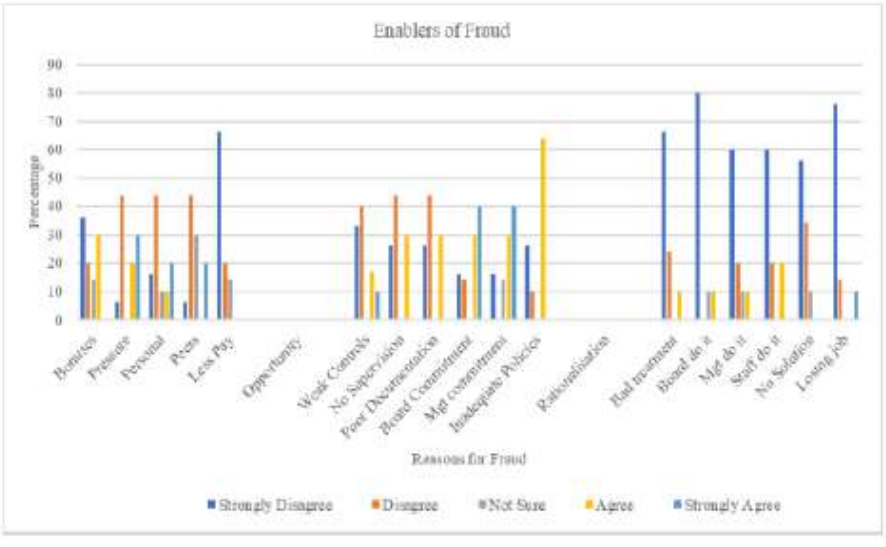

Figure 11. How to Manage Financial Fraud

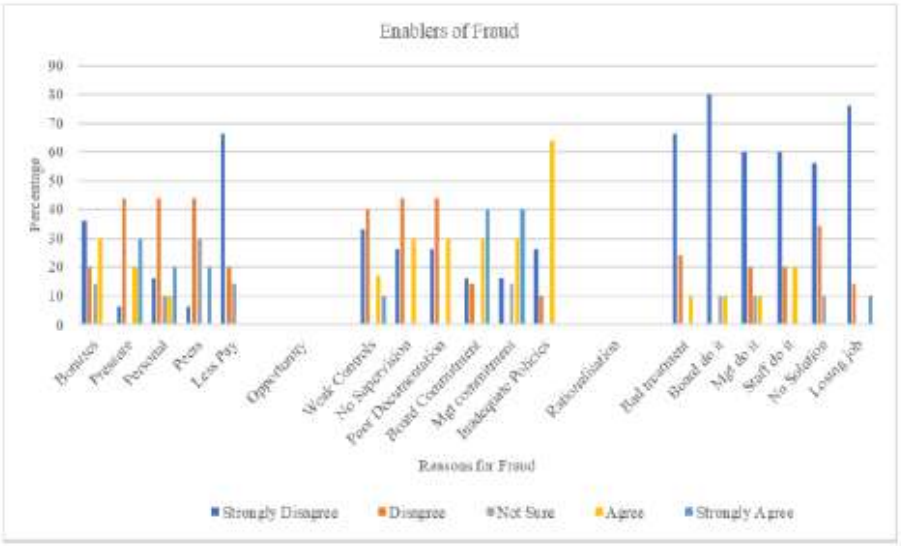

Figure 12. Summary on Management of Financial Fraud

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Discrimination and Abuses: The impact on the Mental and General Health Conditions of Gay, Lesbian, Bisexual, and Transgender Populations in Ghana

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Abstract

Despite the growing acceptance of lesbian, gay, bisexual, and transgender (LGBT) in the world, homosexuality in Ghana is illegal. LGBTs in Ghana are subjected to myriads of discrimination and abuses. The purpose of this study was to examine the impact discrimination and abuses faced by the LGBTs have on their mental and general health conditions. A total of 494 self-identified LGBTs, recruited via non-probability sampling technique of snow-ball participated in the study. The survey included four categories of survey items: demographic information, forms of discrimination and abuses, general health, and mental health. The findings of the study indicated that the major forms of discrimination and abuses faced by the LGBTs are of legal, social and employment forms. The findings of the study revealed that LGBT individuals in Ghana experience somatization, depression, and anxiety several days. On the contrary, a significant proportion 218(48.3%) of the LGBTs considered themselves to be in good general health condition. A simple linear regression analysis performed to examine the impact the discrimination and abuses faced by the LGBTs have on their mental and general health conditions revealed that the legal, employment, and family discrimination and abuses faced by the LGBTs have a detrimental effect on the psychological distress of anxiety, somatization, and depression of the LGBTs. It is recommended that policies and laws against LGBTs in Ghana be changed to allow for their acceptance, otherwise LGBTs in Ghana will continue to experience discriminations and abuses which will have negative effects on their mental and general health.

Keywords: *Homosexuality, sexual orientation, discrimination, abuses, LGBTs, Ghana.*

Introduction

Worldwide, lesbian, gay, bisexual and transgender (LGBT) persons experience vast amounts of discrimination, harassment and victimization from society. In addition, many places in the world do not provide a safe environment for people of sexual minorities to live and express their orientation freely. In many parts of the world, being lesbian, gay, bisexual or transgender (LGBT) is not seen as a right, but as a wrong. Homosexuality is considered a sin or an illness, a social or ideological deviation, or a betrayal of one's culture. Whereas most governments either deny practicing human rights violations or portray them as rare aberrations, the repression that LGBT people face is often openly and passionately defended in the name of culture, religion, morality or public health, and facilitated by specific legal provisions (US Department of State, 2011).

The abuses against lesbian, gay, bisexual or transgender (LGBT) violates the basic human rights protected under international standards including the International Covenant on Civil and Political Rights (ICCPR), the International Covenant on Economic, Social and Cultural Rights, the Universal Declaration of Human Rights, and the UN Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment. International law prohibits not only torture, but also acts which do not amount to torture, but nevertheless constitute "cruel, inhuman or degrading treatment or punishment" (ill-treatment). This prohibition is absolute and applies in all circumstances. Unfortunately, laws criminalizing LGBT exist on all continents, albeit in different forms (Human

Right Watch, 2008). By institutionalizing discrimination, they act as an official incitement to violence against LGBT people in the community as a whole, whether in custody, in prison, on the street or in the home. By stripping a sector of the population of their full rights, they also deprive LGBT victims of torture or ill-treatment of access to redress and allow their torturers to continue abusing others with impunity (Amnesty International, 2001).

LGBT individuals, like their heterosexual individuals, have a right to health. However, discrimination and abuses have restricted LGBT individuals' access to healthcare. For instance, in the United States of America, in 2010, more than half of LGBT people reported being discriminated against by a health care provider and more than 25 percent of transgender individuals reported being refused medical care outright. Health care services tailored to the LGBT community are absent in Africa. As a result of the discrimination and abuses faced by LGBT individuals, they face the higher risk of depression, anxiety, obsessive-compulsive and phobic disorders, suicidality, self-harm, and substance use among LGBT people (Diamant and Wold, 2003; Cochran and Mays, 2007; Boyd et al., 2010). There is a growing body of research that supports the theory that negative experiences resulting from LGBT stigma can lead to chronic stress that contributes to emotional distress among LGBT persons, which could lead to mental health problems (Bontempo and D'Augelli 2002; Clements-Nolle et al. 2006; Murdock and Bolch 2005).

Discrimination and abuses normally deter LGBT individuals from seeking health care from medical facilities which negatively affect their health conditions (Singh and Durso, 2017). For instance, a survey conducted by the Center for American Progress in 2017, revealed that discrimination played a role in preventing a significant number of LGBT people from seeking health care. In the year prior to the survey, 8 percent of all LGBT people - and 14 percent of those who had experienced discrimination on the basis of their sexual orientation or gender identity in the past year - avoided or postponed needed medical care because of disrespect or discrimination from health care staff. Among transgender people, 22 percent reported such avoidance (Singh and Durso, 2017). In many African countries, patients fear disclosing their sexual orientation to medical staff as they are likely to become verbally abusive or breach confidentiality. As a result of that, in Africa, men who have sex with men – whether or not they live in heterosexual relationships – are nine times more likely to have contracted HIV than other men (Amnesty International, 2013). Organizations including the Global Fund for AIDS, Malaria and Tuberculosis, the UN Human Rights Committee and UNAIDS have all documented that discrimination and abuses meted out to LGBTs have accelerated the spread of HIV (International Gay and Lesbian Human Rights Commission [IGLHRC], 2008).

In many African countries, LGBT individuals face significant discrimination and abuses. Culture and religion are often used to defend anti LGBT sentiments and the guise of "protecting minors" becomes a proxy to further advance an anti-LGBT agenda (Advocates for Youth, 2016). A recent survey by the Pew Global Attitudes Project puts discrimination and abuses against LGBT individuals in Kenya (at 90 percent), Senegal (at 96 percent), Nigeria (at 98 percent), and Uganda (at 96 percent), and Egypt (at 95 percent) showing particularly high levels of stigmatization (Pew, 2013). Access of LGBT individuals to health, education, housing, and employment is hindered across the region, regardless of the legal status of homosexuality. For instance, in Burkina Faso protesters demonstrated and effectively evicted a couple of men assumed to be gay, with no intervention from the police. This is due to the cultural stigmatization, which does not automatically disappear even after decriminalization (Rodenbough, 2014).

Ghana has a bad record when it comes to the treatment of lesbian, gay, bisexual and transgender (LGBT) people. LGBT people are very frequently victims of physical violence and psychological abuse, extortion and discrimination in many different aspects of daily life (Human Right Watch, 2018; Quaye et al., 2015; Green et al., 2015). Many LGBT Ghanaians fear disclosing their sexual identity because of the stigma associated with homosexuality – the fear of violence perpetrated by family members and others in the community and homelessness (Human Right Watch, 2018; Quaye et al., 2015; Green et al., 2015). LGBT individuals in Ghana dare not disclose their sexuality in public (Frimpong, 2018; MacDarling, 2011; Ofori,

2014; Haruna, 2015; Essien and Aderinto, 2009; Dankwa, 2009; Allotey, 2015; Human Right Watch, 2018). The legal landscape and social climate for LGBT people in Ghana have contributed to a large extent the discrimination and the abuses faced by the LGBTs in Ghana (Human Right Watch, 2018).

A number of studies have been conducted on LGBT individuals in Ghana. However, majority of these studies conducted on LGBT individuals in Ghana have focused mostly on report from the media, state institutions and laws, and public opinions, with few of these studies focused on individual cases (Human Right Watch, 2017). On the other hand, the few studies that have obtained the views of the LGBT individuals themselves have mainly focused on the various discrimination and abuses meted out to the LGBT individuals; leaving out the impact these discrimination and abuses have on the mental and general health of the LGBTs (Human Right Watch, 2018; Essien & Aderinto, 2009; Anarfi & Owusu, 2010; Nelson et al., 2015; Osafo et al, 2013; Amoah, Padmore & Gyasi, Razak, 2016). This paper therefore examines the impact the discrimination and abuses faced by the LGBT individuals have on their mental and general health conditions. Specifically, the study seeks to determine the various forms of discriminations and abuses faced by the LGBT individuals in Ghana, the mental and the general health conditions of the LGBT individuals in Ghana and the impact the discrimination and abuses have on the mental and the general health conditions of the LGBT individuals in Ghana.

Materials and methods

Description of the site

Ghana is one of the countries on the African continent, found on the western part of the continent. Ghana sits on the Atlantic Ocean and shares borders with Togo, Cote d'Ivoire, and Burkina Faso. Formed from the merger of the British colony of the Gold Coast and the Togoland trust territory, Ghana in 1957 became the first sub-Saharan country in colonial Africa to gain its independence. Ghana's population of approximately 30 million (Worldometers, 2019) spans a variety of ethnic, linguistic and religious groups (Ghana Statistical Service [GSS], 2018). According to the 2010 census, 71.2% of the population are Christians, 17.6% are Muslim, and 5.2% practice traditional faiths (GSS, 2013). Over the past twenty years, Ghana has made major strides as far democracy under a multi-party system is concerned, with its independent judiciary winning public trust. Ghana is ranked among the top three countries in Africa for freedom of speech and press freedom, with strong broadcast media (World Bank, 2019). However, LGBT rights in Ghana are heavily suppressed. Physical and violent homophobic attacks against LGBT people are common, often encouraged by the media and religious and political leaders. Despite the Constitution guaranteeing a right to freedom of speech, of expression and of assembly to Ghanaian citizens, these fundamental rights are actively denied to LGBT people. Same-sex relationships are a misdemeanor punishable by up to three years in prison in Ghana. According to a recent Pew survey, 98 percent of Ghanaians feel that homosexuality is “morally unacceptable,” the highest percentage of any country surveyed (Pew Research, 2013). Anti-LGBT rhetoric is rampant from prominent Ghanaian politicians and LGBT citizens face societal discrimination and the threat of violent attack.

Instruments

The study was carried out through the use of a questionnaire. The questionnaire consisted of three sections. The first section focused on the demographics of the participants - age, ethnicity, sexual orientation, region, geographical location, working status, educational level, ethnicity, religious affiliation, and educational attainment. The second section of the questionnaire elicited information on the various forms of discrimination and abuses faced by the LGBTs in Ghana. The response format was predominantly based on a five-point scale: 1 = never, 2 = seldom, 3= sometimes, 4 = usually, 5 = always. The third section of the questionnaire measured the mental and the general health conditions of the LGBTs. The response format for the general health conditions was based on a based on a five-point scale: 1 = never, 2 = seldom, 3= sometimes, 4 = usually, 5 = always, while the mental health condition of the LGBTs was measured using the Brief Symptom Inventory 18 (BSI-18) Scale. The BSI is the short version of the SCL-R-90 (Derogatis, 1993), for the assessment of psychological distress, especially in clinical practice. The Brief Symptom Inventory with 53 items was developed by Derogatis using a factor analysis and maintaining the scale structure with

the reduced item number of the SCL-90-R (somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, anger-hostility, phobic anxiety paranoid ideation and psychoticism).The BSI-18, which is the short version of BSI-53 contains only three six-item scales somatization (SOMA), anxiety (ANX), depression (DEPR), and the global Scale Global Severity Index (GSI). Responses range from 0 (not at all) to 3(nearly every day). Contrary to the SCL-90-R and the BSI-53, the BSI-18 scores are calculated by sum scores. The GSI therefore ranges between 0 – 72 and the three scales between 0 – 24. The application studies demonstrated that the BSI-18 is a suitable instrument for measuring psychological distress and comorbidities in patients with different mental and somatic illnesses (Adams, Boscarino, & Galea, 2006; Berman, Weems, & Stickle, 2006; Carlson, et al, 2004; Coley & Hernandez, 2006; Coultas D., Frederick, Barnett, Singh, Wludyka, 2005).

Procedure

The participants of the study were recruited from the LGBT community all over Ghana. Non-probability sampling of Snowball sampling technique was used to select the sample for the study. The snowball sampling technique was appropriate for the study due to the fact that the LGBT individuals are a hidden population in Ghana which makes it difficult to access them. However, because they know themselves, the individuals are closely connected. As a result, one participant is likely to know others who are LGBT that make them eligible for inclusion in the study. The only disadvantage of this sampling technique is that as the participants are not selected from a sampling frame, the sample is subject to bias. For example, an LGBT individual who have many friends who are also LGBT were more likely to be recruited into the sample than those who do not have many friends who are LGBT. The study used a sample of 500 LGBT individuals all over the country. A total of 500 questionnaires were therefore sent out to the participants of the study. Of the total of 500 questionnaires sent to the LGBT individuals, 494 were retrieved and were considered usable for the study. In all, a response rate of 98.8% was achieved for the study. According to Fincham (2008), response rates approximating 60% for most research should be the goal of researchers, and for survey research intended to represent all LGBT individuals in Ghana, a response rate of at least 90% is expected. This was however achieved in this study.

Statistical methods used

Statistical analysis was performed using IBM SPSS Statistics version 20.0 (IBM, Armonk, NY) with a significance level of 0.05. General descriptive statistics characteristics of the participants were expressed as the mean ± standard deviation for continuous variables and as frequency (%) for categorical variables. Internal consistency reliability was analyzed by using Cronbach's alpha coefficient, and test-retest reliability was analyzed by using Spearman's rank correlation coefficient. Descriptive statistics – frequencies, percentages, mean and standard deviations were used to describe the participants' demographics, discrimination and abuses, mental health as well as the general health conditions of the LGBTs. The inferential statistics of ordinary simple linear regression analysis was carried out to determine the impact the discrimination and abuses have on the mental and the general health conditions of the LGBT individuals in Ghana. On the other hand, one-way Analysis of Variance (one-way ANOVA was used to explore differences based sexual orientation of the participants.

Cronbach's alpha coefficient 0.892 was obtained for the discrimination and abuses (legal – 0.832; social – 0.831; employment – 0.781; religious – 0.810; health – 0.798; housing – 0.842; and family – 0.801), 0.894 for the mental health conditions (Somatization – 0.804; Depression – 0.862; Anxiety – 0.799), and 0.785 for general health conditions of the participants. Spear-man's rank correlation coefficients, which were used to assess correlations between test-retest results, ranged from 0.672 to 0.879. In general, Cronbach's alpha coefficients of at least 0.6 are thought to be indicative of good reliability (Lee, Yim and Kim, 2018**)**. Hence, the questionnaire for the study was confirmed to exhibit internal consistency for all the items.

Results

Table 1 presents the demographics of the participants of the study. Of the total 494 participants whose questionnaires were considered usable for the study, 73.5 % (n=363) were males, while 26.5 % (n=131) were females.

On the other hand, of the total 494 participants, 14.1% (n=70) identified themselves as lesbians; 41.9% (n=208) identified themselves as gays; 43.5% (n=216) identified themselves as bisexuals; and .4% (n=2) identified themselves as transgender.

Table 1. Demographic profiles of the participants

Demographics	**N**	**Frequency**
Gender		
Male	363	73.5%
Female	131	26.5%
Sexual Orientation		
Lesbian	70	14.1%
Gay	208	41.9%
Bisexual	216	43.5%
Transgender	2	.4%
Age		
14-19	23	4.6%
20-24	89	17.9%
25-29	194	39.0%
30-34	113	22.7%
35-39	35	7.0%
40-44	17	3.4%
45-49	12	2.4%
50 and above	14	2.8%
Region		
Ashanti	63	12.7%
BA	41	8.3%
Central	60	12.1%
Eastern	59	11.9%
Greater Accra	98	19.8%
Northern	40	8.1%
Upper East	13	2.6%
Upper West	15	3.0%
Volta	71	14.3%
Western	36	7.3%
Geographical Location		
Urban	399	89.7%
Rural	46	10.3%
Working status		
Working full-time	241	48.9%
Working part-time	87	17.6%
Unemployed	96	19.5%
Retired	12	2.4%
House-wife/husband	12	2.4%
Student/Pupil	33	6.7%

Self Employed	12	2.4%
Educational Level		
No formal school	13	2.6%
Primary school	23	4.7%
Junior High School	46	9.3%
Senior High School	140	28.5%
Technical/Vocational Training/Diploma	157	31.9%
University Graduate	78	15.9%
Post Graduate	27	5.5%
MSLC	8	1.6%
Ethnic group		
Akan	232	46.8%
Ga/Dangme	103	20.8%
Ewe	72	14.5%
Guan	12	2.4%
Mole-Dagbani	30	6.0%
Grusi	13	2.6%
Gruma	14	2.8%
Mande	3	.6%
Fante	17	3.4%

The participants were from the 14 years and above, with 4.6% (n=23) between the ages of 14-19 years; 17.9% (n=89) between the ages of 20-24 years; 39.0% (n=194) between the ages of 25-29 years; 22.7% (n=113) between the ages of 30-34 years; and 15.7% were 35 years and above. Of the regional distribution of the participants, majority (19.8%) were from the Greater Accra Region; 14.3% (n=71) were from the Volta Region; 12.7% (n=63) were from the Ashanti Region; 12.1% were from the Central Region; and 11.9% were from the Eastern Region. Less than 10.0% were from the Northern (8.1%), Upper East (2.6%), Upper West (3.0%), and Western (7.3%) Regions. Regarding geographical location, majority of the participants (89.7%) were located in the urban areas, while 10.3% were found in the rural areas. About 49% of the participants declared themselves as working full-time, 17.6% reported as working part-time, while 19.5% of the participants declared themselves as unemployed. However, 2.4% of the declared themselves as retired workers, house-wife/house-husband, and self-employed, respectively, while 6.7% (n=33) reported as being students/pupils.

Nearly 29% of the participants had completed senior high school, 31.9% had Technical/Vocational Training/Diploma, 15.9% had university undergraduate degree, and 5.5% had university post-graduate degree. Meanwhile, 9.3% (n=46) had primary education, 1.6% (n=8) had middle school living certificate education, while 2.6% (n=13) had no formal education. With respect to ethnicity, 46.8 % (n= 232) considered themselves to be Akans, 20.8% (n=103) considered themselves to be Ga/Dangme, while 14.5% considered themselves to be Ewes. However, 2.4% (n=12) regarded themselves as Guans, 6.0 % (n=30) regarded themselves as Mole-Dagbani, 2.6 % (n=13) regarded themselves as Grusi, 2.8% (n=14) regarded themselves as Gruma, and 3.4% (n=17) regarded themselves as Fantes.

Discriminations and abuses faced by LGBTs in ghana

Table 2 shows the mean, standard deviation and the p-values of one-way analysis of variance (ANOVA) of the various forms of discrimination and abuses faced by the LGBTs in Ghana. As shown in the table, the findings of the study indicated that the legal environment (M=4.1, SD=1.02), the social climate (M=3.6, SD=0.87), and the working environment (M=3.2, SD=1.11)

of the country highly discriminate against LGBTs in Ghana. On the other hand, the findings of the study revealed that the religious environment (M=2.7, SD=1.32), the health environment (M=2.4, SD=1.03), the housing environment (M=2.7, SD=1.23), and the family environment (M=2.7, SD=1.16) moderately discriminate against the LGBTs in Ghana. The results of the one-way analysis of variance (ANOVA) as shown in the table indicates that significant differences exist among the sexual orientation with regards to the discrimination and abuses faced by the LGBTs in Ghana. The one-way analysis of variance (ANOVA) showed significant difference among the sexual orientation with regards to employment discrimination and abuses, F (3,492) =2.702, p<.05). As shown in the table, with regards to employment discrimination and abuses, lesbians (M=3.3, SD=1.11) and gays (M=3.3, SD=1.17) were found to experience employment discrimination and abuses more than the bisexuals (M=3.0, SD=1.03) and the transgender (M=2.1, SD=1.59). Lesbians (M=3.4, SD=1.11) and gays (M = 3.0, SD = 1.32) were found to experience religious discrimination and abuses more than the bisexuals (M = 2.3, SD = 1.22) and the transgender group (M = 3.3, SD = 1.11). On the other hand, lesbians (M = 2.9, SD = 0.88) and gays (M = 2.5, SD = 1.08) reported to experience health discrimination and abuses more than the bisexuals (M = 2.2, SD = 0.96) and the transgender (M = 1.8, SD = 1.13). In terms of housing discrimination and abuses, the one-way analysis of variance showed a significant difference among the LGBTs, F (3,489) = 9.571, p < .05). Lesbians (M = 3.3, SD = 1.20) and gays (M = 2.9, SD = 1.36) reported to experience housing discrimination and abuses more than their bisexual (M = 2.5, SD = 1.02) and transgender counterparts (M = 1.6, SD = .088). In the family setting, the results of the one-way analysis of variance revealed a significant difference in the discrimination and abuses among the LGBT individuals, F (3,492) = 6.676, p <.05. Lesbians (M = 3.2, SD = .097) and gays (M = 2.8, SD = 1.16) were found to experience more of the family discrimination and abuses than their bisexual (M = 2.5, SD = 1.18) and transgender (M = 1.7, SD = 0.94) counterparts.

General health status of LGBTs in ghana

Table 3 shows the frequencies of cross tabulations of the general health conditions of LGBTs by their sexual orientation. Out of a total of 480 LGBTs who participated in the study, 33 (7.3%) described their health to be in poor condition, while 72(16.0%) considered their health to be in fair condition. However, a significant proportion of the participants 218(48.3%) considered themselves to be in good health condition, while 77(17.1%) described themselves to be in a very good health condition. Meanwhile, 51(11.3%) of the participants indicated that they in an excellent health condition. In terms of sexual orientation of the participants, the gays were found to be in poor – 23(5.1%) health condition than the rest of the sexual orientation individuals. On the other hand, the bisexuals were found to be in good – 130(28.8%) health conditions than the lesbians, gays and the transgender.

Mental health conditions of LGBTS in ghana

Table 4 shows the mean, standard deviation and the p-values of one–way ANOVA of the mental health conditions of the LGBTs.

Table 2. Mean, standard deviation and the p-values of one-way ANOVA of the discrimination and abuses of LGBTs

Discrimination and abuses	Sexual Orientation										
	Lesbian		Gay		Bisexual		Transgender		Total		
	M	SD	M	SD	M	SD	M	SD	M	SD	p-value
Legal	4.1	1.08	4.1	1.11	4.1	0.90	3.3	1.34	4.1	1.02	0.696
Social	3.7	1.01	3.6	0.98	3.6	0.70	3.6	0.59	3.6	0.87	0.449
Employment	3.3	1.11	3.3	1.17	3.0	1.03	2.1	1.59	3.2	1.11	0.045
Religious	3.4	1.11	3.0	1.32	2.3	1.22	1.6	0.85	2.7	1.32	0.000
Health	2.9	0.88	2.5	1.08	2.2	0.96	1.8	1.13	2.4	1.03	0.000
Housing	3.3	1.20	2.9	1.36	2.5	1.02	1.6	0.88	2.7	1.23	0.000
Family	3.2	0.97	2.8	1.16	2.5	1.18	1.7	0.94	2.7	1.16	0.000

Table 3. Cross tabulations of general health conditions of LGBTs by Sexual Orientation

General health conditions	**Sexual Orientation**				Total
	Lesbian	***Gay***	***Bisexual***	***Transgender***	
Poor	5 (1.1%)	23(5.1%)	5(1.1%)	-	33(7.35)
Fair	28(6.2%)	37(8.2%)	7(1.6%)	-	72(16.0%)
Good	12(2.7%)	75(16.6%)	130(28.8%)	1(.2%)	218(48.3%)
Very good	14(3.1%)	31(6.9%)	32(7.1%)	-	77(17.1%)
Excellent	4(.9%)	22(4.9%)	24(5.3%)	1(.2%)	51(11.3%)

Table 4. Mean, standard deviation and the p-values of one-way ANOVA of the mental health conditions of LGBTs

Mental health conditions	**Sexual Orientation**										
	Lesbian		***Gay***		***Bisexual***		***Transgender***		***Total***		
	M	SD	M	SD	M	SD	M	SD	M	SD	p-value
Somatization	.90	0.60	1.0	0.70	1.3	.79	0.7	0.99	1.1	0.75	.000
Depression	.80	0.68	1.0	0.75	1.2	.72	0.6	0.85	1.0	0.74	.000
Anxiety	1.2	0.70	1.1	0.83	1.3	.89	0.6	0.31	1.2	0.84	.000
GSI	1.0	0.50	1.0	0.67	1.3	.72	0.6	0.51	1.1	0.68	.000

As clearly noticed in the table the LGBTs reported that they experienced somatization (M=1.1, SD =.075), depression (M = 1.0, SD=.074), and anxiety (M=1.2, SD=.084) several days. The Global Severity Index, which measures a patient's severity-of-illness and also the overall psychological distress level indicated that the LGBTs suffered from somatization, depression and anxiety (M = 1.1, SD = 0.68) several days. The results from the one-way ANOVA shows a significant level of incidence of somatization, depression and anxiety among the LGBTs ($p<.05$). Bisexuals (M = 1.3, SD = .79) and gays (M = 1.0, SD = .70) were found to experience somatization several days than the lesbians (M = .90, SD = .60) and transgender group (M = .70, SD = .99). On the other hand, the bisexuals (M = 1.2, SD = .72) and gays (M = 1.0, SD = .75) on several days got depressed than the lesbians (M = .80, SD = .68) and transgender (M = .60, SD = .31). Meanwhile, the bisexuals (M = 1.3, SD = .89), gays (M = 1.1, SD = .89) and the lesbians (M = 1.2, SD = .70) were found to experience more anxiety than their transgender counterpart. The Global Severity Index (GSI) also indicated that the bisexuals (M = 1.3, SD = .72), gays (M = 1.0, SD = .67) and the lesbians (M = 1.0, SD = .50) for several days experienced mental disorders than their transgender counterparts

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Table 5. Regression estimates showing the impact of the discrimination and abuses on the mental and general health conditions of LGBTs in Ghana

Independent Variables (Discrimination and Abuses)	**Mental Health Conditions**			**General Health Conditions**
	Model 1	***Model 2***	***Model 3***	***Model 4***
	DV: Somatization	DV: Depression	DV: Anxiety	DV: General Health
Legal	.080**	.021	.102**	-.281
Social	-.128***	-.167***	-.046	.068***
Employment	.420***	.356***	.320***	.008
Religious	-.281***	-.251***	-.310***	-.153**
Health	.042	.068	-.076	.306***
Housing	-.054	-.152***	.064	-.120
Family	-.001	.084**	.101***	-.078

F	32.696***	17.997***	15.694***	7.418***
R	.567	.456	.431	.326
R Square	.322	.208	.186	.106
Adj. R	.312	.196	.174	.092
Constant	.768	1.139	.537	4.185
N	490	489	490	466

** p<0.05; *** p<0.01

Impact of Discrimination and Abuses on the Mental and General Health Conditions of LGBTS

Table 5 shows the simple linear regression estimates of the impact the discrimination and abuses faced by the LGBTs have on their mental and general health conditions. As shown in the table, the ordinary simple linear regression analysis results revealed that social discrimination and abuses$(\beta = -.128, p < .05)$, and religious discrimination and abuses$(\beta = -.281, p < .05)$ had a negative impact on the psychological distress of somatization. However, legal discrimination and abuses $(\beta = .080, p < .05)$, and employment discrimination and abuses$(\beta = 420, p < .05)$ had a positive impact on the psychological distress of somatization of the LGBTs. This implies that as the legal and employment challenges increases, the psychological distress of somatization of the LGBTs also increases, and vice versa. The results also showed that, social challenges$(\beta = -.167, p < .05)$, religious discrimination and abuses$(\beta = -.125, p < .05)$, and housing discrimination and abuses$(\beta = -.151, p < .05)$ had a negative impact on the psychological distress of depression of the LGBTs. This implies that social, religious and housing discrimination and

abuses do not have any significant negative effect on the psychological distress of depression of the LGBT. Meanwhile, employment discrimination and abuses$(\beta = .356, p < .05)$ and family discrimination and abuses $(\beta = .084, p < .05)$ were found to have a positive impact on the psychological distress of depression of the LGBTs. The results of the study also revealed that religious discrimination and abuses$(\beta = -.130, p < .05)$ had a negative impact on the psychological distress of anxiety of the LGBTs. This means that the religious discrimination and abuses faced by the LGBTs does not affect the anxiety of the LGBTs. This is not surprising as majority of the LGBTs are non-religious. However, legal discrimination and abuses $(\beta = .102, p < .05)$, employment discrimination and abuses $(\beta = .320, p < .05)$, and family discrimination and abuses $(\beta = .101, p < .05)$, were found to have a positive impact on the psychological distress of anxiety of the LGBTs. This implies that as the legal, employment, and family discrimination and abuses increases, the anxiety of the LGBTs also increases. Thus, the legal, employment, and family challenges affects the psychological distress of anxiety of the LGBTs. The results of the ordinary simple linear regression analysis also revealed that religious discrimination and abuses $(\beta = -.153, p < .05)$ had a negative impact on the general health of the LGBTs. This implies that as religious discrimination and abuses increases, the general health condition of the LGBTs decreases. Thus, religious challenges lead to the deterioration of the general health conditions of the LGBTs. This could explain the reason why most of the LGBTs have decided not to be religiously affiliated. On the other hand, the results of the study revealed that social discrimination and abuses $(\beta = .068, p < .05)$, and health discrimination and abuses $(\beta = .306, p < .05)$ does not lead to the deterioration of the general health conditions of the LGBTs.

Discussion

The aim of the study was to determine the various forms of discriminations and abuses faced by the LGBT individuals in Ghana, the mental and the general health conditions of the LGBT individuals in Ghana and the impact the discrimination and abuses have on the mental and the general health conditions of the LGBT individuals in Ghana. The findings of the study revealed that the LGBTs in Ghana face various forms of discrimination and abuses ranging from legal, social, employment, religious, health, housing to family discrimination and abuses. The findings of the study indicated that the major forms of discrimination and abuses faced by the LGBTs are of legal, social and employment forms. This finding is corroborated by the fact

that, in Ghana, homophobic comments, as well as physical assault and verbal abuse from the general public directed towards LGBTs are very common. For instance, the term “Obaa barima” meaning woman man, “Kodjo Besia”, which also literally means man woman (Kodjo, a name for boy born on Monday and Besia, which means female), “Supi”(lesbianism, which is also thought to be the affectionate ties pubescent girls forge at boarding-schools), “trumutu” (men who sleep with men) are all local terms used to stigmatize LGBTs by the general public (Allotey, 2015 and Søgaard, 2013).This atmosphere in which LGBTs find themselves in Ghana could be attributed largely in part to the law that discriminates against the LGBTs in the country.

The results of the study revealed significant differences in the discrimination and abuses based on the sexual orientation of the LGBTs. Statistically significant differences were found in among the sexual orientations of the LGBTs in terms of employment, religious, health, housing and family discrimination and abuses. The gays and lesbians were found to experience more of these discrimination and abuses more than their bisexual and transgender counterparts. This revelation is not surprising as majority in Ghana assumes that once a person is married to the opposite sex he or she cannot engage in such acts and so their attention is focused much more on those who are not married. They can easily ascribe to these unmarried people as gays or lesbians more than the married ones. These findings are supportive of previous findings. Drydakis (2014) found that gay and lesbian employees report more incidents of harassment and are more likely to report experiencing unfair treatment in the labour market than heterosexual employees. On the other hand, the gays and the lesbians are easily identifiable and are the main targets of Ghanaian, than the other sexual minorities. In fact, the bisexuals, because of their attraction to both male and female are not easily suspected and as such are safer than the gays and the lesbians, who are attracted to the single same sex. According to SEN (2010), the situation of LGBT people in the labour market is influenced by the general social and legal context. The public opinion towards LGBT people is negative, and that openness within a society towards different sexual orientations is the key to greater equality for LGBT people in the labour market. A research study conducted by Pew Research Center (2013) found that many LBGT adults see major religious institutions as unfriendly toward them, and about three-in-ten LGBT adults (29%) say they personally have been made to feel unwelcome in a church or religious organization. Gay men and lesbians were found somewhat more inclined than bisexual adults, especially bisexual women, to see a conflict between their religious beliefs and their sexual orientation. Roughly three-in-ten gay men (29%) and lesbians (31%) say there is a conflict, compared with a fifth (21%) of bisexual adults.

Contrary to the belief that LGBTs have poorer health status as a result of social stigmatization and internalized homophobia, as anti-LGBT attitudes are integrated into their self-perception that lead to health problems (Melo, Perilo, Braz & Pedrosa, 2011; Barbosa, Facchini, 2009; Araújo, Saraiva, Galvão, & Albuquerque, 2006) the finding of this study revealed that majority of the LGBTs had a general good health condition. One explanation for this finding is that the existence of internal and external homophobia implies the displacement of the LGBT population, in cases of illness, to pharmacies first. The LGBT population turn to health units only when the resolution becomes unsuccessful (Gutiérrez, 2007). Self-medication allows the disappearance of diseases, with search for health units only when conditions are very critical. This attitude permeates in almost all the sexual orientations including among heterosexuals in Ghana.

The results show that the LGBT individuals in Ghana experience somatization, depression, and anxiety several days. The Global Severity Index, which measures a patient's severity-of-illness and also the overall psychological distress level indicated that the LGBTs suffered from somatization, depression and anxiety several days. Moreover, a significant level of incidence of somatization, depression and anxiety was recorded among the LGBTs. Bisexuals and gays were found to experience somatization several days than the lesbians and transgender group. On the other hand, the bisexuals and gays on several days got depressed than the lesbians and transgender. Meanwhile, the bisexuals, gays and the lesbians were found to experience more anxiety than their transgender counterpart. These findings supports previous research findings on mental health of LGBT population, which reveals that people engaging in same-gender sexual

behaviour and/or identifying as LGBT are at higher risk for mental health disorders, including depression, anxiety, substance abuse, and suicide ideation and attempts (Cochran, 2001, 2003, 2007; Gilman et al., 2001; Sandfort, de Graaf, Bijl, & Schnabel, 2001; Balsam, *et al*., 2005; Cochran and Mays, 2000; D'Augelli, 2002; Espelage, Aragon, Birkett, & Koenig, 2008).

Evidence from previous studies, which the finding of this study also supports, suggests that compared with their other homosexuals, gay men suffer more from mental health problems including substance use disorders, affective disorders, and suicide (Cochran, 2001; Gilman et al., 2001;Sandfort, de Graaf, Bijl, & Schnabel, 2001; Bontempo & D'Augelli, 2002; Eisenberg & Resnick, 2006; Espelage et al., 2008; Fedewa & Ahn, 2011; Feinstein, Goldfried, & Davila, 2012; Russell, Ryan, Toomey, Diaz, & Sanchez, 2011; Ueno, 2005). These mental health disparities among these LGBT individuals have been explained by the direct experiences of stigma, prejudice, and discrimination that create a stressful social environment for these individuals (Friedman, 1999 as cited in Meyer, 2003; D'Augelli, 2002; Espelage, Aragon, Birkett, & Koenig, 2008; Fedewa & Ahn, 2011; Katz-Wise & Hyde, 2012).

The results of the study suggest that the social and religious discrimination and abuses does not have a negative impact on the psychological distress of depression, somatization and anxiety of the LGBTs. This implies that as the social and religious discrimination and abuses increases, it does not have any significant effect on the psychological distress of depression, somatization and anxiety of the LGBTs. This finding is not surprising as majority of the LGBTs interviewed in Ghana indicated their loss of faith in the pastors and the religious leaders and as such most of them are seen as not interested in religious activities. On the other hand, since the LGBTs know that everybody is against them, they have developed a tough skin, so to speak, and so the hostile social climate seems not to have a significant negative effect on them anymore. However, the legal, employment, and family discrimination and abuses faced by the LGBTs were found to have a positive impact on the psychological distress of anxiety of the LGBTs, implying that as the legal, employment, and family discrimination and abuses increased, the anxiety of the LGBTs also increased. One possible explanation for this finding, which also supports literature is that law, work, and family are among the basic needs of every human, and so if one is deprived of these basic needs then obviously it will have a negative effect on the welfare of the individual. Well-being and health are negatively affected when GLBT do not have social and family support and a sense of community (Nesmith, Burton & Cosgrove, 1999; Hershberger & D'Augelli, 1995; Turner, Pearlin & Mullan, 1998; Johnston, Stall & Smith, 1995; Watkins, 2000). Loss of support is also seen in the workplace; GLBT who experience greater heterosexism demonstrate greater job withdrawal (Waldo, 1999).

Conclusion

Discrimination and abuses have been found to impact on the mental and the general health of LGBTs. Research on the impact of homophobia shows that individuals who identify as lesbian, gay and bisexual have a shorter life expectancy and face health risks and social problems at a greater rate compared with the general population (Banks, 2003). Based on previous studies which reveals that the discrimination and abuses faced by the LGBTs have effects on the mental as well as general health of the LGBTs, the author sought to determine the various forms of discriminations and abuses faced by the LGBT individuals in Ghana, the mental and the general health conditions of the LGBT individuals in Ghana and the impact the discrimination and abuses have on the mental and the general health conditions of the LGBT individuals in Ghana. Overcoming centuries of discriminations and abuses faced by LGBTs requires more than the passing of laws. As with many social and political movements, including the anti-sexual violence movement, multiple strategies are needed to create significant social change. This study was carried out to help policy makers, stakeholders, the media and the general public, especially in Ghana, to get to know the issues at stake as far as the discrimination and abuses of LGBTs in Ghana are concerned so that informed decisions geared towards social change can be made. Recruiting the participants of the study through a non-probability sampling technique of Snow-ball, the results of the study corroborate with some of the findings of previous studies. The results of the present study reveal that, LGBTs in Ghana face various forms of discrimination and abuses

including legal, social, employment, religious, health, housing, and family discrimination and abuses. The main forms of discrimination and abuses faced by the LGBTs in Ghana are of legal social, and employment forms. There are significant differences in the discriminations and

on the mental and general health of the LGBTs. Most these discrimination and abuses are found to have a significant negative impact on the mental health conditions of the LGBTs more than on the general health conditions of the LGBTs. One possible explanation for this finding, which is also supported by literature, is that discrimination and abuses give room for self-medication, which allows for the disappearance of diseases, with search for health units only when conditions are very critical. This implies that the only time the LGBTs feel that they are in real danger is when they experience mental health conditions, which in this case, is not easy to turn to pharmacies for drugs except to seek professional medical attention. The results of the study also revealed that LGBT individuals in Ghana experience somatization, depression, and anxiety several days. The Global Severity Index, reveals that LGBT individuals in Ghana suffer from somatization, depression and anxiety for several days.

These findings suggest the immediate passage of laws and policies in Ghana protecting the rights, legal benefits and privileges of all people regardless of their sexual orientation, gender identity or gender expression. There should also be increased awareness of the broader social and legal context in which LGBT people find themselves in Ghana. This will help to alleviate the stigmatization and discrimination LGBTs face. The seriousness of the mental health conditions among LGBTs in Ghana calls for a serious intervention by all and sundry. If not, an individual having the feeling of "gayism", "lesbianism", or "bisexualism" could result in suicidal tendencies. This is because it is difficult for LGBT individuals to voice out their feelings publicly, even to their family members and close friends, as a result of the anti-LGBT environment LGBTs find themselves in. The author based on the findings of this study also recommends the provision of high-quality mental and medical health care treatment for all people and, therefore, expects all medical facilities and staff to provide appropriate, nondiscriminatory treatment to all people, regardless of their sexual abuses faced by the LGBTS based on their sexual orientation. The gays and lesbians are found to experience most of these discrimination and abuses more than their bisexual and transgender counterpart. The discrimination and abuses faced by the LGBTS are found to have a negative effect orientation, gender identity or gender expression. The author also recommends the creation of a welcoming and affirming environment for LGBTs by creating an office space and (or) hospital unit that affirms people's identity.

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Assessing Factors Influencing Pre-Service Teachers' Mathematical Knowledge for Teaching (MKT) Mathematics in Ghanaian Basic Schools

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Abstract

Introduction: *Knowledge about teaching mathematics remains a contentious issue in the preparation of pre-service teachers. This study assessed factors influencing pre-service teachers' mathematical knowledge for teaching (MKT) mathematics in Ghanaian basic schools.*

Methods: *The cross-sectional survey design was adopted for this study. A total of 998 pre-service teachers from ten (10) public colleges of education were sampled via multi-stage sampling technique for the study. Structured questionnaire and unstructured observation schedule were used to conduct the survey. Secondary data was also collected in the form of mathematics test results. The Statistical Package for Social Sciences version 22 was used to analyse the data using descriptive statistics (frequency count, percentage) and inferential statistics (Pearson's correlation, multiple regression, exploratory factor analysis).*

Results: *The study revealed that many pre-service teachers in Ghanaian public colleges of education had weak mathematics content knowledge. The following factors influenced MKT of the pre-service teachers: gender, ways of imparting mathematics knowledge, perception about mathematics as a subject, perception about mathematics teaching and learning and attitudes towards mathematics ($p < .05$).*

Conclusions: *This study exploring the factors that influence pre-service teachers' MKT suggests that, to be able to build effective mathematics teacher base in any basic school, there must be effective training on factors like gender, perception, and attitude. There is therefore the need for the National Council for Tertiary Education to emphasis on factors that influence MKT besides the content of the college of education mathematics curriculum.*

Keywords: *Colleges of education, mathematical knowledge for teaching, pre-service teachers.*

Introduction

Individuals who enroll into colleges of education (CoE) in Ghana are known as pre-service teachers or teacher trainees. Pre-service teachers are selected into the CoE by virtue of their performance in the West Africa Senior Secondary Certificate Examination (WASSCE). Currently, each pre-service teacher goes through four semesters in college, and one academic year of internship in a basic school. The mathematics courses offered at the CoE comprises content and methodology courses. The method courses are offered in the second year of the programme by which time the trainees had already been taken through the basic mathematics content course. It is believed that the pre-service training mathematics curriculum will equip pre-service teachers with the basic mathematical knowledge needed for teaching at the primary and junior high school (JHS) during their internship and upon completion of their training.

The thinking and practices of preservice teachers are shaped by background attributes such as entry behavior (e.g., entry level mathematics content knowledge), professional and life experience, the nature and extent of teacher preparation and continued professional learning. For this reason, colleges of education (CoE) in Ghana are strategically positioned to train teachers to acquire the professional competence with which to impart knowledge to learners in basic and high schools. Accordingly, preservice mathematics teachers' preparation should entail all the necessary conditions needed to equip them with the requisite mathematical knowledge for teaching (MKT). MKT is the

domain of knowledge that a teacher uses in the act of teaching [1].

The study of science and mathematics among Ghanaian children has been a subject of concern over the last three decades [2]. A number of indicators have made it clear that children in basic schools and secondary schools are not doing well in science and mathematics. Results of the National Education Assessment (NEA) in mathematics that is administered to a sample of third grade and sixth grade pupils every two years, indicate that over the last six years, less than 20% reached proficiency level in mathematics [3]. Several researchers [4, 5, 6] have found that pre-service teachers do not always possess the conceptual understanding of the mathematics content they will be expected to teach. Evidence of this is highlighted in the 2008 chief examiners report on teaching primary mathematics. Also, pre-service teachers are still exhibiting weak performances in their 'End of Semester Examination' [7] giving the impression that there has been little improvement in mathematics performance over the years. This phenomenon could be partly attributed to inadequate mathematical knowledge for teaching (MKT) by teachers who teach pupils from the lower level through to higher levels. It has been indicated that the low performance in mathematics at the pre-tertiary level of the education system could be attributed to the low content base knowledge of teachers of mathematics [8]. Perhaps one way of resolving this non-performance in mathematics education is by ensuring that basic teachers' MKT is firmly grounded. It is therefore important that a comprehensive look is made into the MKT of pre-service teachers in Ghanaian colleges of education.

There is a phenomenon of poor performance of pupils in mathematics in Ghanaian basic and senior high schools, and this is possibly traced to pre-service teachers' poor mathematical knowledge of teaching [MKT] [9, 10]. This suggests that colleges of education and universities that train teachers in Ghana have not yet been successful in grooming teacher trainees become confident and competent in the teaching of mathematics. A critical examination of the way teachers are prepared in MKT in Ghanaian colleges of education seemed to suggest that they are ill-equipped with MKT. Oftentimes, pre-service mathematics teachers in Ghanaian colleges of education experience the challenge of transitioning their mathematical knowledge of teaching from the college setting to future school (field) settings (David, A. personal communication, 17th April, 2019). It is observed that they experience the difficulty of integrating theory and practice, and/or integrating knowledge gained between classroom and the field [11]. A number of performance indicators revealed downward trends in mathematics performance [7]. At the primary level, for instance, National Education Assessment (NEA) report by the Ministry of Education (MoE) in Ghana indicated that less than 20% reached proficiency level in mathematics at P3 and P6 over the last six years [12]. At the Basic Education Certificate Examination [BECE] (2014, 2015, 2016, 2017), Chief Examiner's report by the West African Examination Council (WAEC) revealed candidates' performance falling below average in mathematics. The poor results in NESAR at P2 indicates undue focus on memorization of facts and rules; J.H.S 2 students performed poorly in international assessment such as TIMSS; WASSCE results for SHS students showed poor performance in integrated science and core mathematics with about 60% obtaining poor grades [12]. Teaching primary and junior high secondary mathematics was not satisfactory; only a limited number of the candidates exhibited good mastery in areas tested [7]. For this reason, this study assessed the mathematical knowledge for teaching (MKT) of pre-service teachers in teaching basic school mathematics, and practical ways to enhance pre-service teachers' MKT for teaching and learning in Ghanaian basic schools. Additionally, it investigated the factors influencing Ghanaian public colleges of education pre-service teachers' mathematical knowledge for teaching basic school mathematics.

The study adopted the Constructivist Theory in mathematics teaching and learning. Constructivism is derived from the works of Jean Piaget [13], Lev Vygotsky [14], John Dewey [15] and many others as cited in Acikalin [16] who studied how learners acquire knowledge. Constructivism is a philosophy of learning founded on the premise that, by reflecting on our experiences, learners construct their understanding of the world they live in. Constructivism represents a change in perspective on what knowledge is and how it is

developed [17]. A constructivist approach to mathematics learning involves the child as an active participant in the learning process. The constructivist view of knowledge has been associated to mathematics learning and teaching. From a constructivist perspective, knowledge is not passively received from the world, from others, or from authoritative sources. Rather, all knowledge is created as individuals adapt to and make sense of their experiential worlds [18]. Applying these ideas to mathematical knowledge for teaching (MKT), mathematics is viewed as an ongoing process of human minds, not an aspect of the external world waiting to be discovered [19]. According to Glasersfeld and Steffe (1991), the essence of constructivism can be summarized in the following way: *knowledge cannot simply be transferred ready-made from parent to child or from teacher to student but has to be actively built up by each learner in his own mind* [18]. In the constructivist classroom, a teacher has an important role. Rather than a dispenser of knowledge, the teacher is a guide and facilitator who encourage learners to question, challenge, and formulate their own ideas, opinions and conclusions. Although (social) constructivist perspective on learning has provided mathematics educators with useful ways to understand learning and has given a useful framework for thinking about mathematics learning in classrooms, it does not define any particular model for teaching mathematics [19]. This framework also bears on subject-matter content knowledge by Shuman [20] who viewed mathematics content knowledge as rooted in knowledge and application of procedural facts, algorithms, and methods as well as the understanding of how these are interrelated [21]. Figures 1 and 2 presented the conceptual frameworks for the study.

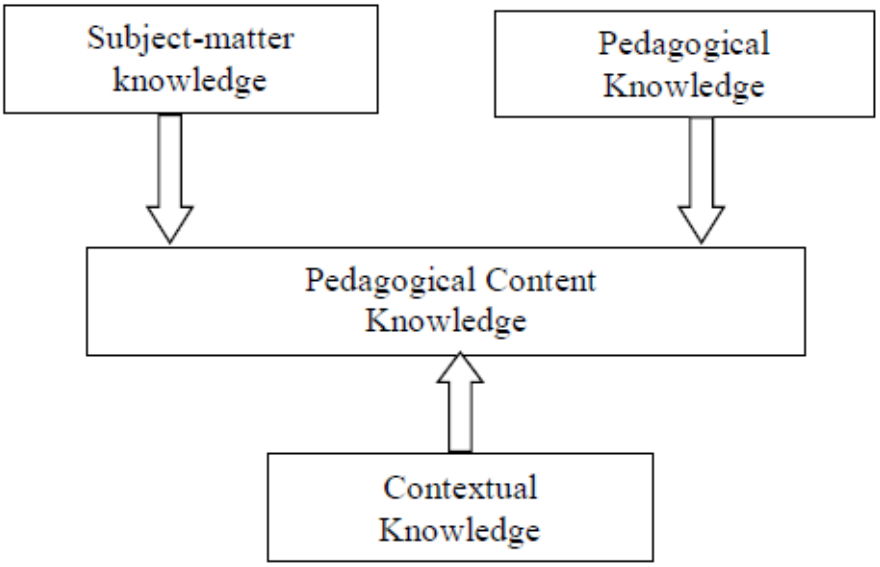

Figure 1. Adapted conceptual framework

Source: Adapted from Gess-Newsome [22].

In Figure 1, the model depicts that teaching mathematics requires subject matter knowledge which is the element of mathematics the teacher is supposed to teach, the pedagogical knowledge which is the knowledge about the child being taught and contextual knowledge which forms the part of content to be taught. The mathematical knowledge (MKT) for teaching that mathematics teachers need to know is substantial. The researcher therefore sort to find ways to improving the teaching and learning of mathematics in the basic school by considering the model that has a direct implication on the use of manipulatives for practicality and the attitudes of the teacher being trained to take up the task of teaching mathematics in the basic school. The National Council of Teachers of Mathematics (NCTM) argue that traditional, procedural-based approaches to mathematics teaching do not prepare students enough for higher level mathematics. To them, success in higher level mathematics is dependent on students' understanding of concepts as well as procedures. In order for students to receive mathematics instruction that attends to concepts as well as

procedures, teachers must receive additional training in MKT and support to deliver instruction in a more conceptually-based way [23, 24).

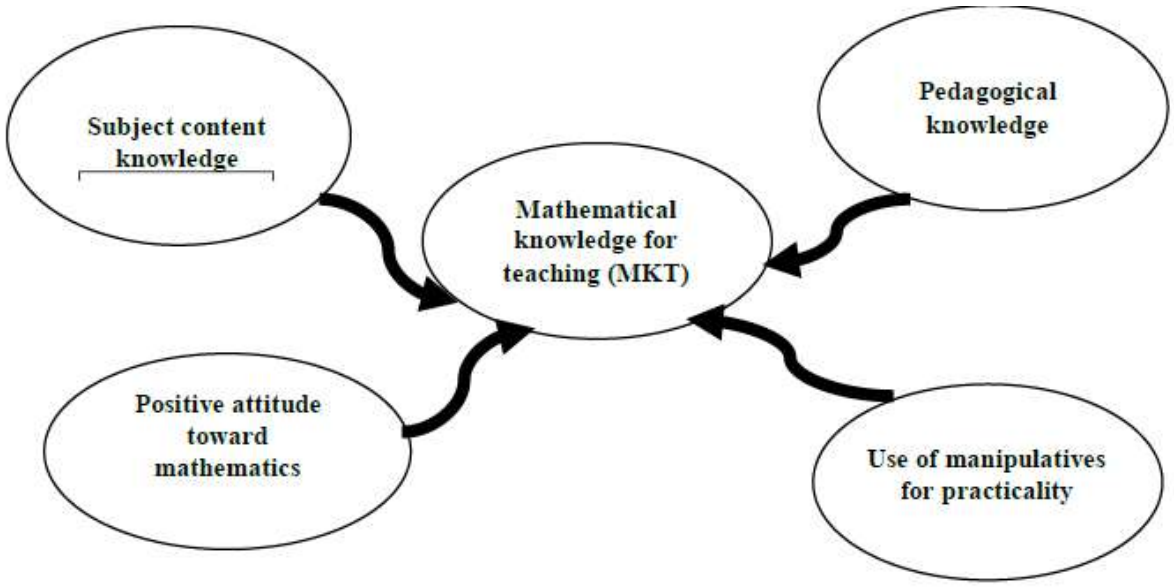

Figure 2. Mathematical knowledge for teaching basic school mathematics

Source: Researcher's construct (2019).

The main difference between the adapted framework (Figure 1) and the researchers' framework (Figure 2) is that, the researcher is considering a model that depicts the knowledge that is needed in teaching mathematics to the basic school child who is mainly at concrete operational stage [25]. This involves subject matter knowledge which is the element of mathematics the teacher is supposed to teach, the pedagogical knowledge which is the knowledge about the child being taught, the use of manipulatives for practicality in teaching, and considering the teachers' attitude towards the subject he or she is supposed to teach. In order to construct mathematical concepts in students' mind, pedagogical knowledge as well as subject content knowledge are needed. The manner in which teachers relate their subject matter (what they know about what they teach) to their pedagogical knowledge (what they know about the children they are teaching) and how instructions are structured with the use of manipulatives in an honest manner coupled with positive attitude to mathematics are seen as integral of mathematical knowledge for teaching (MKT). The pedagogical content knowledge of the adapted model is one aspect of mathematical knowledge needed to teach the basic school child. To teach a basic school subject like mathematics effectively necessitates knowledge of mathematics that goes beyond the knowledge of subject matter per se to the dimension of subject matter knowledge for teaching [20]. So, pre-service teachers require mathematical content knowledge before taking up the job as service teachers. The next section discusses the conceptualization of mathematical knowledge for teaching (MKT) and factors influencing its development.

The way teachers instruct in a particular content is determined partly by their pedagogical content knowledge which '*goes beyond knowledge of the subject matter per se to the dimension of the subject matter knowledge for teaching'* [20] and partly by teachers' mathematics-related beliefs [26, 27]. MKT has been described as the complex relationship between mathematics content knowledge and teaching [28]. It is the domain of knowledge that a teacher uses in the act of teaching. In other words, MKT involves knowing what kinds of common and specialized mathematical content with knowledge of skills needed for the distinctive work in teaching mathematics [1]. Some studies aimed at teachers' mathematical knowledge mainly have focused on two topics: first, the teachers' characteristics, for example, the number of mathematics courses they have completed, and second, the nature of teachers' mathematical knowledge [29].

A study of developing measures of teachers' MKT revealed that teacher's knowledge for teaching basic mathematics is multidimensional and includes knowledge of various mathematical topics (example, number and operations, and algebra) [30]. A research team in Michigan has developed a questionnaire to measure MKT. The purpose of the measures is to research the nature, role and different types of mathematical knowledge for teaching [31]. The MKT measures were originally developed to measure and research the mathematical knowledge for teaching held by US teachers. The fact that the measures relate to the task of teaching, not teaching practice, makes them more universal and more suitable for translation mathematics, and teaching material when attempting to translate and adapt the MKT measures [31, 32, 33]. The investigation of the MKT measures' adaptability can be useful for future studies because it can enable comparison of teachers' knowledge across nations [32]. Even though adjusting and translating the MKT measures involve challenges and cost, it is worthwhile since the MKT measures give an opportunity to measure teachers' knowledge at scale with quality [34]. The MKT measures have been used to measure teachers and prospective teachers' mathematical knowledge for teaching outside the US. They have been adapted and translated for use in Ghana, Indonesia, Ireland, Korea, and Norway [35].

Prospective mathematics' teachers need to understand the content knowledge and fundamental principles that underlie school mathematics. Teacher's knowledge of mathematics is a complicated conceptual structure, including its structure and unifying concepts; knowledge of procedures and strategies; history of mathematics; links with of other subjects and knowledge about mathematics as a whole [36]. In Ghana, teaching in the basic school especially at the lower level requires that teachers must know some amount of mathematics (content knowledge) studied at that level. Teachers' content knowledge is related to the mathematical quality of teachers' instructions and teaching style [37, 38, 39, 40]. Extensive evidence suggests that it is important to develop teachers' mathematical content knowledge and values so that teachers can more effectively support students' mathematical learning [41, 42, 43].

A teacher in mathematics needs a subject matter knowledge that is a knowledge about and of mathematics [20, 36], which includes knowledge of the content of a subject area as well as understanding of the structures of the subject matter [20, 44]. Teachers' knowledge of teaching mathematics is based on their learning experiences in mathematics. This knowledge is developed during the studies of mathematics but most of this knowledge is acquired in teacher education, teacher practice or in place of work [36]. Teachers' knowledge of mathematics is important for utilizing instructional materials in most productive way, assessing students' progress and finding the most effective presentation and sequence of the subject [37, 45]. Therefore, colleges of education in Ghana need to help pre-service teachers spend as much time as possible with the content they will be teaching while exploring the ways in which primary students develop conceptions and misconceptions about this content.

Researchers have been influential in the project to better understand teachers' knowledge of mathematics [46]. The choice of ways to measure the mathematical content knowledge of prospective teachers was grounded in the work of Ball and the research team at the University of Michigan [30, 47, 48], and their definition of common content knowledge (knowledge held by people outside the teaching profession) and specialized content knowledge (knowledge used in teaching) [49]. A study found that pre-service teachers in the graduate program had an inadequate, basic mathematics background to prepare K-12 students [50]. More so, few studies on measuring MCK have been done in developing countries. In their systematic review, some researchers found only one study of MCK that included an African country [51, 52].

Materials and methods

This is a quantitative research which adopted the cross-sectional survey design. The rationale for the adoption of a cross-sectional survey design was that it relied on large-scale data from a representative sample of a population with the aim of describing the nature of existing conditions [53]. The target population was three thousand, three hundred and forty (3342) second-year or level 200 pre-service teachers in forty-six (46) public colleges of education in Ghana. Multi-stage sampling was used in sampling nine

hundred and ninety-eight (n = 998, 30%) second year pre-service teachers from ten (10) conveniently selected public colleges of education for the study. These colleges categorized into three geographical clusters or belts of Republic of Ghana, namely; the Southern, Central and Northern belts. Purposive sampling was used to pick level 200 students. The second-year group was purposively chosen because, with the curriculum of colleges of education, methodology courses which are actually pedagogical knowledge of the various subject areas are taught in second year besides the content knowledge studied in level 100. Therefore, they were chosen since the researchers' objective was to assess mathematical knowledge for teaching (MKT) which embodies the mathematical content knowledge and pedagogical knowledge of pre-service teachers for teaching basic school mathematics. The third-year students were already in off-campus for teaching practice. A combination of stratified and simple random sampling techniques was used to sample 998 (30%) trainee (pre-service) teachers of the target population. The stratified sampling technique was used to categorise and select the respondents based on gender. The simple random sampling technique using the lottery approach was then used to select 645 (65%) males and 353 (35%) female students from the sampled colleges of education. The choice of 15% of the population is based on the assertion that a sample size of 5 to 30 percent of the accessible population is appropriate for a descriptive survey [54]. Again, the sample size was deemed representative of the target population based on the recommendation that a sample size of 10% to 20% of the target population is representative in descriptive research [55].

Structured questionnaire, mathematics test items and unstructured observation schedule developed by the researcher were used to collect data for the study. These instruments were used because of the explorative and descriptive nature of the study. The questionnaire had a reliability coefficient (r) of 0.895 using Cronbach Alpha reliability analysis via the Statistical Package for Social Sciences (SPSS) software version 22. The instrument was pilot tested on twenty (20) level 200 students from Ada College of Education which did not form part of the actual field study. Secondary data was also collected in the form of mathematics test results from Institute of Education at University of Cape Coast. The data were described using descriptive statistics (frequency count, percentage) as well as inferential statistics (Pearson's correlation, multiple regression, exploratory factor analysis [EFA]) were computed at a significance level (p-value) of $p \leq 0.05$ (2-tailed) at a confidence interval (C.I) of 95% with a margin of error of ± 5. The data analysis was done SPSS software version 22.

Results

Background information

Table 1. Background information of respondents (n = 998)

Variable	Frequency	%
Sex		
Male	645	65
Female	353	35
Age (yrs.)		
18 - 22	500	50
23 - 27	464	47
28 & above	34	3

It is observed in Table 1 that more male (n = 645, 65%) than female (n = 353, 35%) pre-service teachers were used for the study. This result suggests that there were more male than female students in public colleges of education in Ghana. About half of the respondent sample (n= 500, 50%) were between ages 18 to 22, ages 23 to 27 years constituted 47% (n=464), whilst from age 28 and above constituted 3% (n=34). With regard to entry level grade in mathematics, the data collected and analysed indicated that many of the

pre-service teachers (n = 947, 95%) had good entry grades of A1, B2, B3, C4, C5 and C6.

The factors influencing mathematical knowledge for teaching (MKT) of pre-service teachers in Ghanaian colleges of education

In order to find the plausible factors that influence pre-service teachers' MKT, Pearson's correlation was done to analyse the relationship between pre-service teachers' attitude, perception about mathematics as a subject and perception about mathematics teaching and learning, ways of imparting mathematical knowledge and mathematics performance. A scatter plot was used in the representation of the relationships between the variables or factors. The scatter plot in Figures 3 and 4 illustrate a positive correlation in that the data points start from lower left to the upper right of the graph. This brings to the fore the power of the idea launched by Shulman and his colleagues that good mathematics performance demands positive attitude and hands on activities [20]. This explains why National Teachers Council and stakeholders in teacher education are eager to set requirements based on national teachers' standards in Ghana.

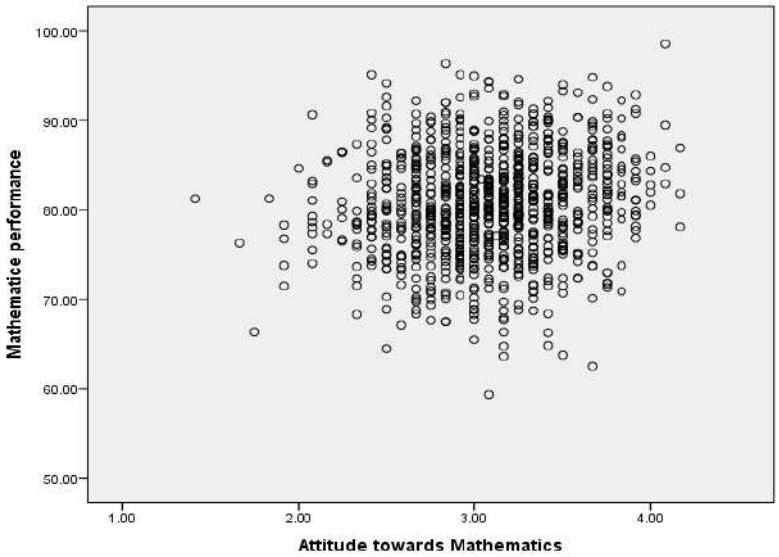

Figure 3. Scatter plot between mathematics performance and attitudes of mathematics teachers

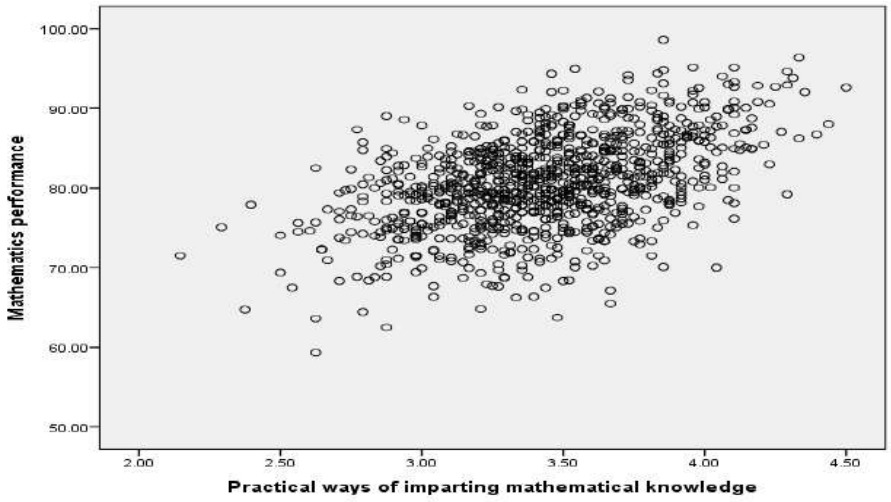

Figure 4. Scatter plot between mathematic performance and practical ways of imparting mathematical knowledge

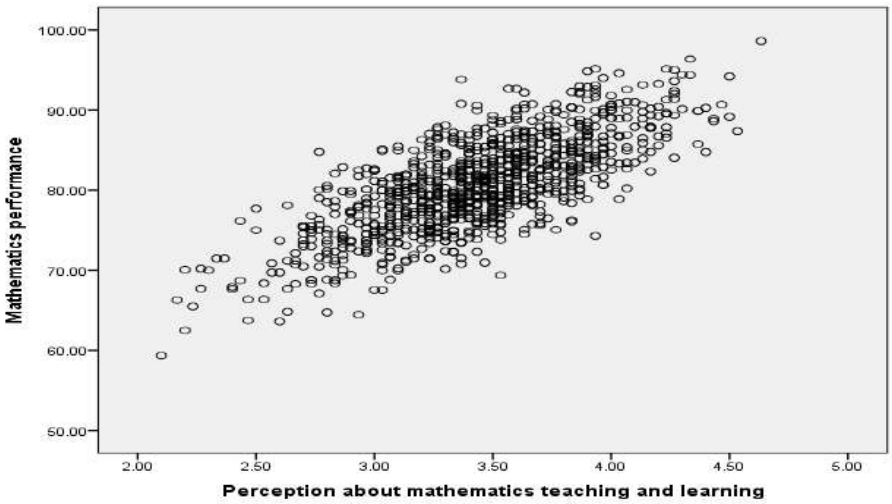

Figure 5. Scatter plot between mathematic performance and perception about mathematics teaching and learning

As it is recorded from the correlation analyses, it could be seen that there is a positive relationship between pre-service teachers' attitudes towards mathematics, practical ways of imparting mathematical knowledge, perception about mathematics as a subject and perception about mathematics teaching and learning, on their mathematics performance. A five-stage hierarchical multiple regressions were conducted with mathematics performance as the dependent variable to ascertain the established relationship from the correlation analyses. Demographics were entered at stage one of the regression model as a controlled variable. The pre-service teachers' attitudes towards mathematics were entered at stage two, whiles practical ways of imparting mathematical knowledge onto pre-service teachers at college and pupils in basic schools at stage three. Perception about mathematics as a subject was entered at stage 4 and finally, perception about mathematics teaching and learning was entered at stage 5.

Table 2. Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.145[a]	.021	.018	6.25553	.021	7.078	3	994	.001
2	.187[b]	.035	.030	6.21698	.014	7.183	2	992	.001
3	.525[c]	.276	.270	5.39518	.241	82.305	4	988	.001
4	.532[d]	.283	.275	5.37357	.007	4.982	2	986	.007
5	.900[e]	.811	.808	2.76838	.527	546.786	5	981	.001

Table 3. ANOVA

Model		Sum of Squares	df	Mean Square	F	p-value
1	Regression	830.972	3	276.991	7.078	.001
	Residual	38896.908	994	39.132		
	Total	39727.881	997			
2	Regression	1386.202	5	277.240	7.173	.001
	Residual	38341.679	992	38.651		
	Total	39727.881	997			

3	Regression	10969.174	9	1218.797	41.872	.001
	Residual	28758.706	988	29.108		
	Total	39727.881	997			
4	Regression	11256.882	11	1023.353	35.440	.001
	Residual	28470.999	986	28.875		
	Total	39727.881	997			
5	Regression	32209.556	16	2013.097	262.671	.001
	Residual	7518.325	981	7.664		
	Total	39727.881	997			

From the model summary and ANOVA, it was revealed that at model one, demographics contributed significantly to the regression model, $(F\ (3{,}998) = 7.078, P = .001)$ and accounted for 2.1% of the variation in mathematics performance. Introducing pre-service teachers' attitudes towards mathematics variables explained an additional 1.4% of variation in mathematics performance and this change in R-square was significant$(F\ (2{,}992) = 7.183, P = .001)$. Adding practical ways of imparting mathematical knowledge onto pre-service teachers at college and pupils in basic schools' variables to the regression model explained an additional 24.1% of the variation in mathematics performance and this change in R^2 was significant,$(F(4{,}988) = 82.305, P = .001)$. When perception about mathematics as a subject variable was added to the model, the regression model explained an additional 0.7% of the variation in mathematics performance and this change in R^2 was significant, $(F(2{,}986) = 0000, P = .007)$. And when perception about mathematics teaching and learning was added to the model, the regression model explained an additional 52.7% of the variation in mathematics performance and this change in R^2 was significant,$(F\ (5{,}981) = 546.786, P = .001)$. When all the independent variables were included in model five of the regression, the independent variables were jointly significant$(F\ (16{,}981) = 262.671, P = .001)$, explaining 81.1% of variation in mathematics performance

Table 4. Coefficients of hierarchical multiple regression

Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**p-value**
		B	**Std. Error**	**Beta**		
1	(Constant)	75.930	.623		121.820	0.001
	Gender					
	Female	reference point				
	Male	2.382	.598	.128	3.986	.001
	Age group					
	18 to 22 years	reference point				
	23 to 27 years	-.461	.412	-.036	-1.118	.264
	28 and above	-1.812	1.109	-.052	-1.633	.103
2	(Constant)	70.942	1.536		46.181	.001
	Gender					
	Female	reference point				
	Male	2.305	.594	.124	3.879	**.001**

	Age group					
	18 to 22 years	reference point				
	23 to 27 years	-.479	.410	-.038	-1.168	.243
	28 and above	-1.778	1.103	-.051	-1.611	.107
	Pre-service teachers attitude towards mathematics					
	F1	1.020	.293	.109	3.482	.001
	F2	.572	.363	.049	1.576	.115
3	(Constant)	47.800	2.385		20.042	.001
	Gender					
	Female	reference point				
	Male	2.475	.516	.133	4.793	.001
	Age group					
	18 to 22 years	reference point				
	23 to 27 years	-.376	.356	-.030	-1.058	.290
	28 and above	-.653	.962	-.019	-.679	.497
	Pre-service teachers' attitude towards mathematics					
	F1	1.056	.254	.113	4.155	.000
	F2	.097	.317	.008	.306	.760
	Practical ways of imparting mathematical knowledge					
	F1	2.476	.222	.304	11.162	.001
	F2	2.181	.178	.332	12.252	.001
	F3	.459	.433	.029	1.062	.289
	F4	1.953	.284	.188	6.888	.001
4	(Constant)	39.254	3.646		10.766	.001
	Gender					
	Female	reference point				
	Male	2.483	.515	.134	4.825	.001
	Age group					
	18 to 22 years	reference point				
	23 to 27 years	-.358	.355	-.028	-1.010	.313
	28 and above	-.579	.959	-.017	-.604	.546
	Pre-service teachers' attitude towards mathematics					
	F1	1.046	.253	.111	4.128	.001
	F2	.101	.316	.009	.318	.750
	Practical ways of imparting mathematical knowledge					
	F1	2.506	.221	.308	11.317	.001
	F2	2.182	.177	.332	12.307	.001
	F3	.426	.431	.027	.988	.323
	F4	2.009	.293	.193	6.852	.001
	Perception about mathematics as a subject					
	F7	.776	.513	.042	1.513	.131
	F8	1.578	.540	.081	2.924	.004
5	(Constant)	-2.225	2.107		-1.056	.291
	Gender					
	Female	reference point				

	Male	2.692	.265	.145	10.145	.001
	Age group					
	18 to 22 years	reference point				
	23 to 27 years	.172	.183	.014	.939	.348
	28 and above	.269	.497	.008	.542	.588
	Pre-service teachers attitude towards mathematics					
	F1	1.405	.131	.150	10.725	.001
	F2	.406	.163	.035	2.488	.013
	Practical ways of imparting mathematical knowledge					
	F1	2.527	.115	.311	22.047	.001
	F2	2.348	.092	.358	25.662	.001
	F3	-.221	.222	-.014	-.994	.321
	F4	2.203	.151	.212	14.576	.001
	Perception about mathematics as a subject					
	F1	1.264	.265	.069	4.762	.001
	F2	1.811	.278	.093	6.507	.001
	Perception about mathematics teaching and learning					
	F1	.149	.134	.018	1.105	.269
	F2	2.149	.178	.259	12.097	.001
	F3	2.319	.259	.209	8.959	.001
	F4	2.951	.134	.309	22.016	.001
	F5	2.865	.126	.432	22.728	.001

From Table 4, it can be seen that gender significantly predicts mathematics performance. Male pre-service teachers performed better in mathematics than female counterparts. The other variables that significantly predict mathematics performance were attitudes towards mathematics, practical ways of imparting mathematical knowledge (Factor 1, Factor 2 and Factor 4), perception about mathematics as a subject and perception about mathematics teaching and learning (Factor 2, Factor 3, Factor 4 and Factor 5). Factor analyses was also run to modify the plausible factors by reducing the number of entries that constitute the various factors analysed.

Table 5. KMO and Bartlett's test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.951
Bartlett's Test of Sphericity	Approx. Chi-square	2.232E4
	p-value	0.001

Table 5 presents the KMO test which measures the ratio of the squared correlation and the squared partial correlation between variables. For an appropriate data, the value should exceed 0.6. Bartlett's test tests if the correlation matrix is an identity matrix. However, we want to have correlated variables, so the off-diagonal elements should not be zero (0). Thus, the test should be significant. From Table 5, the Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) value is 0.951, and the Bartlett's test is significant($p - value = 0.001$). This is indicative that factor analysis used was appropriate.

Discussions

The study found that many of the pre-service teachers (n = 947, 95%) had good entry grades (A1, B2, B3, C4, C5 and C6), but it did not reflect in their mathematics foundation courses as well as their mathematics professional course to build their MKT. This confirms the inadequacy of

MKT of pre-service teachers as reported by researchers in the West [56, 57, 58, 59, 60, 61]. The increase in predictive power of MKT for increased alignment of high performance in mathematics in the basic school supports the recommendation of researchers [31,56] who use the term mathematical content for teaching, and conforms to the recommendations of authors [62, 63] that prospective programs need to account for the weak mathematics knowledge of substantial portions of pre-service teachers.

It could be concluded from the results that the following factors influenced MKT of pre-service teachers: gender, ways of imparting mathematics knowledge, perception about mathematics as a subject, perception about mathematics teaching and learning and attitudes towards mathematics ($p < .05$). These findings validate the views of several researchers who averred that pre-service teachers' attitudes influence their approach in learning how to teach [64], the way they will teach in the future [65], and the classroom ethos [36, 65]. It has been argued that teachers' attitudes to mathematics may influence their enthusiasm and confidence to teaching the subject [36].

Conclusions

The entry behavior with regard to the grades in mathematics of many pre-service teachers in Ghanaian public colleges of education seemed good. Nonetheless, this does not reflection in their mathematics foundation courses as well as their mathematics professional course in college to build their MKT. This implies that pre-service teachers in Ghanaian colleges of education are likely to have weak mathematics knowledge for teaching mathematics in basic schools after completion of their course of study. In view of the above findings, the study makes the following recommendations:

1. Mathematics tutors in Ghanaian colleges of education should organize remedial lessons for pre-service teachers to scale-up their mathematics content knowledge, procedural and pedagogical knowledge. This would step up their mathematical knowledge for teaching (MKT) mathematics in Ghanaian Basic schools.
2. The National Council for Tertiary Education (NCTE) of Ghana should review the mathematics curriculum for colleges of education with regard to shedding light on the effect of values on MKT.
3. The Ghana Education Service should carry out continuous professional development programmes for in-service mathematics teachers to strengthen their mathematical knowledge for teaching (MKT) with regard to perception about the subject, attitude to pedagogy and assessment and constant reminder of gender equality and social inclusion.

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Impact of Socio-Economic Factors on Students' Achievement in English Language in the Senior High Schools in West Akim Municipality of Ghana

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Abstract

The main focus of the study is to investigate the influence of students' socio-economic background, parental involvement and teacher's attitude on their achievement in English in the senior high schools in West Akim Municipality. The study also investigated the cumulative effect of the three factors on students' achievement in the English language. Three research questions guided the study. Ex-post factor research design was adopted for the study. A total of 100 students were selected by means of simple random sampling technique while four schools in the municipal were selected via stratified sampling technique. Questionnaire was the major instrument data collection. Quantitative paradigm was employed for data analysis which involved the use of descriptive (percentages and frequencies) and inferential statistics of which tables were used to highlight the objectives of the study. Based on the investigative study conducted, it was discovered that Findings of the study revealed that socio-economic background, parental involvement and teachers' attitude are very important factors in determining students' achievement in core subjects such as the English language. Additionally, findings reveal that teachers' attitude is one most important factor instrumental to students' achievement in the English language. This means students' academic issues are not the only factors predictive of students' achievement in the English language.

Keywords*: Socio-economic, achievement, background, municipality, influence.*

Introduction

In recent times, due to globalization and technological revolution, education is considered as a first step for every human activity. It occupies a vital role in the development of human capital and is intertwined with an individual's well-being and opportunities for better living (Battle & Lewis, 2002). It fosters the acquisition of knowledge and skills that qualifies individuals to increase their productivity and improve their quality of life. The increase in productivity also leads towards new sources of earning which enhances economic growth of a country (Saxton, 2000).

Achieving the main objective of education requires that serious attention should be paid to English language education. An area of English education that should be looked into is students' achievement in English. Students' achievement in English is the result of their learning English. It is the measure of the extent to which the students have mastered communicative skills and knowledge in English. This is commonly obtained through standardized achievement tests such as Basic Education Certificate Examination (BECE) and West African Senior School Certificate Examination (WASSCE) or non-standardized achievement tests such as teacher-made tests. The students' achievements in English at the senior high school have an influential effect on their performance in college and their future careers.

Having a solid background in in the English language facilitates students' development of sophisticated perspectives and offers more career options. Being a core subject, English language has been seen by seasoned educators and politicians as an important cog in the wheel of an individual progress (Wilkins & Ma, 2002). Both teachers and parents have being paying attention to students' performance in English and their progress every year. Politicians have

also been calling for improving students' overall performances and closing students' achievement gaps. However, any progress in this regard require cognition of factors influencing students' achievement the English language and how it can be improved so as to enable them make substantial academic progress.

In their study, Farooq, Chaudhry, Shafia, and Berhanu (2011), asserted that the quality of students' performance remains at top priority for educators. Educators, trainers, and researchers both locally and internationally have long been interested in exploring variables contributing effectively to quality performance of learners. These variables, according to Crosnoe, Johnson & Elder (2004), are inside and outside school that affect students' quality of academic achievement. These factors may be termed as student factors, family factors, school factors and peer factors.

Generally, these factors include age, gender, geographical belongingness, ethnicity, marital status, socioeconomic status (SES), parents' education level, parental profession, language, income and religious affiliations. These are usually discussed under the umbrella or demography (Ballatine, 1993). In a broader context demography is referred to as a way to explore the nature and effects or demographic variables in the biological and social context. Unfortunately, defining and measuring the quality of education is not a simple issue and the complexity of this process increases due to the changing values or quality attributes associated with the different stakeholders view point (Blevins, 2009, Parri 2006)

Despite the efforts of the government and private sector to improve access to education, Acquaye (2010) indicated that the same cannot be said about the quality performance of students in West African Senior School Certificate Examination (WASSCE) especially in core subjects such as the English language. For example, Ghana's percentage of students passing (grades A1-C6) in (WASSCE) the English language in 2015 was 50.29 percent (Doozie, 2015). The situation was even worse in West Akim Municipal, because, according to the Municipal office (2015), out of 398 candidates presented by one of the schools for 2015 WASSCE for English, 28.4 percent had passing grade (grades A1-C6), the rest 71.6 performed poorly.

A number of factors, according to Saad and Usman (2014) and Doozie (2015), might have been identified as contributors to this problem nationwide, some of which may include the school, students, curriculum related, instructional and socio-economic background of the students and parental involvement. Recent studies conducted in establishing the relationship between these factors and students' achievement in core subjects were often based on the duration of the course and the entry behaviour of the products from the senior high schools. However, with the perennial nature students' poor performance in the English language, Saad and Usman and Doozie asserted that there is need for further studies, hence, the objective of the present study is to adequately investigate the relationship between students' achievement in English and their socio-economic background, parental involvement and teachers' attitude towards the teaching and learning process in the West Akim Municipality.

Objectives of the study

The main objective of the study was to investigate the relationship between students' socio- economic background, parents' involvement, teachers' attitude and their achievement in the English language in the senior high school in West Akim Municipality. The specific objectives of the study are as follows

1. Ascertain the general socio-economic background of students in senior high schools in West Akim Municipality.
2. Investigate whether students' socio-economic background, parents' involvement and teachers' attitude strongly predict their achievement in English in the Municipality.

Research questions

The following research questions were set to guide the study.

1. What is the general socio-economic background of students in senior high schools in West Akim Municipality?
2. Do the students' socio-economic background, parents' involvement and teachers' attitude strongly predict their achievement in English in the Municipality?

Significance of the study

Stakeholders and teachers in education have been making necessary efforts to ensure that conducive environment is created through provision of ample logistics to facilitate the teaching and learning of English. However, the consistent poor performance of the students is becoming the biggest headache to them. These findings of this study will help in the following areas

1. Parents will take keen interest in their children education and make the necessary sacrifices by providing their educational needs.
2. Parents will constantly discuss with their children their academic progress and provide congenial atmosphere for them to learn.
3. Understanding the socio-economic background of the students will enable the teachers plan their lessons to cater for the needs of every student.
4. Teachers' will employ positive and friendly attitude to motivate students
5. School authorities and parents will come to terms with how to handle issues affecting the students' academic performance.

Delimitation of the study

The study was confined to the third-year students of all the public senior high schools in West Akim Municipality in the Central Region of Ghana. A total of 315 students was sampled for the study. The study would use three consecutive ends of term examination scores of the sampled students in English to determine their achievement in the English language. Both internal and external factors that influence students' academic achievement are examined. These include teachers' attitude, socio-economic factors like parental education, their occupation and places of residence and parental involvement. However, the concern of this study is family socio-economic circumstances and teachers' attitude in relation to its connectedness to students' achievement in English. For this reason, the variables that are considered for this study are socio-economic factors (parental level of education, occupation and places of residence), parental involvement and teachers' attitude as independent variables. Students' achievement in English forms the dependent variable for the study.

Literature review

Defined as the socio-economic position of an individual's family of origin rather than their present occupational or family circumstances, socio-economic background often exerts much influence on the life of an individual (Marks, McMillan, Jones & Ainley, 2000). Dependent children have yet to establish their own socio-economic characteristics. Rather, their socio-economic position is derived by the socio-economic climate of their family home, or more narrowly by the socio-economic characteristics of their parents. (Marks et al, 2000). Socio-economic indicators according to Ghana Statistical Service (2008), includes demographic characteristics of the population and all aspects of living conditions such as health, education, housing, household income, consumption and expenditure, credits, assets and saving, prices, employment and migration.

The present study gave consideration to the socio-economic status indicators such parents' education, occupation, marital status and their place of residence and parental supports and the contribution of these factors to the success of their children's education in English.

Socio-economic status

Socio-economic status refers to as a finely graded hierarchy of social positions which can be used to describe a person's overall social position or standing (Marks et al, 2000). It can be indicated by a number of sub-concepts such as employment status, occupational status, educational attainment and income and wealth (Graetz, 1995).

Mayer and Jencks, (1989) also described socio-economic status (SES) as the term used by sociologists to denote an individual or family 's overall rank in the social and economic hierarchy. In most research, including national studies, socio-economic status (SES) has been measured as a combination of parent's education, parent's occupational prestige, and family income (Mayer & Jencks; White, 1989).

Socio-economic status and academic achievement

Researchers have been exploring a number of mechanisms through which socio-economic status (SES exert influence on academic performance of the students. One of such mechanisms is undoubtedly, role modeling

students from high or middle SES families constantly see their parents and neighbours' social and economic payoffs that good education could provide. Whilst many minority children in high poverty areas have few if any role model who succeeded in education or who have translated school success into economic gain (Lippmann, Burns, McArthur, Burton, Smith, & Kaufman, (1996).). These claims suggest the direct relationship between SES background and students' educational aspirations. Socio-economic status is determined to be a predictor of English achievement. Studies repeatedly discovered that the parents' annual level of income is correlated with students' math achievement scores (Eamon, 2005; Jeynes, 2002; Hochschild, 2003; McNeal, 2001). Socio-economic status was found significant in primary English and Mathematics achievement scores (Ma & Klinger, 2000). Another study found poor academic achievement of Canadian students to be attributable to their low socio-economic status (Hull, 1990).

Parental involvement and educational outcomes

Epstein (cited in Richardson, 2009) indicated that parental involvement is exerts powerful

influence in a child's education. It can have various effects on students, both academically and behaviourally. Initially, research on family involvement generally did not aim at differentiating between the effects of specific types of involvement on definite student outcomes (Sheldon, 2009). But rather, the connections between general measures of parental involvement with students' test scores and grades were analyzed. However, recently, researchers started studying how different types of involvement connect to specific student outcomes.

According to the Center for Comprehensive School Reform and Improvement (Obeidat and Al-Hassan, 2009; 124-125), successful parental involvement may be defined as "the active, ongoing participation of a parent or primary caregiver in the education of his or her child". At home, parents can demonstrate their involvement in different ways; such as by reading for their child, assisting with homework, and having regular discussions about school or school work with their child. In addition, it is important for parents to convey their expectations to their child's education.

Lareau (1987) found that investment income and inherited income explained more variance in children's academic performance test scores than did total family income. These studies have focused on investigating direct effects of parental income on children academic performance. For example, studies also reported that children were more likely to graduate from high schools if they lived in households where parents' income levels were high.

Agyemang (1986) contended that poverty of parents as reflected in the socio-economic status of the family, affected the child's chances of success in school. For example, hungry children from low socio-economic background would not be able to concentrate on their lessons in class. Children whose parents could not provide them with writing materials or school uniform would feel embarrassed among their peers. Again, middle- and upper-class socio-economic parents constantly provided congenial learning atmosphere for their children at home. This gave children in this situation an edge over those from lower class socio-economic families.

Opare (1999) studied the relationship between socio-economic factors and students' educational aspirations. The study was designed to find out if socio-economic variables equally explained students' academic aspirations. The variables were parents' income, parents' education, parents' occupational status and parents' relation with their children regarding the latter's education. Opare used Coleman's social capital theory as the conceptual framework for the study. The theory was founded on the proposition that family background was a simple key factor that determines the level of education attained by children and youth.

Teachers' attitude and educational outcomes

In his observational theory, Bandura (1971) demonstrated that behaviours are acquired by watching another (teacher, parent, mentor, friend) that performs the behaviour. The model (teacher, parent, mentor, friend) displays it and the learner observes and tries to imitate it. Teachers are, invariably, role models whose behaviours are easily copied by students. What teachers like or dislike, appreciate and how they

feel about their learning or studies could have a significant effect on their students. Unfortunately, however, many teachers seldom realize that how they teach (Abimbade, 1999) how they behave and how they interact with students can be more paramount than what they teach. In a nutshell, teachers' attitudes directly affect students' attitudes. Teachers' attitudes are in turn, influenced by their culture and belief system (Yara, 2009 p. 64)

When the learner exhibits the expected behaviour or response, the value attached determines very significantly the effectiveness of the learning processes in any aspect of education. Gangoli cited in Igwe (2002) stipulates that for teaching and learning of core courses such as English to be interesting and stimulating, there has to be motivation on the part of both the teacher and the learner so as to ensure the development of positive attitude and subsequently maximum academic achievement. It has been observed that teachers teach most core courses including English, in a way that merely requires the pupils to listen, read and regurgitate (Yara, 2009 p. 365). This depicts negative attitude to teaching. Ogunniyi (1982) found that students' positive attitude towards English could be enhanced by the following teacher-related factors

1. Teachers' enthusiasm,
2. Teachers' resourcefulness and helpful behaviour,
3. Teachers' thorough knowledge of the subject-matter and their making English despite its numerous concept and principles quite interesting.

The aforementioned clearly shows that the role of the teacher as facilitator of learning and the contributions to students' achievement is enormous. Bajah (1999) was of the opinion that the success of the English language curriculum depends greatly on the classroom teacher as he is the one that translates all our thoughts into action. Several research findings as enumerated below confirmed the hypothesis that teachers' attitude either towards English or towards English language teaching affect their students' achievement in the English language and their overall attitude towards English (Yara, 2009).

Extant literature revealed that socio-economic background, parental involvement and teachers' attitude plays significant role in students' achievement, however, as indicated in the review, some researcher contended that the level of influence exerted by each of these variables differs, hence the need for further studies.

Methodology

The study adopted ex-post facto research design for the study. Ex-post facto research design helps the researcher determine and compare the relationships, causes, effects or reasons for existing differences in the behavior or status of individuals (Gay, 1996; Best & Kahn, 1998; Fraenkel & Wallen, 2000). Glatthorn and Joyner (2005) also indicated that ex-post factor helps the researcher identify the major factors that have led to these differences which makes it a fitting methodology for the study.

The target population for the study comprises students in the senior high schools of the West Akim Municipal in the Central Region of Ghana. Using simple random sampling technique, the researcher selected a total of 315 respondents from the six senior high schools in the West Akim Municipality. The main instrument for the study was a questionnaire which was termed Socio-Economic Background and Teacher's Attitude Questionnaire (SETABQ) was used to collect data on the students.

The SETABQ comprises four parts, the first part consists of bio data of the students; age, gender, school and class. The second part included level of parents' educational, occupation of parents, marital status and place of residence, number of siblings and others. The third part comprises information on teachers' attitude while the final part dwelled on with questions on parental educational involvement. Data analysis was done via descriptive statistics such as frequencies, percentages, charts and tables and inferential statistics (linear regression) so as to underscore the objectives of the study.

Results and discussions

Gender is an important social, cultural and psychological construct, seen as a process, stratification system and structure, which describe the expected attitudes and behaviours a society associates with sex (Kaur, 2012). Items in Table 2 described the gender distribution of respondents, since gender role is related to

cognitive perception which can greatly influence students' achievement in English, ascertaining gender implication.

Table 1. Sex distribution of respondents

Sex	Frequency	Percent (%)
Males	140	44.4
Girls	175	55.6
Total	315	100.00

n=315
Source: Fieldwork 2017.

Study would reveal the social, cultural and psychological construct, which describes the expected attitudes and behaviours a society associates with sex and age. Depicted in Table 2 is the demographic data of the respondents involved in the study. Results revealed that out of the 315 participants, there were 140 (44.4%) males and 175 (55.6%) females. Thus, majority of the respondents were girls (55.6%) compared to boys (44.4%). This information is presented in Table 2. This finding tally with the notable study conducted by Voyer and Voyer (2014) that both male and female are interested in core subjects such as Mathematics and English and girls performed quite well in both subjects. This clearly went contrary to the prevailing stereotypes in the Ghanaian society. Several individuals within the Ghanaian society, according to Alhassan (2011) and Amaoteng (2013) refrain from sending females into school because they felt that women are only meant to be in the Kitchen and cannot do well in school.

Table 2. Age distribution of respondents

Age	Frequency	Percent (%)
13-15 years	29	9.2
16-17years	94	29.8
18-20years	158	50.2
21-23years	28	8.9
24 and above	6	1.9
Total	315	100.00

n=315
Source: Fieldwork 2017.

As a result, according to Szalavitz (2013), women are underrepresented in formal education in several levels including senior high schools. Finding from Table 3 clearly demonstrated that out of the 315 respondents drawn for the study, majority 158 (50.2%) of the respondents were 18-20 years of age, while 94 (29.8%) were 16-17 years of age. The table also revealed that few 29 (9.2%) of the respondents were 13-15 years of age while fewer 6 (1.9%) of the participants were 24 years and above. These computations implied that majority of the respondents were within the statutory age for an adult in Ghanaian context. This means, responses from these groups of participants is reliable and rationale because it was given based on mature reasoning faculty.

A. Analyses of research questions

Research Question 1. What is the general socio-economic background of students in senior high schools in assin north municipality?

The essence of this question is to elicit relevant information regarding each of the items constituting socio-economic condition of the parent/guardian of the respondents. Items constituting socio-economic background characteristics included parents' occupation, marital status and place of residence. In line with previous studies on household income (Filmer & Pritchett. 2001, Gwatkin, Rustin, Johnson, Pande & Wagstaff, 2000), analyzing household income can be difficult, hence, the present study employed composite index, often called wealth index, as a proxy indicator of family economic status. The wealth index scores were calculated on the basis of easy-to-collect data on a household's ownership of selected assets, such as television, refrigerator, car, and so on and occupation using Principal component analysis (PCA). This PCA searches for the linear combination of the variables considered for the maximum possible variance in the data. In this study, the wealth index scores were divided into three equal parts. Thus, students with lower 33%, middle 33% and upper 33% of the wealth scores was designated as having low, medium or high economic or wealth status. Descriptive statistics of socio-economic background, parental involvement and teachers' attitude are presented on an item-by-item basis below.

Table 3. Analysis of students' socio-economic background

Socio-Economic Background	Level	N	%
Parental Education			
Less or up to primary school	Low	109	34.6
Secondary education	Middle	178.5	56.7
University education	High	27.5	8.7
Parental Occupation			
Artisan/Farmer	Low	88	27.9
Driver/Trading	Middle	155.5	49.4
Teaching/Civil Servant/Health/Fin. Serv	High	71.5	22.7
Wealth Index*			
	Low	89.3	28.3
	Middle	147.4	46.8
	High	78.3	24.9
Overall rating for socio-economic background of students			
	Low	95.4	30.3
	Middle	160.5	51.0
	High	59.1	18.7

n=315*p<0.001
Source: Fieldwork, 2016.

Findings from Table 18 revealed that 34.6% of the respondents are from parents who had less or up to primary school education while majority 56.7% of the respondents' parents have secondary education. It was also shown in Table 18 that few 27.5% of the respondents' parents have university education. This means most of the respondents' parent occupies the 2nd quartile in terms of educational status.

Results in connection with parental occupation in Table 18shows that 27.9% of respondents' parents are mostly artisans or farmers while most 49.4% of the respondents' parent are traders. It is also noteworthy that 22.7% of the respondents' parent are either teachers or gainfully employed as civil servants, health workers or financial service provider. Table 18 also revealed that 28.3% of the respondents' family had low wealth index while majority 46.8% of the respondents' family had middle wealth index. It is also noteworthy that 24.9% of the respondents' parents attended higher education. Result of the study tally with the findings of several studies (Okorodudu, 2010; Baffour-Awuah, 2011; Opoku, 2014; Igbo, Okafor, Rita & Eze, 2014) that socio-economic background of students has tremendous effect on their academic achievement especially in the English language. Essentially, findings from Table 3 coupled with demographic data revealed that majority of the students are from parents with average education, occupation and means of livelihood, in other words, the general socio-economic background of the participants for the study is neither low nor high; rather it is middle socio-economic background.

Research Objective 3. Do the students' socio-economic background, parental' involvement and teachers' attitude strongly predict their achievement in English in the municipality?

In a bid to ascertain the extent to which socio-economic background of students, their parents/guardian's involvement and teachers attitude influences achievement in English and whether such influence or impact is statistically significant, the researcher carried out multiple regression. The model the researcher employed was as follows:

Achievement in English

exmscavg (trm1+trm2+term3) =
$\beta_o+\beta_1 Socioeconsavg(ped+pao+wi)+\beta_2 Parentalinvolveavg(actu+psc+pch)+\beta_3 Teacheratti avg(attdc+assmt+involv)$

Where
exmsavg = Exam scores average
trm = School Term
socioeconsavg = Socio-economics averages
ped = Parental education
pao = parental
wi = Wealth index calculated via factor analysis
actu = Accommodated and tuition
psc = Parent and School
pch = Parent and Children
attdc= Teachers' regularity at classroom
assmt=How often teacher assess students' knowledge
invol=how often teacher involve students in teaching and learning process
the researcher as certain the influence and interrelatedness of the dependent variable and
dependent variable via the above stated formulae and the following result was obtained:

Table 4a. Summary of regression analysis results

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	120[a]	0.42	008	2.04309
a. Predictors: (Constant), Parental involve, Socioecons, Teacheratti				

Table 4b. ANOVA (Analysis of Variance)

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	19.018	2	9.509	2.478	041[a]
Residual	1302.360	312	4.174		
Total	1321.378	314			
a. Predictors: (Constant), Parental involve, Socioecons					
b. Dependent Variable: Average of three terms' scores					

Table 4c. Coefficients

Model	**Unstandardized Coefficients**		**Standardized Coefficients**		**Sig**
	B	**Std. Error**	**Beta**	**t**	
(Constant)	2.447	367		6.660	000
Socioecons	-050	286	017	-173	863
Parental involve	306	228	134	1.341	181
Teacherati	338	246	145	1.532	201
a. Dependent Variable: Average of three terms' scores					

n=315 p<0.05
Source: Fieldwork, 2017.

Depicted in Table 4a is the summary of regression results. The results are revealing because the combined effect of socio-economic background of students and parental involvement is significant because as shown in Table 4b (R Square = 0.042), it shows a prediction of 42% of higher achievement in English. This means that 48% of variations in higher achievement in English are attributable to other variables not considered in the present study.

Additionally, statistics in Table 4c showed that probability value associated with the overall calculated value of F (2.478) for the influence of socio-economic background of students, parental involvement and teacher attitude is 0.04. The statistics above shows that the p-value (0.04) is lesser than the 0.05 level of significance. This means respondents' socio-economic background, parental involvement and teacher's attitude is statistically significant on respondents' achievement in English.

Moreover, the unstandardized beta values in Table 4c, which represent the co-efficient of the independent variables entered in the model. It could be stated that students' teachers' attitude has the highest beta value (0.338), while socio-economic background follows with a beta value of 0.306. These statistics also shows that teachers' attitude is largely predictive of high academic achievement in the English language than socio-economic background and parental involvement.

In effect, findings in Table 4a, b, and c, shows that teachers' attitude to teaching English (beta value 0.338) is largely predictive of high academic achievement in the English language than parental involvement and socio-economic background of students. However, the three has a statistically significant influence on (R^2 = 42%) on students' achievement in English.

The result of the present study tally with the findings of Jeynes (2005) that socio-economic background, parental involvement and teachers' attitude are very important factors in determining students' achievement in core subjects such as the English language.

Additionally, the findings of Yara (2009) clearly demonstrate that teachers' attitude is one most important factor instrumental to students' achievement in the English language. This means students' academic issues are not the only factors predictive of students' achievement in the English language, there are other numerous factors that could affect students' outcomes which are not often considered due to the narrow focus of several studies on issues pertaining to students' academic achievement especially in core subjects including English language.

Conclusion

Findings of the study revealed that socio-economic background, parental involvement and teachers' attitude are very important factors in determining students' achievement in core subjects such as the English language. Additionally, findings reveal that teachers' attitude is one most important factor instrumental to students' achievement in the English language. This means students' academic issues are not the only factors predictive of students' achievement in the English language. The study revealed that the three variables considered in this study are not the only factors responsible for students' achievement, hence further studies on the same issue is recommended so as to facilitate stakeholders' effort in ameliorating the perennial poor performance of senior high school students in the English language in WASSCE. It is also recommended that teachers should improve their attitude towards teaching English by actively involving students in discussions and giving individualized attention to each of the students.

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The Causes of Ocular Defects and the Patients' Satisfaction with Ocular Proshesis Treatment in Ghana; A Case of Teaching Hospital

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Abstract

The purpose of this study was to analyze the causes of ocular defect in a teaching hospital in Ghana and ascertain patients' satisfaction of its treatment. A retrospective cohort data of ocular defect cases which were reported and treated in the department over a 5-month period (January to May 2015) were purposively selected. From a sample of 248 participants findings from the study revealed a predominance of males being affected with ocular defects. It was also observed from the study that the right side was involved more when compared to the left- contralateral. In relation to age, patients between 21- and 40-years age group were involved the most whiles causes of ocular defect etiologically revealed a predominance of infection and trauma. The study also brings to the fore that most patients' time lag between loss of eye and treatment was more than ten years. Although our study indicated a high satisfaction level with the quality and treatment services provided by care givers, there were inconsistencies in the satisfaction reported on treatment costs in this study. The study concludes that injuries and infections in young adults (mostly males) were the main reason behind ocular bulb loss, and the time lag between eye loss and rehabilitation with ocular prosthesis was found to be very high. Moreover, the study concludes that as health care is becoming progressively costly in Ghana and patients' consciousness of rights evolving, a strong health system which focuses on patients' access to affordable rehabilitation centres is advocated.

Keywords: *Ghana, causes, Patients' Satisfaction, Prosthesis, Ocular / Orbital disease*

Background

The loss of an eye can be a very traumatic event in a person's life, not only medically, but also emotionally. For many, the face and eyes help represent who they are, and it is common for these patients to feel as if a part of them has been lost. Various methods of rehabilitating an ophthalmic socket include, stock eye prosthesis (Prefabricated) and custom-made ocular prosthesis. The stock prostheses that come in standard sizes, shapes, and color can satisfy the need for an artificial eye for such patient. No special skills or materials are required for fabrication. Stock prostheses are inexpensive and can be delivered quickly (Rahn et al, 1970; Welden, 1956; Cain 1992; Smith 1995).

The application of an ocular prosthesis is required to replace an eye following an enucleation, evisceration, orbital exenteration, or is applied over the phthisis bulbi or a discolored blind eye of near-normal size to improve the cosmetic appearance. Custom ocular prosthesis has certain advantages which include improved adaptation to underlying tissues, increased mobility of the prosthesis, improved facial contours and esthetics gained from control over the size of the iris and pupil and color of the iris and sclera (Cain 1992; Smith 1995).

The earliest attempt at manufacturing an ocular prosthesis dates back to as early as 4800 years ago, and several further attempts have been made in the following centuries using materials ranging from precious stones to copper, bronze, and gold in the shrunken socket (Roberts, 1971). However, it was not until the sixteenth century that the first actual ocular prosthesis was designed by AmbroiseParé, a French doctor, who named it 'emblepharon'. His first prosthesis was made of gold and silver, but he later improved his first design using glass and porcelain, which was a great step forward and resulted in the use of shell-type prostheses instead of spheres (Gibson, 1955). Glass remained the most popular material until the introduction of synthetic materials in the twentieth century (Dyer, 1950).

Currently, the main causes for the need of ocular prosthesis include tumors, congenital defects and malformations, irreparable trauma, and end-stage eye diseases. The former is the most common etiologies in children, while the latter are more common in adults. Other common etiologies include severe ocular diseases leading to blindness associated with uncontrolled pain or unpleasant cosmetic appearance, such as intraocular infections or post-surgical complications (Artopoulou, 2006).

As indicated earlier, since the loss of an eye is an immediate trigger to the physical and emotional stress caused by personal, familiar, and societal reactions to the resulting facial disfigurement, replacing the lost eye with an ocular prosthesis aims at promoting physical and physiological healing, and improving social acceptance (Artopoulou, 2006).

Hence, in this study, the general objective was to evaluate causes of ocular defect among patients in Ghana by specifically focusing more on patients' satisfaction of ocular / orbital prosthesis rehabilitation / treatment in Ghana

Objectives of the study

Generally, the study focuses on causes of ocular defect and patient satisfaction; a case study of Teaching Hospital, Kumasi.

The specific objectives of the study are

1. To examine the causes of ocular defect among patients among different age groups, gender, anatomical side involved and etiology at the teaching hospital
2. To determine patients' satisfaction of ocular defect treatment / rehabilitation at the teaching hospital.

Methods

In this study, the cross-sectional study or design was considered the most appropriate for collecting data on the objects for this study. Cross-sectional studies, also known as one-shot studies, are designed to study a phenomenon by taking a cross-section of it at a time. They are comparatively cheaper to undertake and easy to analyze even though they cannot measure change. It necessitates processing of quantitative data and enables the researcher strive for breadth rather than depth towards making valid general observations (Barbie, 1989).

Also, the researchers' presumed maximum variability and hence we considered prevalence of patient satisfaction as 50%. A retrospective cohort data of ocular defect cases which were reported and treated in the various hospitals over the period of study was from January 2015 to May 2015. Information regarding general identification, gender, and age at which patient lost the eye or diagnosis of atrophy was made, affected side and etiology, and time lag between eye loss and rehabilitation were gathered from the clinical records of patients. Based on the side affected, the loss/atrophies were classified as left, right, or bilateral. Etiology of the eye defect was considered under following categories: (i) Congenital (from birth), (ii) traumatic, (iii) pathologic (infection, tumor, or any other pathology), or (iv) not known.

On the sample, which is considered to be a representative sub-group of the population that meets the research‘s criteria (Leedy & Ormrod, 2005), a retrospective cohort data of ocular defect cases which were reported and treated in the department over a 5 month period (January to May 2015) were purposively selected.

Purposive sampling technique initially was used to select participants for the study. The selection was based on the researcher belief that the researcher ‘s knowledge about the population can be used to hand pick the cases to be included in the sample. This was done by selecting patients who met the inclusion criteria. Those who consented to be part of the study and could speak English and Twi were recruited in the study. This was due to the fact the researcher could speak and understand those dialects.

The data gathered and analyzed was obtained from the primary sources and this include patients at the Teaching Hospital.

In a research, it is important to use already existing validated scales or questionnaires when available because their validity has already been established. But in a situation where scales or questions are not readily available, it becomes imperative to design or generate appropriate questionnaires with considerable degree of content and construct validity and reliability (Punch, 2005). Questionnaire was used to collect data from the respondents because it is an appropriate tool that allows the respondent to give a self-report at free will. The questionnaire used comprised only close ended questions to capture as much information as possible. The questionnaire was divided into three sections: socio-demographic characteristics of the

respondents, prevalence of ocular defect and caregivers' satisfaction of its treatment.

Some statements regarding services of physical facilities, registration staff, doctor, nurse, pharmacy, and laboratory staff were asked to patients. Patients were asked to give ratings to these statements. Likert's 3 points rating scale was used. The rating was done as following-1= satisfied, 2= Not satisfied, 3= Not decided. On an average 20 minutes time was given for interview of each patient. The responses were expressed in proportions.

Results

Socio-demographic data

From table 1 below, a total of 398 patients had reported to the department in the past 5 months. However, detailed data were available for only 248 patients. The evaluated data of 248 patients included in this study revealed that the ocular defects in relation to gender were more frequently observed in the male population (75%). That is, 187 were males whiles 61 were females.

The findings above revealed a predominance of males being affected with ocular defects in the teaching hospital, which agrees with the finding of previous investigations (Côas et al, 2005; Mattosetal, 2005). These results may possibly be attributed to the fact that male population is usually more exposed to situations that can lead to eyeball injury and infections caused by a lack of hygiene and polluted environment. Males are still the majority of workers in areas of physical demand and are most commonly involved in road traffic accidents and cases of aggression or urban violence.

Regarding the prevalence in relation to the side involved, it was observed from the study that the right side was involved more (65%) when compared to the left side (25%) whiles (10%) had ocular defects in both eyes as indicated in table below. These findings were not in accordance with previous studies which found the left side was more involved (Côas et al, 2005). According to those authors, the findings were not statistically significant due to which they concluded that the side involved does not seem to be an important issue to be considered in preventive and educative campaigns.

In relation to age, caregivers between 21- and 40-years age group were involved the most (45%), and the patients above 80 years of age were least involved (11%) among the age groups considered. However, the patients between 0–20 and 41–60 years age group showed almost equivalent prevalence, that is, 20% and 23% respectively. This predominance is probably attributed to the fact that individuals at age range of 21–60 have multiple activities and are therefore more exposed to situations that can lead to ocular defects. Age group of 0–20 is more reckless and explorative in nature leading to ocular defect. Similar results were observed in previous studies

Etiologically, causes of ocular defect revealed a predominance of trauma (50%) followed by the chronic cancers and malignant cancers (26% and 14%, respectively). However, hereditary (8%) and congenital causes were less (2%). This revealed the highest number was traumatic causes followed by pathologic causes. Coas*et al*. 2005 who examined 3008 patients and verified 58.77% of injuries of traumatic origin and 41.22% of pathogenic origin. Studies conducted by other authors were also in accordance with the present study (Saeed et al., 2006). Bearing in mind these results, it is imperative to adopt some preventive measures such as wearing protective eye glasses during activities that can lead to eyeball injury. Use of reinforced glass in vehicle windshields and building constructions, in addition to regular checkup by an ophthalmologist should be emphasized. To reduce the causes of ocular defects as a result of road traffic accidents or occupational hazards, wearing of the protective eyewear should be made compulsory (Neerja et. al., 2012).

Among the loss of an eye due to pathogenic origin, infectious reasons were more than neoplastic or any other pathogenic event. This observation signifies the level of hygiene and negligence of health on the part of the patients. This aspect has to be considered in community educative program.

For most patient's time lag between loss of eye and treatment was more than ten years (54%). This was proceeded by 5-10 years (22%) and 1-5 years (19%) respectively. However, only (5%) were less than a year. This finding is probably attributed to the fact that people from rural background have low awareness about prosthetic rehabilitation.

Table 1. Ocular defect as function of respondents' bio-data

	Frequency	Percent
Gender		
Male	187	75.4
Female	61	24.6
Side Involved		
Left	62	25.0
Right	161	64.9
Both	25	10.1
Age Group		
0–20 years	51	20.6
21-40 years	112	45.2
41–60 years	58	23.3
Above 60 years	27	10.9
Etiology		
Trauma	124	50.0
Chronic cancers	65	26.2
malignant cancers	35	14.1
Hereditary	19	7.7
Congenital	5	2.0
Time lag		
< 1 years	13	5.2
1-5 years	47	19.0
6-10 years	55	22.2
>10 years	133	53.6

Source: Authors Construct, 2016

Patients satisfaction of treatment

Patient perceptions of outcome and satisfaction with treatment are key elements in evaluating quality of care. On doctors' orientation as a source of patients' satisfaction, the study indicated that all patients (100%) were satisfied with the care and time spent with them as well as the advice on prescriptions. Majority of patients (85.5%) were satisfied with the willingness of doctors to listen to their complaints, explaining their eye condition (80.6%), explaining their test results (71.8%) and discussing their condition (68.55%).

Therefore, in table 2, level of satisfaction ranged from 170 (68.55%) for doctors discussing patients' condition to 248 (100%) for doctors caring and spending time with patients and giving clear advice to patients about prescriptions.

Table 2. Doctor's service orientation

Category	S (%)	NS (%)	U (%)
Doctor was willing to explain my eye condition	200 (80.6)	48 (19.4)	0 (0)
Doctors showed willingness to listen to your complaints	212 (85.5)	35 (14.1)	1 (0.4)
Doctors explained the test results	178 (71.8)	68 (27.4)	2 (0.8)
Doctor gave clear advice to patients about the prescriptions	248 (100)	0 (0)	0 (0)
Doctor was caring and spent enough time with me	248 (100)	0 (0)	0 (0)
Doctor appropriately discussed my condition	170 (68.55)	77 (31.05)	1 (0.4)

Source: Authors Construct, 2016 (S= Satisfied, NS= Not satisfied, U= Undecided)

On nurses' orientation as a source of satisfaction, majority (98.8%) as indicated in table 3 below were satisfied with the way nurses communicated their needs to doctors whiles 96.4% of patients indicated they were satisfied with the care and time nurses spent with them. That is, majority of patients were satisfied with nursing care. Only a modest number of (64.5%) were satisfied with the individual attention nurses gave them.

Table 3. Nurse service orientation

Category	S (%)	NS (%)	U (%)
Nurses were caring and spent enough time with me	239 (96.4)	9 (3.6)	0 (0)
Nurses communicated patients' needs to doctors	245 (98.8)	2 (0.8)	1 (0.4)
Nurses gave individual attention to patients	160 (64.5)	88 (35.5)	0 (0)
Nurses administered treatment in a timely manner	190 (76.6)	50 (20.2)	8 (3.2)

Source: Authors Construct, 2016 (S= Satisfied, NS= Not satisfied, U= Undecided)

In table 4 below, other sources of patients' satisfaction were sought. Results from the table below indicated that majority of patients were satisfied with the hospital (97.2%) and the courteousness of their staff (99.6%). Nonetheless, patients expressed their dissatisfaction on cost. That is, cost in terms of lab tests fee (60.5%) and travel costs to the hospital (79.4%).

Table 4. Other sources of satisfaction

Category	S (%)	NS (%)	U (%)
Eye department was clean	241 (97.2)	7 (2.8)	0
Records were well kept	148 (59.7)	20 (8.1)	80 (32.2)
Consultation fee	124 50	100 (40.32)	24 (9.7)
Lab tests fee	187 75.4	53 21.4	8 3.2
Drug costs	92 37.1	150 60.5	6 2.4
Travel costs to hospital	61 24.6	197 79.4	0
Pharmacists and other staff were courteous	247 99.6	1 0.4	0

Source: Author's Construct, 2016 (S= Satisfied, NS= Not satisfied, U= Undecided)

Discussion

Eye problem remains one of the commonest public health problems. People's expectation toward eye care services is taking a different shape considering the development in technology and availability of competitive services. Eye care is a service industry and its uptake depend on the quality of services delivered. Evaluation of services usually focuses on the quality of medical care and the surgical outcomes. But satisfaction of patients is often forgotten.

This study was to understand patient's expectations toward eye care services at different levels and suggest the changes to be made accordingly. Findings from the study revealed a predominance of males being affected with ocular defects in the teaching hospital, which agrees with the finding of previous investigations (Rahn et al, 1970; Welden, 1956; Cain 1992; Smith 1995). It was also observed from the study that the right side was involved more when compared to the left side regarding prevalence in relation to the side involved. In relation to age, caregivers between 21- and 40-years age group were involved the most whiles prevalence of ocular defect etiologically revealed a predominance of trauma. The study also brings to the fore that most patients' time lag between loss of eye and treatment was more than ten years.

Although our study indicated a high satisfaction level with the quality and treatment of services, there were inconsistencies in the satisfaction reported on treatment costs in this study. In the more affluent Western world, health care consumers have become much more sensitive to costs despite health insurance coverage (Afolabi & Erhin, 2003).

In the developing world, such as Ghana is a perennial concern among those seeking health care service given their low earnings. Such costs

include consultation fees, laboratory test charges, travel, drugs and accommodation. While basic health care service is supposed to be free in public hospitals, patients end up bearing the costs of medicine and laboratory tests, as well as some additional unseen costs. Although there is the existence of the National Health Insurance Scheme (NHIS) that insures patient, it does not cover full treatment cost especially the rehabilitation with prosthesis is not approved by the NHIS

Conclusion

The study concludes that frequent injuries and infections in young adults (mostly males) were the main reason behind ocular bulb loss, and the time lag between eye loss and rehabilitation was found to be very high. Moreover, the study concludes that as health care is becoming progressively costly in Ghana and patients' consciousness of rights evolving, a strong health system which is patient and affordable is advocated.

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An Assessment of the Knowledge, Attitudes and Care Practices of Health Workers on Mental Health Persons Living with HIV/AIDS

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Abstract

Evidence has shown that socioeconomic inequalities are an important topic in politics, social sciences and public health research. The common trend is that individuals from low socioeconomic backgrounds are often deprived of essential commodities, in the form of service, that are critical to their wellbeing. Nonetheless, little but surely, these deprivations result in affecting the psychological health of the victims and ultimately may end up causing mental dysfunction. It is against such hypothesis that many scholars have established the link of SES as being a powerful risk factor of mental illness. In light of the above, this study aimed at exploring the association of SES, home environment, HIV/AIDS and mental illness. A more specific approach was to assess the knowledge, attitudes and care practices of health workers on mental Health Persons Living with HIV/AIDS (PLWHA).

A mixed method approach was used to carry out this investigation, however, much embedded on the qualitative approached. The study collected primary data study participants through the use of a semi-structured interview guide. The study participants included Nurses and Clinical Officers in Health Centres in Lusaka urban and rural, as well as relatives of the mental health patients. Consent was sought from the ministry of health to conduct the study and all study participants were consented before participating in the study.

The study revealed that health workers had adequate knowledge on HIV/AIDS; however, there was evidence on negligence in provision of health care towards mental persons living with HIV/AIDS. Despite a lot of health care reporting to have had training on care for HIV/AID persons (90%), the findings revealed that some of them had a negative attitude towards caring for persons living with HIV/AIDS and this affects the quality of care. This study provides strong evidence that SES impacts the development of mental illness directly, as well as indirectly through its association with adverse economic stressful conditions among lower income groups.

Based on the findings of the study, there is need for improved awareness on mental health by health providers so that they may have a positive attitude towards to service they deliver and enhance the quality of health care.

Keywords: *Knowledge; Attitudes; Practices; Health workers; mental persons; HIV/AIDS; Mental illness.*

Introduction

Mental disorders, which include anxiety, depression, schizophrenia, and alcohol and substance use, are highly prevalent and burdensome worldwide (WHO, 2012). Over the years, mental health care has been regarded as being important because it assists the individuals with mental disorders to achieve their optimal capacity in responding to demands of daily living so that they may achieve a better quality of life. Evidence has shown that mental or psychological well-being is influenced not only by individual characteristics or attributes, but also by the socioeconomic circumstances in which persons find themselves and the broader environment in which they live (Meyer, 2014).There is a growing interest in documenting the role of social factors on the aetiology and evolution of mental disorders, such as the relation between socioeconomic status (SES) and mental health. This is because having understanding of the factors that influence mental health is critical for tailoring interventions and programmes that can improve mental health.

Nonetheless, there is a wide gap of knowledge in this area in Zambia because of lack of systemic

research on this subject compared to Europe and other parts of the world where the subject has been well researched. It has been asserted that the poorer one's socioeconomic conditions are, the higher one's risk is for mental disability and psychiatric hospitalization (Hudson, 2005). In light of the above, this study took keen interest to unveil to current Zambian picture as far as assessing the effect of knowledge, attitudes and care practices of health workers on mental health persons living with HIV/AIDS. The rationale behind this study is not only to contribute to the already existing literature in effect of SES on mental health but also to bridge the gap of the inadequacies of Zambian contextual evidence on mental health care. Therefore, this study would ultimately contribute to policy formulation and interventions as well as informing decision making processes around mental health. Evidence has shown a low stimulus towards mental health issues in Zambia and this, to a great extent, fosters the SES inequalities that may exist as far as mental health care is concerned.

Literature review

There has been a lot of literature surrounding HIV/AIDS knowledge, attitudes and practices of healthcare workers in developing countries. It has been established that even when mental health services are available, patients of low SES are more likely to be treated with pharmacology and less likely to receive any form of psychotherapy (Crosby et al., 2012). Men and women in low SES are less likely to receive mental health treatment of any sort than their urban counterparts (Hauenstein et al., 2006). Those at lower SES also experience more depressive symptomatology compared to their higher SES peers (Everson et al., 2002). Considering this relationship, there is a clear need to research this relationship and identify potential causal pathways upon which we may intervene to promote good mental health among people of lower socioeconomic status.

In an attempt to understand these dynamics, two competing theories of the causal pathway of the association between socioeconomic status and mental illness: the social causation theory and the social selection theory (Hudson, 2005). The social causation theory purports that mental health is affected by adversity and stress associated with low social status; while the social selection theory asserts that people who are genetically predisposed to mental illness drift down or fail to rise out of poverty. The social causation theory suggests that the inverse relationship between socioeconomic status and mental illness is a function of stressful economic conditions or family fragmentation and lack of support (Hudson, 2005).

However, there has been tremendous research which has revealed that the knowledge, attitude and care practices of health workers also have an effect on the quality of care provided to mental persons. In many Sub-Saharan African countries, there have been concerns about the way and manner some health workers relate to and communicate with patients in health facilities. Reports have been made that health workers, particularly nurses, sometimes do not treat patients or clients well. For instance, Reis et al. (2005) in a study in Nigeria found that a significant number of health professionals showed discriminatory attitudes and engaged in unethical behaviour towards patients with HIV/AIDS.

However, some studies have observed that most nurses reach professional ideals in their interactions with patients or clients during service provision. For instance, a study in Mexico by Fusilier et al. (1998) found that 81 per cent of health care providers interviewed were willing to provide AIDS care. Conversely, early studies conducted in Zambia among nurses revealed that good knowledge of HIV/AIDS, including HIV transmission, is a pre-requisite for quality of health towards PLWHA but majority of the nurses were reported to lack of knowledge about identification of high risk groups, symptoms, diagnostic tests and universal precautions (Chamane, 1997). Another study among nursing staff caring for HIV/AIDS inpatients indicated poor HIV/AIDS knowledge (Dijkstra et. al, 2007), with participants complaining about their lack of training.

Conversely, the attitude of health providers towards PLWHA have been investigated widely, with some studies indicating negative and discriminatory behaviour (Mungherera et. al, 1997; Mbanya et. al, 2001; Reis et. al, 2005; Oyeyemi et. al, 2006). Nonetheless, other studies have revealed more empathic attitude by health providers towards PLWHA (Walusimbi and Okonsky 2004). Clearly from the above set of literature, it is evident that both sides of the coin, as far as attitude of health providers towards

PLWHA, have been witnessed and Zambia is not an exception as it has been stipulated in the studies of Deetlefs et. al (2003) and Smit (2005).

In the study by Shisana et.al, (2004) on the impact of HIV/AIDS on the healthcare sector in Zambia, nearly 50% of the respondents thought that HIV/AIDS had an impact on their work and they were fearful of contracting the disease. This had a great impact on the quality of care. This study revealed that healthcare workers were reluctant to provide care to persons with HIV/AIDS. These sentiments were in contrast with the findings of Smit (2005) in his qualitative study which revealed that more than 50% of health workers expressed empathy and compassion towards persons living with HIV/AIDS despite having fear of infection.

It should be noted that studies have shown that lack of universal precaution adherence and injection safety in developing countries puts both patients and healthcare workers at risk of occupational HIV infection (Kermode, (2004b). For instance, a retrospective analysis done in Zambia of on-duty injury cases among hospital staff identified a high incidence of needle-stick injuries (Ehlers, 2006), while another study revealed that there was incorrect use of sharp containers Nsabuga and Jokkola, 2005). In light of the above, knowledge on HIV/AIDS and having adequate information of how to prevent contraction among health workers is the best remedy. Ehlers (2006) and HIV/AIDS knowledge has been shown to correlate with attitudes and practices Dorrington et.al (2006) and to help alleviate the fear of HIV contagion, which seems to be resistant to change among healthcare workers.

Health workers providing care to PLWHA need to acquire new attitudes, knowledge and skill as they confront the multi-disciplinary problems of AIDS care and prevention (Ehlers, 2006). This would foster the agenda toward reduction of stigmatization on HIV/AIDS patients as well as enhance many strategies from the supply side of health care. Negative attitudes about mental illness often are caused by stigma which can interfere with recovery of patients (Weiss et. al., 2006). This could also minimize the contradictions that surround the attitude of health care providers.

Methodology

The study adopted an empirical and non-experimental design in the sense that (it was carried out in a natural and uncontrolled setup) there was no control group or treatment given to the respondents in order to obtain certain information. However, the research design that was employed to carry out the investigation was exploratory as the study intended to unveil the knowledge levels, attitudes and care practices of health workers on mental health persons living with HIV/AIDS.

The study population comprised of Nurses and Clinical Officers caring for people living with HIV/AIDS in Health Centres of Lusaka urban and rural district, as well as mental patients living with HIV/AIDS (discharged from the mental facility) and relatives of the mental health patients at the Out Patient Department / filter clinic at Chainama Hills Hospital. A target population of 250 participants (10 Nurses and Clinical Officers; 150 relatives; 90 mental health patients living with HIV/AIDS) was sampled for this study. The sample sized was determined based on the number of medical personnel at different health centers and the number of mental patients being discharged from the mental facility per quarter. The medical personnel were purposively sampled for this study, whereas the mental health patients and their relatives were conveniently sampled.

The data was collected using a semi-structured interview guide (for medical personnel) and a structured questionnaire (for mental health patients and their relatives). This means that a mixed approach method of data collection was used to capture both qualitative and quantitative data. The study used SPSS version 21 to carry out statistical analysis for this study. For background characteristics of the study participants, descriptive statistics were done. To determine association of the independent and dependent variables, Chi-square test was performed and to measure the level of association, correlation analysis was employed.

As far as ethical issues are concerned, the study upheld voluntarily participation of participants, anonymity of personal information as well as stipulating the benefits and risks of

participation in this study.

Results

The findings of the study were presented based on the three thematic areas of the objective: Knowledge, Attitude and Practices of Care.

Demographics of Respondents

Table 1

Health workers	F (n)	P (%)
Nurses	7	70%
Clinical Officers	3	30
Total	**10**	**100**

Table 1 above shows that there were more nurses (70%) than clinical officers caring for mental PLWHA in the selected facilities.

Table 2

Mental PLWHA	F (n)	P (%)
Sex		
Male	40	44.4%
Female	**50**	55.6%
Education		
Primary	**50**	55.6%
secondary	**30**	33.3%
College	**10**	11.1%
Occupation		
Employed	**20**	22.2%
Not employed	**70**	77.8%
Total	**90**	**100**

According to table 2, majority of the mental PLWHA were females (55.5%) compared to 44.4% who were males. Furthermore, the table shows that majority of the mental PLWHA had attained an education up to primary level (55.6%) and majority were not in any formal employment (77.8%).

Knowledge

As far as knowledge on HIV/AIDS among health workers that were responsible of PLWHA,

it was established that all reported to have had adequate knowledge and awareness of HIV/AIDS. Furthermore, the study established that over 90% (n=9) of the health workers reported to have had training on HIV/AIDS care and thus fully understood what was required of them (*see figure 1 below).*

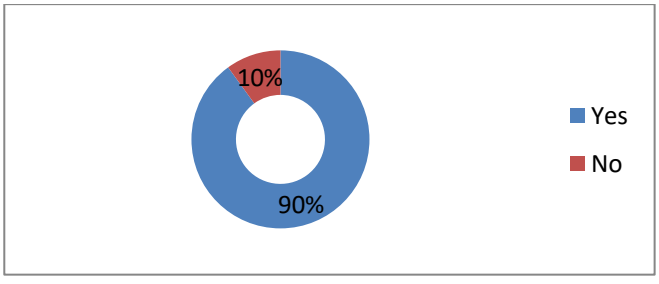

Figure 1. Training on HIV/AIDS

Source: Field data

The figure above shows that 10% (n=1) of the health workers lacked knowledge and skills to care for PLWHA who have mental health problems. Ideally, all health workers must be equipped with adequate knowledge and skills so

that they are able to deal with mental health problems of PLWHA.

Nonetheless, the findings of this study further revealed that many health workers (80%, n=8) felt that they do not know how to treat PLWHA who have long-term (or chronic) mental health problems. Conversely, the study findings also showed that most health workers (70%, n=7) perceived that they know how to communicate with mental PLWHA. However, the correlation analysis shows that there was no significant difference been different professions of health workers and their demographics.

Attitude

As earlier alluded to, attitude of health workers towards their work has a strong effect on the quality of care and as such, the study endeavoured to assess the attitude of health workers towards mental PLWHA. The study enquired on what the health workers thought about how easy it was for them to attend to the mental PLWHA. Majority (60%, n=6) reported to that it was easy, however, there were some health workers that felt it was not easy but rather very difficult (*see figure 2).*

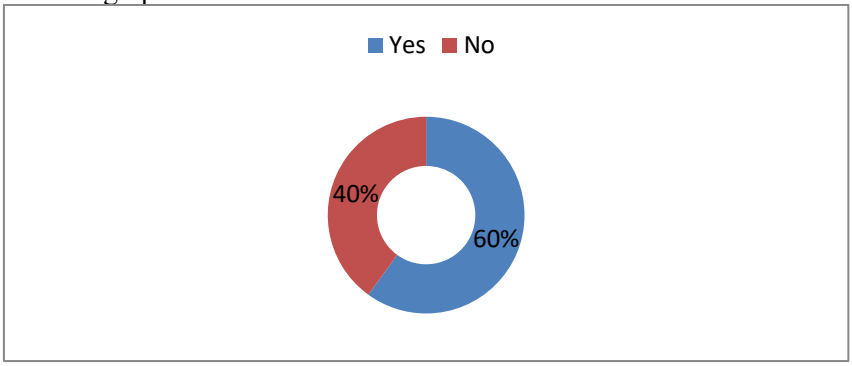

Figure 2. Easy to care for mental PLWHA

Source: Field data

Conversely, majority of health workers reported that they felt it was risky for them to contract the disease since they were where dealing with persons that were not mentally stable. In light of this, it was established that there was an element of fear in the health workers.

Nonetheless, Pearson correlation suggested a weak positive linear relationship between these feelings and views of health workers towards mental PLWHA and their total knowledge levels on HIV/AIDS ($p < 0.01$, 2-tailed, r2 X 100 =5.0%). This suggests that as HIV/AIDS knowledge increases, so do positive feelings and views towards PLWHA.

Practices

The study reported that 80% of the health workers reported that they understood their facility's written HIV testing policy. In light of this, the study established that 80% of professionals reported obtaining informed consent from next of kin of mentally ill patients for HIV tests in most cases, however, 20% of the health workers reported otherwise (i.e. never obtained consent for HIV tests).

Health workers who reported that they lacked adequate training in HIV/AIDS treatment and ethics in the current study had 60% higher odds of reporting that they failed to obtain informed consent for HIV tests (most of the times) compared to health workers reporting adequate training in these areas.

Discussion

Evidence from the analysis that was performed for this study shows that majority of the health workers had knowledge on HIV/AIDS and that there were no significant discrepancies in terms of professions of health workers. This finding is in contrast with the findings of Chamane (1997) which revealed that majority of health workers lacked knowledge about identification of high-risk groups, symptoms, diagnostic tests and universal precautions. However, this current study suggested that, in most cases, the lack of protective and other materials needed to treat and prevent the spread of HIV and related conditions can contribute to discriminatory behaviour by health workers towards PLWHA.

With regards to attitude of health workers towards PLWHA, it was established that there was weak positive linear relationship between these feelings and views of health workers towards mental PLWHA and their total

knowledge levels on HIV/AIDS. This finding is similar to that of a study by Ehlers (2006) which asserted that HIV/AIDS knowledge had been seen to correlate with attitudes and practices. However, the study showed that about 40% of the health workers had a negative attitude towards mental PLWHA which is in harmony with the findings of Reis et al. (2005) in a study in Nigeria found that a significant number of health professionals showed discriminatory attitudes and engaged in unethical behaviour towards patients with HIV/AIDS.

Overall, the study suggests a significant proportion of health professionals in Zambia as reporting discriminatory attitudes and engaging in discriminatory and unethical behaviour toward patients with HIV or AIDS, including denial of care, breach of confidentiality, and non-consented HIV testing

Conclusion

This study provided information on knowledge levels, attitudes and care practices of health workers on mental health persons living with HIV/AIDS. Overall, the study has established that there is need for improved knowledge and awareness by the health providers in order to have a positive attitude towards their service rendered to mental persons living with HIV/AIDS. This in turn would enhance the quality of care provided to these patients.

Recommendations

The following recommendations were made:

1. There is need to provide proper and exclusive training for health care providers of mental persons living with HIV/AIDS
2. There is need to increase the provision of suppliers or equipment for mental persons living with HIV/AIDS
3. There is need to enhance awareness and knowledge on care practices by health care providers of mental persons living with HIV/AIDS
4. There is need for the continued development of preventive and early intervention strategies that pay particular attention to the devastating impacts of unemployment, economic displacement, and housing dislocation, including homelessness.
5. Further empirical studies on social inequalities in health are needed to make sense of the mixed research findings, to understand the pathways through which they influence health, and to find out ways of reducing their magnitude.
6. The study of the associations between contextual SES and mental health also needs more powerful studies, using multilevel analyses and establishing mediating pathways and effect-modifying factors, in order to disentangle the individual effect from the neighbourhood effect on health.

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Investigating the most applied Head Teachers' Leadership Style in Motivating Teachers: The Case of Secondary Education Teachers in Kitwe District, Zambia

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Abstract

The purpose of the study was to investigate the most applied head teachers' leadership styles in motivating teachers' in secondary schools of Kitwe district, Zambia. The study was conducted using descriptive survey. Purposive and simple random sampling techniques were used to select 22 head teachers and 210 teachers respectively to participate in the study. Questionnaire instruments with Likert scale questions were used as research tools in collecting data from teachers and head teachers. To test reliability of the instruments, data set on the questionnaires were subjected to chronbach`s alpha (α) test statistics using statistical package for social sciences version.20 (SPSS 20). Data collected from the participants were quantitatively analyzed and presented into tables using SPSS 20. The results for this study show that head teachers frequently apply democratic leadership style as they allow teachers to express their feelings about how things should be done and they put suggestions made by staff members into operation. It is recommended that head teachers in secondary schools of Kitwe district should equally apply all the three leadership styles (democratic, laissez-faire and autocratic) without favoring only one type of leadership style. (184 words).

Keywords: *Head teachers' leadership styles, Teachers' motivation, Secondary education teachers, Kitwe district, Zambia.*

Introduction

Background Information

In recent years, issues of teachers' motivation and quality assurance have become a matter of debate and concerns in educational system and standards (Ofjebe & Ejugo, 2010). Teachers' motivation is a key to guaranteed quality education, as such influences quality and assurance in the education system. Without efficient and effective teachers in education industry, quantitative learning outcomes cannot be achieved. It is very important to motivate teachers properly in order to enhance quality in education system (Ofjebe & Ejugo, 2010).

Leadership plays a vital role in the school effectiveness and school improvement and this importance has always been emphasized by the researchers from the school effectiveness and school improvement (Kuvale, 2016). Good school-based management requires effective school leadership where by, school head teachers are able to handle school environmental interaction (Machumu & Kaitila, 2014). Head teacher's leadership styles and teacher's motivation are two very important factors of the work of the school that is enhanced by head teachers and teachers.

The style of leadership from the head teacher is of great importance for the performance of teachers in schools. The school head teacher ensures that there is exertion of influence and provision of direction on teachers in order to achieve the school goals (Kinyanjui & Orodho, 2014). It is against this background that this study sought to investigate the most applied head teachers' leadership styles in motivating teachers' in secondary schools of Kitwe district, Zambia.

Literature review

Leadership is viewed as the social influence process through which one individual exerts influence intentionary over others to structure the behaviors and relationship within a group or an organization such as a school (Ukaidi, 2016).

Ukaidi (2016) further expressed that organizational productivity, such as fora school is dependent on the leadership style adopted. Leadership style is the pattern of behaviors which is engaged in by a leader when dealing with the employee (Chua et al., 2018).

Lewin led a number of researchers to identify different leadership styles. The researchers identified three major leadership styles and these are Autocratic (authoritarian), democratic (participative) and Laissez leadership styles. In order to achieve the school goals the leader should use all the three leadership styles, with one of them being dominant, bad leaders tend to stick with one style of leadership (Kinyanjui & Orodho, 2014).

Ukaidi (2016) defined autocratic leadership style as one in which a leader gives orders and demands that should be carried out by the staff members. In this leadership style no questions are allowed and no explanations are given. Study conducted by Probst & Raisch (2005) found out that autocratic leadership style causes leaders to possess too much power which can resort to negative implications to the performance of an organization such as a school. Probst & Raisch (2005) further expressed that autocratic leadership style limits potentials of other members to excel and thus, discourage employee participation and contributes to low level of job satisfaction and trust in an organization.

Ojokuku et al. (2012) expressed that democratic leadership style is one where decision making is decentralized and shared by the subordinates. It encourages members of an organization to be part of the decision making. Amir et al. (2017), in their research found out that democratic leadership style is friendliness and helpfulness among the members of an organization. Democratic leadership style promotes the participation of staff in decision making (Raelin, 2012).

On laissez-faire leadership style, Muhammed et al., (2015) stressed that Laissez-faire leadership is the one in which the manager provides little or no direction and gives members of an organization as much freedom as possible. All authority or power is given to the employees and they must determine goals, make decisions, and solve problems on their own. Leaders who adopt Laissez-faire leadership style exercise little control over the followers who have freedom to carry out their assigned tasks without direct supervision.

Relationship between teacher motivation and head teachers' leadership styles

Motivation is important in ensuring that an individual get successful in achieving the established goals (Franklin, 2016). Graffari et al., (2017) stressed that motivation in organization is important and is needed for improving the performance of employees in an affirmative manner. Motivational encouragement of work force contributes to a higher quality of human resources and better performance in organizations (Graffari et al., 2017). Employee motivation is very important for organizations as every concern requires a physical, financial and human resources to accomplish the goals. Goals can be achieved if coordination and cooperation take place simultaneously which can be effectively done through motivation (Shalizadi et al., 2014). Employee motivation is the key factor to boost up the function of an organization. Motivated employees are always beneficial for the business organization in order to increase the production level and boost up the frequency of manufacturing (Datuck, 2018).

Study conducted by Kayii (2008) show that effective employee performance depends mostly on levels of staff motivation. The leadership style exhibited by head teachers should motivate teachers to contribute effectively towards the achievement of desired school objectives. Findings of the research conducted by Wasserman (2016) indicates that there is a correlation between the management style and teachers' commitment to work.

Theoretical framework

Study of Franklin (2016) show that researchers have linked the source of employee motivation to different leadership styles. Researchers have examined leadership styles and their influence on motivation of employees. Franklin (2016) used self-determination theory (SDT) in the context of employee motivation as influenced by leadership styles. This study is based on self-determination theory (SDT), study conducted by Gagne & Deci (2005) expressed that self-determination theory, encourages managerial autonomy support. Managerial

autonomy support is defined as the leaders acknowledging their staff members perspectives, providing relevant information in a non-controlling way, offering choice and encouraging self-motivation rather than pressing staff to act in specified ways. Self-determination theory is associated with employees being satisfied with their jobs, having a higher level of trust in corporate management, and displaying other positive work-related attitudes (Gagne & Deci, 2005).

Conceptual framework

According to the study conducted by Adom et al., (2018) defined conceptual framework in statistical perspective to be a relationship between the main concepts of the study. The conceptual framework is arranged in logical structure to provide a picture or visual display of how the variables are related to each other. leadership styles and teachers' motivation

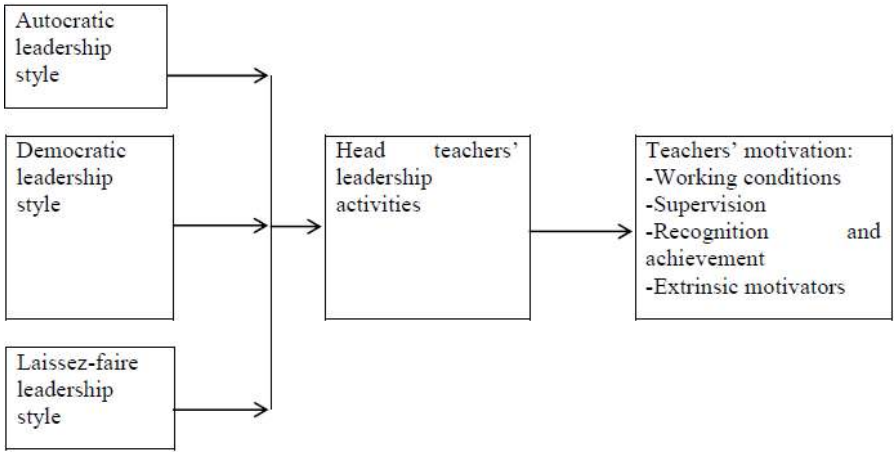

Figure 1. Relationship between head teachers'

The conceptual framework above shows that leadership style is the independent variable which has an influence on teachers' motivation. Intervening variables such as intrinsic and extrinsic motivators also influence teachers' motivation. Nevertheless, the leadership style applied by the head teacher has an impact on teachers' motivation. That is, teachers are motivated intrinsically from the required leadership style.

The reviewed literature gave the purpose of the study based on leadership style and teacher's motivation in the school work place in which head teachers exerts influence over teachers in order to reach the desired objectives in the school organization. In this study leadership style is defined as a particular behavioral applied by a leader to motivate his/her subordinates (Kinyanju, 2014). In the literature review three leadership style namely, the autocratic, democratic and Laissez-faire leadership style were discussed.

In autocratic leadership style, the leader held all authority and responsibility. There is little or no group participation in decision making and there is close supervision. In democratic leadership style the workers are involved in decision making and it promotes high morale on the workers. In Laissez-faire leadership style, the leader's waves responsibility and allows workers to work based on their decision with minimum interference. The study aimed at investigating the most applied head teachers' leadership styles in motivating teachers in secondary schools of Kitwe district, Zambia.

Statement of the problem

Learners' achievement in academic work depends on teachers' performance in secondary schools, poor performance of teachers' leads to poor academic achievement of the learners. Teachers' performance depends on both intrinsic and extrinsic motivation given to them through head teachers' leadership styles. In secondary school's head teachers are the ones with the highest authority; this means that they are the ones responsible for spearheading and monitoring of all the school activities.

It is the head teachers' leadership style and teacher's motivation that the research wants to investigate. The current research investigates the most applied head teachers' leadership styles in

motivating teachers' in secondary schools of Kitwe district, Zambia**.**

Purpose and objectives of the study

The purpose of the study was to investigate the most applied head teachers' leadership style in motivating teachers' in secondary schools of Kitwe district, Zambia. The following objectives guided the study:

1. To determine the extent to which head teachers practice democratic leadership style in motivating teachers in secondary schools of Kitwe district.
2. To determine the extent to which head teachers practice laissez-faire leadership style in motivating teachers in secondary schools of Kitwe district.
3. To determine the extent to which head teachers practice Autocratic leadership style in motivating teachers in secondary schools of Kitwe district.
4. To identify the most used leadership style by the head teachers in motivating teachers in secondary schools of Kitwe district

Research methodology

Research design

The study was conducted using descriptive survey. The target population was public secondary schools in Kitwe district. The district has 22 public secondary schools with 22 head teachers and 2101 teachers (Statisticaldata, from Kitwe district educational board office). Simple random sampling was used to select 210 teachers in Kitwe district from all 22 secondary schools. This was 10% of the total number of secondary education teachers. The head teachers were purposively selected from all the secondary schools. Two sets of questionnaires were prepared, one set of questionnaires were administered to the teachers and the other one to the head teachers. To test the reliability of the questionnaire instruments, data set on the questionnaires were subjected to chronbach's Alpha (α) test using statistical package for social sciences version.20 (SPSS 20). The chronbach's Alpha (α) provides an overall reliability coefficient for a set of variables. Overall chronbach's alpha (α) based on standardized head teachers' and teachers' questionnaire items are 0.801 and 0.782 respectively. For the two sets of questionnaire instruments tested, the results indicate that there is high level of internal consistency for the scale with specific data from the questionnaires.

Measures

The questionnaires administered to the head teachers and teachers consisted of the Likert scale questions that were used as the data collection. The questionnaire for the Head teachers consisted of 12 Likert items (in Annex I). Among them democratic leadership styles are measured by items 1, 4, 7 and 10, laissez-faire leadership is measured by 2, 5, 8 and 11. Then Autocratic leadership style is measured by 3, 6, 9 and 12. Then the questionnaire for the teachers consisted of 9 Likert items (Annex II). Among them democratic leadership style is measured by items 1, 4 and 7, laissez-faire is measured by items 2, 5 and 8. Then Autocratic leadership style is measured by items 3, 6 and 9. All responses for each statement item consisted of five choices, and these choices were given values which are strongly disagree as 1, disagree as 2, neutral as 3, agree as 4 and strongly agree as 5. For responses strongly disagree represents the minimum extent in the scale and strongly agree refers to the maximum extent in the scale relating to a specific extent.

For the measuring purposes of the responses the researcher followed a procedure, for calculating a composite score for each Likert item responses. It was done by calculating a mean-item summated score. Warmbrod, (2014) explained that a mean item summated score is an individual summated score divided by the number of items consisting the scale or the subscale, and thereby creating a mean item score for each individual Likert item that falls within the range of the values for the continuum options. Warmbrod (2014) further expressed that all items comprising a scale or subscale is assumed to have equal weight when calculating a summated score or a mean item score.

The questionnaires were self-administered to the respondents who are the teachers and head teachers. For this purpose, the researcher distributed self-administered questionnaires to the respondents and assured them that the information provided from them is to be kept confidential. The researcher collected the filled questionnaires on the same day and checked the research tool for ensuring its quality.

Data analysis

The data collected from the respondents with compatibility of addressing the research objectives and research problem was quantitative data. The quantitative data was collected from the Likert scale closed ended questions in the questionnaires. The obtained quantitative data from the questionnaires were analyzed using statistical package for social sciences version.20 (SPSS 20) to generate tables of mean scores and standard deviations.

Findings and discussions

Application of democratic leadership style and motivation of teachers.

The first objective was to determine the extent to which head teachers practice democratic leadership style in motivating teachers in secondary schools of Kitwe district.

Table 1. Head teachers' mean item scores on democratic leadership style

		Statement no.1	Statement no.4	Statement no.7	Statement no.10
N	**Valid**	22	22	22	22
	Missing	0	0	0	0
Mean		3.7273	3.7727	4.3182	3.7727
Std. Deviation		1.42032	1.15189	1.08612	1.37778

Table 1 contains results of four Likert statements (1, 4, 7 & 10) from the head teachers' questionnaire in Annex I, and it carries information which indicates that head teachers practice democratic leadership style in managing secondary schools in Kitwe district. The study revealed that majority of the head teachers make decisions through consultative forum from the teachers as shown by mean of 4.32, they allow teachers to express their feelings about how things should be done and they look out for personal welfare for teachers as indicated by mean scores of 3.77 for the two statements in Table 1. It has been indicated that head teachers put suggestions made by staff into operation as shown by mean of 3.73.

Table 2. Teachers mean item scores on democratic leadership style

		Statement no.1	Statement no.4	Statement no.7
N	**Valid**	210	210	210
	Missing	0	0	0
Mean		4.1952	4.5095	4.1524
Std. Deviation		.83292	.79617	.74860

Table 2 contains results of three statements (1, 4 & 7) from teachers' questionnaire in Annex II, the information from Table 2 shows that teachers have supported that head teacher's practice democratic leadership style in motivating teachers in secondary schools through proper management of secondary schools. The results in table 2 indicates that majority of the head teachers invites teachers to participate in decision making process as shown by a mean of 4.51, the study further shows that teachers get adequate chance to give suggestions on policy matters as indicated by a mean of 4.20, it has been shown that head teachers welcomes questioning by the staff in matters related to school affairs as indicated by a mean of 4.15.

The results in table 1 & 2 are in line with the study conducted by Obi (2003), which reveals that managers who adopt democratic leadership style are most likely to have high performance level from subordinates. Mohammed et al., (2015) expressed that democratic leadership styles requires a leader to be a coach who has the final say, but gather the information from staff members before making the decisions. The research conducted by Datuck, (2018) found that motivated employees are always beneficial for the business organization in order to increase the production level and boost up the frequency of manufacturing.

Application of laissez-faire leadership style and motivation of teachers

The second objective was to determine the extent to which head teachers practice laissez-faire leadership style in motivating teachers in secondary schools of Kitwe district.

Table 3. Head teachers mean item scores on laissez-faire leadership style

		Statement no. 2	Statement no. 5	Statement no. 8	Statement no. 11
N	**Valid**	22	22	22	22
	Missing	0	0	0	0
Mean		3.8182	2.1818	2.3636	1.4545
Std. Deviation		1.13961	1.09702	1.49747	.91168

Table 3 contains results of four statements (2,5, 8 & 11) from head teachers questionnaire in Annex I, the information from table 3 shows that Head teachers in secondary schools delegate responsibilities to the teachers as shown by the mean of 3.81, this implies that teachers are motivated as they become responsible and gaining of experience in conducting delegated tasks given to them. The results indicate that head teachers do not allow teachers to diagnose their own problems as shown by mean of 2.36. The responses also show that teachers do not make decisions on their own as indicated by the mean of 2.18. Head teachers gave strongly disagree response to statement number 11 of not supervising teachers as shown by a mean of 1.45.

Table 4. Teachers mean item scores on laissez-faire leadership style

		Statement no. 2	Statement no. 5	Statement no. 8
N	**Valid**	210	210	210
	Missing	0	0	0
Mean		1.8619	4.2905	1.9190
Std. Deviation		1.01424	1.01491	1.19333

Table 4 above contains the results of the statements (2, 5 & 8) from teachers questionnaire in Annex II, the information from table 4 shows that head teachers delegates some of their responsibilities to their teachers as shown by the mean of 4.29, the responses further indicates that head teachers does not permit staff to use their own judgment in solving problems, it has been shown by the mean of 1.92, teachers responses show that head teachers do not allow teachers to take their own initiatives it has been indicated by a mean score of 1.86.

The results in Table 3 & 4 shows that head teachers are not in favor of using laissez-faire leadership style in governing secondary schools. As it is said that, “more freedom more problems”, laissez-faire leadership style gives more freedoms to the staff in decision making processes. The results in Table 3 & 4 are in line the study conducted by Muhammed et al., (2015) in which they stressed that laissez-faire leadership style leads to high danger to supervision laws. The study conducted by Franklin (2016) show that laissez-faire leadership gives complete autonomy to employee in completing duties in their time frames. Franklin (2016) further stressed that Laissez-Faire leadership style is not useful when the group members lack necessary knowledge, experience to make the decisions, or when they cannot manage their deadlines.

Application of autocratic leadership style and motivation of teachers

The third objective was to determine the extent to which head teachers practice autocratic leadership style in motivating teachers in secondary schools of Kitwe district.

Table 5. Head teachers mean item scores on autocratic leadership style

		Statement no.3	Statement no.6	Statement no.9	Statement no.12
N	**Valid**	22	22	22	22
	Missing	0	0	0	0
Mean		1.7273	2.5909	3.1364	2.0000
Std. Deviation		1.27920	1.09801	1.20694	1.23443

Table 5 above contains the results for the statements (3, 6, 9 & 12) from head teachers' questionnaire in Annex I. The information from table 5 shows that head teachers gave a neutral response to the statements that states, " I give orders to the teachers regarding what is to be done and how it should done," and, "I issue detailed instructions and supervise teachers work closely," this have been indicated by mean item summated scores of 3.14 and 2.59 respectively. The head teachers gave a disagree response to the statement that head teachers are slow to accept new ideas, as indicated by an accurate mean score of 2.00. Then head teachers gave a disagree response to the statement that they refuse to explain their actions to the teachers as shown by a mean of 1.73.

Table 6. Teachers mean item scores on Autocratic leadership styles

		Statement no.3	Statement no.6	Statement no.9
N	**Valid**	210	210	210
	Missing	0	0	0
Mean		1.7619	1.8381	1.5286
Std. Deviation		.99303	1.26130	.98876

Table 6 above contains the results for statements (3, 6 & 9) from teachers' questionnaire in Annex II. It has been shown that head teachers guide as a friend and not as a dictator as shown by a mean of 1.84, teachers gave the response that head teachers in Kitwe district acts with consultation from the teachers as shown by a mean of 1.76, teachers further responded that head teachers make decisions with consultations from teachers, and teachers are free to express their views as it has been shown by a mean of 1.53.

From the results in table 5 & 6, it has been shown that head teachers in secondary schools of Kitwe district are not favor of autocratic leadership style. Misusing of autocratic leadership style styles enables a leader to be rigid in decision making. The results in Tables 5 & 6 are in line with the study conducted by Muhammed et al., (2015) in which they expressed that in autocratic leadership style, the manager does not consult employees and employees are expected to obey orders without giving any explanation. Autocratic leadership style gives less or no confidences to the employees and good interest of the employees are suppressed. Chukwusa (2018) expressed that autocratic leadership style prevents the use of creative ideas to problem solving.

The most used leadership style by the head teachers.

The fourth objective was to identify the most used leadership style by the head teachers in motivating teachers in secondary schools of Kitwe district. Head teachers and teachers' responses shows that the most used leadership style by head teachers in Kitwe district is democratic leadership style. Results show that democratic leadership style received "strongly agree" and "agree" responses to the statements that support head teachers in using democratic leadership style than laissez-faire and autocratic leadership style from the questionnaire Likert scale questions. It has been indicated by the mean item scores of nearly precisely to 'agree' and 'strongly agree' responses from Table 1 and 2 in agreement of head teachers using democratic leadership style. Then the mean item summated scores from Table 3, 4, 5 and 6, are nearly precisely to 'disagree' and 'strongly disagree' responses which implies that head teachers do not mostly use laissez-faire and autocratic leadership styles. The finding has showed that head teachers in Kitwe district

mostly use democratic leadership style in motivating teachers to teach effectively in secondary schools. The study results are in line with what Obi (2003) suggested that managers who adopt democratic leadership style are most likely to have high performance level from the subordinates. Democratic leadership style has the greatest advantages in motivating teachers in secondary schools than Autocratic and Laissez-Faire leadership styles.

Conclusions and recommendation

The study found that the most used leadership style by head teachers in managing secondary schools of Kitwe district is democratic leadership style. The results show that sometimes head teachers use Laissez-faire leadership style, and then autocratic leadership style posted the worst results as it has not been commonly practiced by the head teachers.

The findings from the study indicates that teachers are motivated when the head teacher is applying democratic leadership style, as in democratic leadership style head teachers invites teachers for support in decision making process, in this way teachers get adequate chance to give suggestions on policy matters. It has been supported from the study that head teachers who adopt democratic leadership are most likely to have high performance level from the teachers.

The results show that head teachers delegate tasks and responsibilities to teachers by applying laissez faire leadership style. It has shown that head teachers do not commonly apply laissez-faire leadership style because it gives more freedom to the staff members in decision making process. The findings have shown that head teachers in secondary schools do not supervise teachers work closely and head teachers accept new ideas, and they explain their actions to the teachers. It has been shown from the responses that head teachers make decisions with consultations from the teachers and teachers are free to express their views. From this study it has been indicated that head teachers in secondary schools of Kitwe district do not commonly practice autocratic leadership style in managing their secondary schools.

Based on the results of the study, the following recommendations were made.

1. The ministry of general education (MoGE) should engage inspectors at district and provincial level in educational sector to inspect head teachers regularly in secondary schools of Kitwe district and Zambia at large, in order to ensure that head teachers apply all the three (3) leadership styles (democratic, autocratic and laissez-faire) equally without favoring only one type of leadership style.
2. Head teachers in secondary schools of Kitwe district should apply a specific leadership style for a specific situation at the right time in order to motivate teachers. Each leadership style is suitable to be applied in a required condition.
3. Head teachers sometimes should collect information from the teachers about what is required for them to be motivated, so that head teachers should identify the best required leadership style that is to be applied for a specific situation.

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Situational Analysis of ICT Applications in Colleges of Education libraries in Nigeria: Issues and Challenges

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Abstract

This research work dealt on "Situational Analysis of ICT Applications in Colleges of Education libraries in Nigeria". The purpose of the study is to find out the challenges of applying ICT in library functions and to examine the benefits of applying ICT in library functions. A survey research design was used for this study. The researcher made use of purposive sampling technique to select fifty respondents from (300) three hundred library staff of colleges of education in south eastern Nigeria. Purposive sampling technique was adopted because the respondents are few and have the same features, for instance, the respondents work in college library. The instrument for data collection is the questionnaire which has thirty (30) items designed to obtain information on ICT application in colleges of education libraries. The mean statistics was used to analyze the data collected. The findings of the study showed that lack of ICT personnel, lack of standardization, lack of library software to mention but a few are some of the challenges of applying ICT in library functions. The paper also listed some of the benefits of applying ICT to library functions such as low cost of processing materials, speed and accuracy of information, better service at lower cost, influences accessibility of information acquisition of knowledge and skills etc. The paper concluded that Government should employ ICT personnel and experts in our libraries to handle the integration and at the same time provide in-service training and re-training for library staffs on a regular basis as measures to ICT application in Colleges of education libraries.

Keywords*: Information and communication Technology (ICT), Libraries, ICT based library services.*

Introduction

Libraries are indispensable structures in supplementing and enhancing our learning. The review of this literature seeks to respond to the benefits and challenges of applying ICT in library functions. After the enormous and continuing revolution in technology, access to information around the globe is becoming equally comfortable. In recent decades, librarians are adopting various technology designs to offer education services. Integration of ICT ensures an active role for librarians in their work (Vijayakumar & Vijayan, 2011; Akor, Joshua, &Idika-Mba, 2016). Also, ICT improves speed and accuracy in accessing, retrieving, storing, manipulating and disseminating data to users. In this line, computers and telecommunication technologies are the leading agents in changing the library operations.

With the dawn of technological advancement, library operations are becoming digital. An academic library brings together learning materials such as textbooks, audiovisuals to enhance the educational and institutional programmes. Besides, it has a collection of advanced books for learners, teachers and scholars who may wish to advance knowledge in a given discipline. A library must acquire reference books to help learners understand concepts on their own besides classroom teaching (Okon & Ogbodo, 2014). In a school set up, a library prepares learners to different professions and occupations by developing and widening their pool of knowledge and skills. Libraries should also provide materials such as newspapers and magazines to make users aware of the current events. Furthermore, libraries provide fiction materials, dictionaries and directories.

To meet the above functions, a library must have a catalogue to ease the process of retrieving the resource materials. In the traditional setting, to access materials from the library, users had to go to the library physically. However, technology has made the process easy. Integration of ICT in the library brings millions of useful resources across the world, helping users to acquire the most recent and relevant materials (Okon & Ogbodo, 2014). A huge number of libraries across the globe can take advantage of ICT.

In recent times, we require and can access information that is produced in all formats. Technology enhances means through which we can gain information in different e-book formats. Access of these resources ensures the sustenance of library and information practices (Okon & Ogbodo, 2014). The Declaration of Human Rights by the United Nations in article 19, states that all persons irrespective of geographical boundaries have freedom of opinion, expression and access to information (The United Nations Universal Declaration of Human Rights, 2014). It follows that the UN recognizes the importance of sharing information across boundaries. Accordingly, libraries can serve us with up to date information.

In most of the developing countries like Nigeria, the libraries face many problems in the implementation of ICT in libraries. According to Naqvi (1982), he observed the following obstacles as factors militating against integration of computers or ICT in library operations. The librarians have no practical experience in the use of computers, as this is still a new innovation. The various numbers of computer brands, windows and programming languages adds to the difficulties. Computer applications for libraries are still new and not taught at our various institutions of higher learning. Professional librarians rarely specialize in computers, just as computer personnel are not well suited to apply computers to library operations.

Observation has shown that most educationists, planners and librarians are scarcely interested in computers. Another problem vividly outstanding is the librarians' rigidity and conservatism, they prefer to do things the way they were taught which is outdated and no longer in vogue. However, the exorbitant costs of computer hardware and software are perhaps the most important factor. There are several other issues that are significant to the challenges of computer application to library operations such as unavailability of vendor support, lack of training facilities, computer illiteracy, lack of library software, lack of funds, retrospective conversion, improper planning, bureaucratic setup, lack of standardized and quality control.

It is without notice; technology is facilitating the flow of information to enhance communication. ICT enhances collection and provision of accurate data, the achievement of research objectives which may be challenging due to organizational structures (Akor, Joshua, & Idika-Mba, 2016). Most of the countries and institutions across the world are using ICT in the library. However, in Nigeria, traditional methods of accessing, processing, storing and delivering information are still in use (Okon & Ogbodo, 2014). It is a concern which makes us raise our eyebrows on reasons why libraries and librarians are taking long to integrate ICT in their operations. In this research, we call them to rise and match up to the occasion and embrace technological changes engulfing the world today.

In the classical libraries, information is carried in the form of graphical representation and in the traditional libraries, information is carried in form of hard copies and operations were manual. Traditional libraries had a list of problems which ranged from finance for acquisition of library materials to the organization of these materials. For instance, it is believed that conservatively there are in print every year, about 11 million books and 2.5 million periodical titles. On the average, a library can add to its collection only 15,000 volumes or 10,000 titles of books and 5000 periodical title per annum. The implication is that the traditional libraries cannot acquire majority of the publications.

Again, library budgets seem to be dwindling, where they exist. Sadly too, the parent bodies that release funds equally determine such volumes to be acquired. Other problems of traditional libraries are; access to rare books, manuscripts, ancient books and out of print titles. The ripple effect of these problems associated with traditional libraries is that users

are deprived of necessary information at the right time, thereby inhibiting academic progress.

The fast evolution of ICT in library operation has led to new ways of managing traditional libraries, especially through the use of computers to create, distribute and access information in digital formats. With e-libraries, the information media of storage systems, access and services have to change. ICT enables academic libraries to publish their categories on the web, online public access (OPAC). For example, the IITA library database has been uploaded on the internet using the web publishing hosted by CGNET. CGNET is the electronic mail network of consultants group. The particular advantage this has for universities and colleges is that resources of those libraries can be accessed on the internet and it promotes resource sharing among academic libraries.

Integration of ICT has numerous positive impacts on the libraries and the level at which information is readily available. Development of Online Public Access Catalogue (OPAC) which is a product of technological innovation which brings together billions of academic resources across the globe, helps in saving space and brings together hundreds of academic catalogues. Libraries and librarians can link to share information, resources and expertise. Networking through local and wide area networks helps in bringing together large databases together for access by users. Consequently, libraries can share resources. Eases the access of compilation of publications from scholars of a given institution such as theses, dissertations, conference papers, reports, papers from seminars and lectures for inaugurals which are great assets of an institution (Vijayakumar & Vijayan, 2011; Akor, Joshua, & Idika-Mba, 2016). Once universities link via the network, they can share the institutional repositories. ICT promotes the creation of a library beyond the space limit. Resources are accessible to all and space is enough for all. The benefits of ICT in library operations has also been identified by several other writers like Madu, (2004), Okore, (2005) and Nwachukwu (2005), to include low cost of processing materials, speed and accuracy of information, better service at lower cost, influences accessibility of information, growth in knowledge and skills, controls proliferation of information, conservation of time as well as boosting income generation.

Over and above the main benefits we recognize from integrating ICT in the library. It is important to note the overwhelming challenges impacting the process. Some of the challenges include inadequate funding from the government, which affects the level of ICT incorporation in Nigeria's learning institutions. ICT infrastructure for libraries requires hefty sums and comprises of network, software, computers, and subscription and purchase of academic material resources. Unfortunately, government allocation to the education sector is 6% of the overall budget (Ameh & Aluko, 2019; Oghenetega, Umeji, &Obue, 2014). The funding is too little to bring up new technological infrastructure. Researches on the impact of ICT in Nigerian libraries highlight funding as the contributing factor to integration (Okon & Ogbodo, 2014).

Power supply to most of the libraries in Nigeria is not consistent. ICT requires a constant supply of power to ensure resources are accessible. When the power goes off, network and computers shut down interfering with free flow of information. Majority of the librarians in Nigeria are not well versed with technological know-how; it is, therefore, a great challenge for them to train and adapt (Oghenetega, Umeji, &Obue, 2014). Nigeria Government restructures ICT policies to fit the interests of the individuals in power. Failure to maintain ICT infrastructure is another challenge facing the library in Nigeria (Okon & Ogbodo, 2014; Vijaya kumar & Vijayan, 2011). Maintenance requires constant and regular monitoring of the networks, resources and security features of the websites. Finally, the use of substandard equipment in the installation stage affects the overall success of the entire library systems (Oghenetega, Umeji, & Obue, 2014).

Factors affecting the adoption of ICT in Nigeria libraries include lack of necessary infrastructure, wrong perceptions of ICT, inadequate training to librarians to possess basic skills, unconducive working environments and inadequate ICT components in the school curriculum (Oghenetega, Umeji, & Obue, 2014). From the ongoing review of the literature, it is clear that ICT integration has numerous benefits despite the challenges. The researcher hopes that

the government will allocate more resources to ensure that learners of Nigeria can access material resources across the globe. Today the need for information is fundamental.

Research questions

1. What are the challenges of applying ICT in library functions?
2. What are the benefits of applying ICT in Library functions?

Methodology

A survey research design was adopted for the study. The population is made up of three hundred staff of colleges of education libraries in South-Eastern Nigeria. Fifty respondents were sampled for the study, using purposive sampling technique. Purposive sampling technique was adopted because the respondents are few and have the same features, for instance, the respondents work in college library.

The instrument for data collection is the questionnaire which has thirty items designed to elicit information on ICT application in colleges of education libraries. The instrument was first validated by experts in library studies at federal college of education technical Umunze and an expert in measurement and evaluation at Nwafor Orizu college of education Nsugbe, Anambra state.

The reliability of the research instrument was determined through the measure of internal consistency of 0.80. This measure is high enough for the instrument to be considered reliable. For data analysis, the research questions were analyzed using mean statistics. Any mean of 2.5 and above is said to be high and effective and those below 2.5 are said to be low and ineffective.

Results

The following are the results of the data analysis:

Research question 1

1. What are the challenges of applying ICT in Library functions**?**

Table 1. Mean rating scores on the application of ICT in library functions

S/N	Item Description	X	Remarks
1.	Lack of support from the government	1.9	Rejected
2.	Lack of ICT personnel or expertise to handle the ICT integration	3.0	Accepted
3.	There is no in-service training for staff	2.8	Accepted
4.	Lack of concern on stakeholders	3.5	Accepted
5.	Lack of standardization and quality control	2.4	Rejected
6.	Librarians have little or no practical experience	3.6	Accepted
7.	The large number of computer brands and languages adds to difficulties.	2.2	Rejected
8.	Computer applications for libraries are not taught at University level.	3.5	Accepted
9.	Lack of interest in computers by librarians, educators and planners.	3.0	Accepted
10.	Rigidity and Conservatism on the part of librarians	3.4	Accepted
11.	Computer illiteracy.	3.5	Accepted
12.	Improper planning and lack of funds.	2.8	Accepted
13.	Lack of library software.	3.5	Accepted
14.	Lack of training facility and retrospective conversion.	3.0	Accepted
15.	Lack of bureaucratic setup and unavailability of vendor support.	3.5	Accepted

The result presented in table one showed that items 2, 3, 4, 6, 8, 9, 10, 11, 12, 13, 14 and 15 were rated high by the respondents. This was clearly indicated from their respective mean

scores of 3.0, 2.8, 3.5, 3.6, 3.5, 3.0, 3.0, 3.4, 3.5, 3.8, 3.5, 3.0 and 3.5, which are above the criterion of acceptance fixed at 2.5 and above. This means that the librarians are in agreement that the items stated above are challenges militating against ICT applications in the library functions. Items 1, 5, and 7 were rated low by the respondents. This can be seen from their respective mean scores of 1.9, 2.4, and 2.2. It means that Librarians did not see these items as challenges to the application of ICT to library functions.

Research question 2

What are the benefits of applying ICT in Library functions?

Table 2. Mean rating scores on the benefits of applying ICT in Library functions

S/N	Item Description	X	Remarks
16.	Influences accessibility of information.	3.0	Accepted
17.	Influences growth and knowledge skills.	3.0	Accepted
18.	Low cost of processing materials	2.8	Accepted
19.	Computers are known for their speed and accuracy.	3.2	Accepted
20.	Controls proliferation of information.	2.5	Accepted
21.	There is better service at lower cost.	3.5	Accepted
22.	Computerization enables librarians to place their entire collection at the immediate disposal of the users.	3.5	Accepted
23.	Enhances resource sharing.	3.5	Accepted
24.	There is efficiency and accuracy.	2.8	Accepted
25.	There will be flood of information.	2.5	Accepted
26.	Solves the storage problem faced by libraries.	3.4	Accepted
27.	There is durability and security of data.	3.0	Accepted
28.	Centralization of services	3.2	Accepted
29.	Serves the information need to remote users	2.8	Accepted
30.	Simple and portable.	3.0	Accepted

The result presented in table 2 shows that items 16-30 were rated high by the librarians. This was clearly indicated from their respective mean scores of 3.0, 3.0, 2.8, 3.2, 2.5, 3.5, 3.5,3.5, 2.8, 2.5, 3.4, 3.0, 3.2, 2.8, and 3.0 respectively. These mean scores are above the criterion of acceptance fixed at 2.5 and above. This means that the items stated above are the benefits of applying ICT in Library functions.

Discussion of findings

The result of the analysis of research question one shows that challenges facing the application of ICT in library functions are: lack of expertise to handle the integration, lack of concern on stake holders, lack of library software among others. These findings are in line with Naqvis (1982) who identified the following obstacles as factors militating against integration of ICT in libraries: librarians have no practical experience in the use of computer brands, as it is still a new innovation, the various number of computer brands, windows and programming languages adds to the difficulties, computer applications for libraries are still new and not taught at our various institutions of higher learning among others.

Corroborating this assertion, Ameh & Aluko, (2019), Umeji & Obue, (2014), Okon & Ogbodo, (2014) identified poor funding as the contributing factor to integration of ICT in library functions. The result is also in conformity with that of Oghenetega, Umeji and Obue 2014 who identified factors affecting the adoption of ICT in Nigeria libraries as: lack of necessary infrastructure, wrong perception of ICT, inadequate training to librarians to possess basic skills, unconducive working environment and inadequate ICT components in the school curriculum.

The result of the analysis of research question two shows that the benefits of applying ICT in library functions are: low cost of processing materials, influences growth and knowledge skills, influences accessibility of information, controls proliferation of information etc.

These findings are in agreement with the works of Madu, (2004), Okore, (2005), and Nwachukwu, (2005), who observed the benefits of ICT in libraries to include: low cost of processing materials, speed and accuracy of information, better service at lower cost, influences accessibility of information, growth in knowledge and skills, controls proliferation of information, conservation of time as well as boosting income generation.

Conclusion

The adoption of ICT application in Library functions is a welcome development towards sustainable development of libraries in Nigeria. Therefore, Government should allocate more resources to ensure that learners in Nigeria can access material resources across the globe. The adoption if carried out diligently, will help to achieve the objectives of libraries and at the same time help Nigerians to enjoy the benefits like their counterparts in the developed world.

Recommendations

Based on the findings above, it is recommended that:

1. Government should employ ICT personnel and experts in our libraries to handle the integration.
2. Government should provide in-service training and re-training for library staff on a regular basis.
3. Government should make adequate provision for funding library projects on a regular basis.
4. Government should formulate policies that would encourage the application and adoption of ICT in all libraries across the country.
5. Government should ensure that libraries acquire the necessary ICT tools, software and gadget with the help of the Nigeria Library Association (NLA) and National Library of Nigeria (NLN).
6. Private companies, rich individuals can invest their resources in ICT especially at colleges of education libraries.

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The Contribution of Education to Entrepreneurship and Management

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Abstract

The purpose of this study was to establish the contribution education has on Entrepreneurship management and its effect on Small and Medium Enterprises (SMEs) in Chipata District of Zambia. Entrepreneurs remain key relevant partners in the economic development of any country globally, and Chipata district is no exception. Due to the lack of clear evidence as to how successful educated entrepreneurs are managing their businesses in Chipata district of Zambia, this study was aimed at assessing the contribution of education to SMEs in Chipata District. The study was limited to Small and Medium Enterprises (SMEs) in Chipata district, town centre. The study implored a descriptive cross-sectional study design to address the research questions. Questionnaires were used as means of collecting data from the business owners. The study sampled 60 business units in Chipata district. The sample was identified by means of specific purposive sampling. All ethical considerations were taken account. The findings showed that most of the entrepreneurs did not possess qualifications that were higher than a first degree, however some entrepreneurs made some efforts to study business courses at local universities. The findings also showed that the SMEs' owners accepted and agreed that employees that had attained some business qualifications added value to the management of the business.

Keywords: *Entrepreneurship, Education, Small and Medium Enterprises.*

Background and context

An increase in the number of entrepreneurs leads to an increase in economic growth that would eventually translates into economic development (Zoltan, 2006). This effect is as a result of the concrete expression of their (entrepreneurs) skills and competencies, more precisely, their propensity to innovate and also harness the power of creativity, one must have the courage to act on his great ideas and plans. Entrepreneurship education can be looked at as the purposeful intervention by an educator in the life of the learner to impact entrepreneurial qualities and skills to enable the learner to survive in the competitive world of business. According to Erasmus, Loedoff, Mda and Nel (2006), entrepreneurship education is a structured formal conveyance of entrepreneurial competencies, which in turn refers to the concepts, skills and mental awareness used by individuals during the process starting and developing their growth-oriented business ventures. Entrepreneurship education is described as a form of education which aims at raising individuals who are capable of starting new business (Timmons, Eisenman and O? Conno, 2015). They further opine that it is increasingly advertised as the premise upon which economies of the world can experience development and sustainability. Rwigema and Venter (2004) view entrepreneurship as the process of conceptualizing, organizing and launching a business opportunity into a potentially high growth venture in a complex and either stable or unstable environment. Entrepreneurship is described to stabilize through innovation and adequate nurturing. From the above definition four key components can be deduced, they are

1. Manageability
2. Organization
3. Integration of resources, and
4. Outcome of opportunity

Luthje and Frank (2002), agree that positive relationship exists between education and business creation. According to Schramm (2006) entrepreneurship should be learnt in all further education and training phases. Kuratko (2003) earlier opined that the motion to inculcate entrepreneurship education at all further education and training phases was taken by many tertiary institutions in the United States of

America, Europe, East Asia and Latin America for example, in order to design and implement relevant entrepreneurship teaching programmes. On the contrary, Tomkins-Bergh and Miller (2015) aver that the inclusion of entrepreneurship education at further education and training phases has not yielded success as expected due to three (3) major reasons known as:

1. Poor definition of context and goals of entrepreneurship education programme.
2. Lack of competition, as entrepreneurship education programmes seem distinct in their nature.
3. Poor research which uses methodologies that truly ascertain the effects of an intervention.

While Eisenman and O? Conno (2015) assert that entrepreneurship education should vary from nation to nation. In other words, different countries should design the curriculum of entrepreneurship education programme obtainable in their society to suit the demands and needs of the host nation, because the programme is essential and influences the intentions, aspirations and attitudes of persons who strive to introduce and promote new endeavours.

Some scholars of entrepreneurship have had some concerns as to who, why and how the impact of entrepreneurship development would contribute to the general economic advancement of the nation such as developing countries (Bruton et. al, 2008); a state of affairs that can be described as a 'scholarly disconnect'. This discourse matters and is very crucial for a number of reasons. Firstly, it is widely believed that entrepreneurship is beneficial for economic growth and development. Secondly, entrepreneurship has been remarkably resurgent over the past three decades in countries that achieved substantial poverty reduction, such as in China. Further to that, developed countries such as Germany have taken keen interest in promoting entrepreneurship through the formation of Small and Medium Enterprises commonly known as (Mittelstand) SMEs. These SMEs have had some financial assistance coming from commercial banks with very reasonable interest rates, just to ensure that small business organizations survive and prosper (CBI Export Planner, 2000). Given the fact that Germany is the second largest exporter in the world, just behind China, the SMEs have played major role in this achievement taking into account the fact that Germany is a first world country with very high labour cost compared to China (Chinese pay slavery wages to their workers and make them work longer hours) Cieslik *et. al,* (2012). Donor Agencies have also looked at entrepreneurship as the source of making aid to developing countries sustainable and value based (Piotr and Rekowski, 2009). Therefore, equipping the entrepreneurs and would be entrepreneurs with necessary skills and competencies (education) is key in achieving the aforesaid objectives and economic status.

To become a successful entrepreneur requires a set of technical skills (Gonçalves et al. 2017), but also the combination of opportunity, capabilities, and resources. However, the entrepreneur needs to be a leader to conduct the business and the teams efficiently and achieve the goals to be successful. In an aim to do so, the entrepreneur might need to embrace education or have an educated team that can serve the business with the above-mentioned skills. OECD has identified three main groups of skills required by entrepreneurs, and these are

Technical

Communication, environment monitoring, problem solving, technology implementation and use, interpersonal, organizational skills

Business management

Planning and goal setting, decision making, human resources management, marketing, finance, accounting, customer relations, quality control, negotiation, business launch, growth management, compliance with regulations skills

Personal entrepreneurial

Self-control and discipline, risk management, innovation, persistence, leadership, change management, network building, and strategic thinking

These combinations of the skills, competencies and attributes are required variously by commercial managers and creative workers. In addition, entrepreneurs require knowledge of the sectors in which they operate (i.e. agricultural sector, in the case of Chipata district). Take for instance, The European Commission that has recognized the importance of entrepreneurship education as a key component in the competence of life, and advised that practical entrepreneurial experience is attained by all before the students leave the

compulsory entrepreneurship education (European Commission, 2013).

British Broadcasting Corporation (BBC) reports on Asia Business report on Friday, 11th October 2019 (at around 04:35 hrs A.M) that Australia had developed a system that would make students in Schools learn and study entrepreneurship courses. This would help students learn how to take risks and understand the challenges that come with business start-ups in the global business environment (BBC Asia Business Report, 2019).

Statement of the problem

Theoretically, there is a lacuna in literature of exactly how entrepreneurship is related to, or how it impacts on economic growth and contributes to national development in Zambia. On the basis of the above statement, there is need for more studies to be conducted in order to uncover exactly the relationship between entrepreneurship and economic growth and national development in developing countries, and also to discover the impact one hand and understanding the value of education in entrepreneurship on the other, taking the case of Chipata SMEs. The main goal of entrepreneurial education is to develop some level of entrepreneurial competencies that remain to be a big challenge and gap in most SMEs in Chipata district. Entrepreneurial competencies would provide knowledge, skills and attitudes that would enhance the willingness and ability to perform the entrepreneurial job of any new creation. This is why this academic research paper, being facilitated and supervised by Texila American University, intends to assess the role of entrepreneurship in economic growth and development of Chipata District of Zambia. The aim will be to understand and evaluate how entrepreneurship could be properly and adequately used to create employment and wealth for the people of Chipata district, and eventually catalyze economic growth and development of this rural district.

Overall objective

The overall objective of this study is to establish the contribution education has on entrepreneurship management and its effect on Small and Medium Enterprises in Chipata district of Zambia

The specific objectives are

1. To establish the contribution of education to SMEs management in Chipata District
2. To discuss and understand the value educated employees add to the sustainability of SMEs in Chipata district
3. To assess the competencies and skills of management of SMEs in Chipata district
4. To provide recommendations to SMEs in Chipata district on how to embrace awareness of entrepreneurial education as a pedagogical approach relevant to all business practitioners.

Significance of the study

This study is justified on the basis of its significance in contributing to the literature (knowledge) on the impact and contribution of education to entrepreneurship and development in Chipata. The significance of this study lies in its quest to assess the role of entrepreneurship in economic growth and development of Chipata district. This will be arrived at through the objective provided above. As such, this study is very important as it will explore and describe the entrepreneurship-development nexus in Chipata, which means that it will generate the knowledge about this topic from the context of our own local area.

This kind of knowledge would not only add to the existing literature on the importance of education to entrepreneurship, but would also be very useful as it would act as the knowledge base needed by the relevant authorities and other stakeholders with a role in the formulation and implementation of educational policies, which will be biased to SMEs in Zambia. To this end, it would suffice to understand the differences between education and management. Entrepreneurial education has seen worldwide exponential growth in higher institutions (Kuratko, 2005), and was in 2001 offered at around 1200 business schools only in United States (Katz, 2008). On other levels of education such strong growth has not yet been seen, but development is under way with policy pressure exerted on educational institutions worldwide (see for example Ohe, 2012, Li et.al., 2003, Farstad, 2002, Mwasalwiba et.al., 2012). Today, entrepreneurial education has become an important part of both industrial and educational policy in many countries (Hytti and O'Gorman, 2004).

Education is the process of facilitating learning, or the acquisition of knowledge, skills, values, beliefs, and habits. While **Management** is in all business and organizational activities is the act of getting people together to accomplish desired goals and objectives using available efficiently and effectively. The gurus of management i.e. Peter Ferdinand Drucker, Henri Fayol and the father of scientific management Frederick W. Taylor have all propounded on the meaning and importance of management in any origination Drucker *et. al* (1994).

Scope of the study

The study area will be confined to a case study of the businessmen and women who are in the category of Small and Medium Enterprises in Chipata district. It will identify problems and constrains that hinder growth and survival of these business organizations.

Structure of the study

Chapter one. The purpose of this chapter was to introduce the background of the study statement of the problem, research questions, overall objective, specific objectives, significant of the study, scope of the study and structure of the study.

Chapter two. Literature Review will be introduced and discuss how entrepreneurship education could be a means to economic development and the importance of integrating it into the school curriculum. This chapter will also introduce learners to the information which empowers them to venture into activities and businesses that would help them improve the standards of living for the people in the community through job creation and the production of goods and services needed for the economy to thrive.

Chapter three. It will describe the methodology that the researcher will apply in the study. Research design, the sample selection and data collection process. Ethical consideration and research limitations will also be discussed in this chapter.

Chapter four. this is the chapter where findings of study will be discussed.

Chapter five. the analysis of the results and discussion of data collection, its validity and reliability of finding will be discussed.

Finally, in **Chapter six.** will provide conclusion and recommendations for future areas of research and what business people (Especially SMEs) should do and observe in order to remain profitable in the fierce global business environment.

Literature review

Entrepreneurship is very importance in the school curriculum in many ways. First of all, human beings have behaviours, attributes and skills which could be developed (learned) through school process that could be entrepreneurial education. One could read a book about entrepreneurship, and comes across education aids that talk about value and importance of entrepreneurship in economic development (Shane, 2003). It creates opportunities, ensures social justice, instills confidence and stimulates the economy. Entrepreneurship education is a lifelong learning process, starting as early as elementary school and progressing through all levels of education, including adult education. Introducing children to entrepreneurship develops their initiative and helps to identify, evaluate and exploit an entrepreneurial opportunity, for example, involves both agential actions and social structures (Shane, 2003 cited in Stokes et. al., 2017). As such, there are many ways entrepreneurship lessons could be integrated in the school curriculum and make clear understanding of who and what is involved in bringing about ‘new’ and ‘innovative’ things (Stokes *et. al.,* 2017).

Entrepreneurship is very importance in the school curriculum as it helps in the development of managerial capabilities (Zahra *et al.,* 2009). The biggest significance of entrepreneurship lies in the fact that it helps in identifying and developing managerial capabilities of entrepreneurs. A curriculum that integrates entrepreneurship studies makes learners to become entrepreneurs that could study a problem, identifies its alternatives, compares the alternatives in terms of cost and benefits implications, and finally chooses the best alternative (Zahra *et al.,* 2009). This exercise helps in sharpening the decision-making skills of a learner. Besides, these managerial capabilities that are used by entrepreneurs in creating new technologies and products in place of older technologies and products resulting in higher performance, it could also help learners recognize

that entrepreneurs are seekers of new goods and services (Galenson, 2008).

Also, entrepreneurship is very important in the school curriculum as it opens children's minds to how organizations are creation and how they operate. This makes children or learners understand most of the things that goes on in organizations, industries, business enterprises and many other sectors of the economy. Hisrich and Peters (2014) explain that entrepreneurship creates open minded individuals who become successful entrepreneurs. They further indicated that "entrepreneurship results into creation of organizations when entrepreneurs assemble and coordinate physical, human and financial resources and direct them towards achievement of objectives through managerial skills" (Hisrich and Peters, 2014). Entrepreneurship is important in the school curriculum in that it introduces learners to the information which empowers them to venture into activities and businesses that help improving standards of living for the people in the community through job creation and the production of goods and services need for the economy to thrive. By creating productive organizations, entrepreneurship helps in making a wide variety of goods and services available to the society which results into higher standards of living for the people. Technological knowledge is also a basis for generating new entry opportunities. Technological Knowledge refers to the entrepreneur's possession of information, technology, know-how, and skills that provide insight into ways to create new knowledge (Hisrich *et. al*., 2013).

Furthermore, entrepreneurship education is a means to economic development hence very important to be integrated into the school curriculum. An entrepreneur plays an important role in accelerating the pace of economic development of a country by discovering new uses of available resources and maximizing their utilization. According to Ollila and Williams-Middleton (2011), entrepreneurship involves creation and use of innovative ideas, maximization of output from given resources, development of managerial skills, and so on, and all these factors are so essential for the economic development of a country. While some entrepreneurs succeed even without learning entrepreneurship skills in the formal education system, it is more likely that individuals who become entrepreneurs after acquiring the knowledge and skills from the formal education system are likely to succeed (Ollila & Williams-Middleton, 2011). To this effect, it is very vital that entrepreneurship studies are made part of the school curriculum so that children in school can be introduced to the knowledge and skills which they can build their careers on as professional business men and women working to make things better. On the other hand, researchers such as Vygotsk, Leont' ev and Galperin explained conceptual model that was learning by doing. In this concept or model the students take action together with other people, primary classmates' other relevant stakeholders. The interaction is based on shared set of "mediating artifacts" such as shared tools, rules, processes, knowledge, signs, ideas etcetera. A tool-mediated view on learning was proposed by Vygotsky as a reaction to predominant acquisition - based model of learning in solitude explored by Piaget and other (Egan, 2004), where prepackaged knowledge is transmitted to passive recipients (Kozulin, 2003, Kozulin and Presseisen, (1995). The term "artifact" can be broadly defined as anything created by human art and workmanship (Hilpinen, 2011). According to Vygotsky and colleagues, human activity leads to two main outcomes; "externalization of activity into artifacts" (Miettinen, 2001, p.299) and "internalization of activity and gradual formation of mental actions", i.e. construction of new mental abilities (Arievitch and Haenen, 2005, p.159). Here externalization is the resulting value creation and internalization is the resulting dee learning. Shared artifacts, new artifacts and mental artifacts can all consist of tools, rules, processes, knowledge, ideas, etc. The concept of surface learning is defined as the memorization and acquisition of facts and while deep learning is defined as the abstraction of meaning and interpretation of experience (Jarvis, 2006). Surface learning informs action, and deep learning is the result of shared inter-action. In essence, learning-by-doing can be regarded as an emotional and motivation laden process, where motivation levels depend on

1. What actions are taken
2. What learning occurs and
3. What value is created

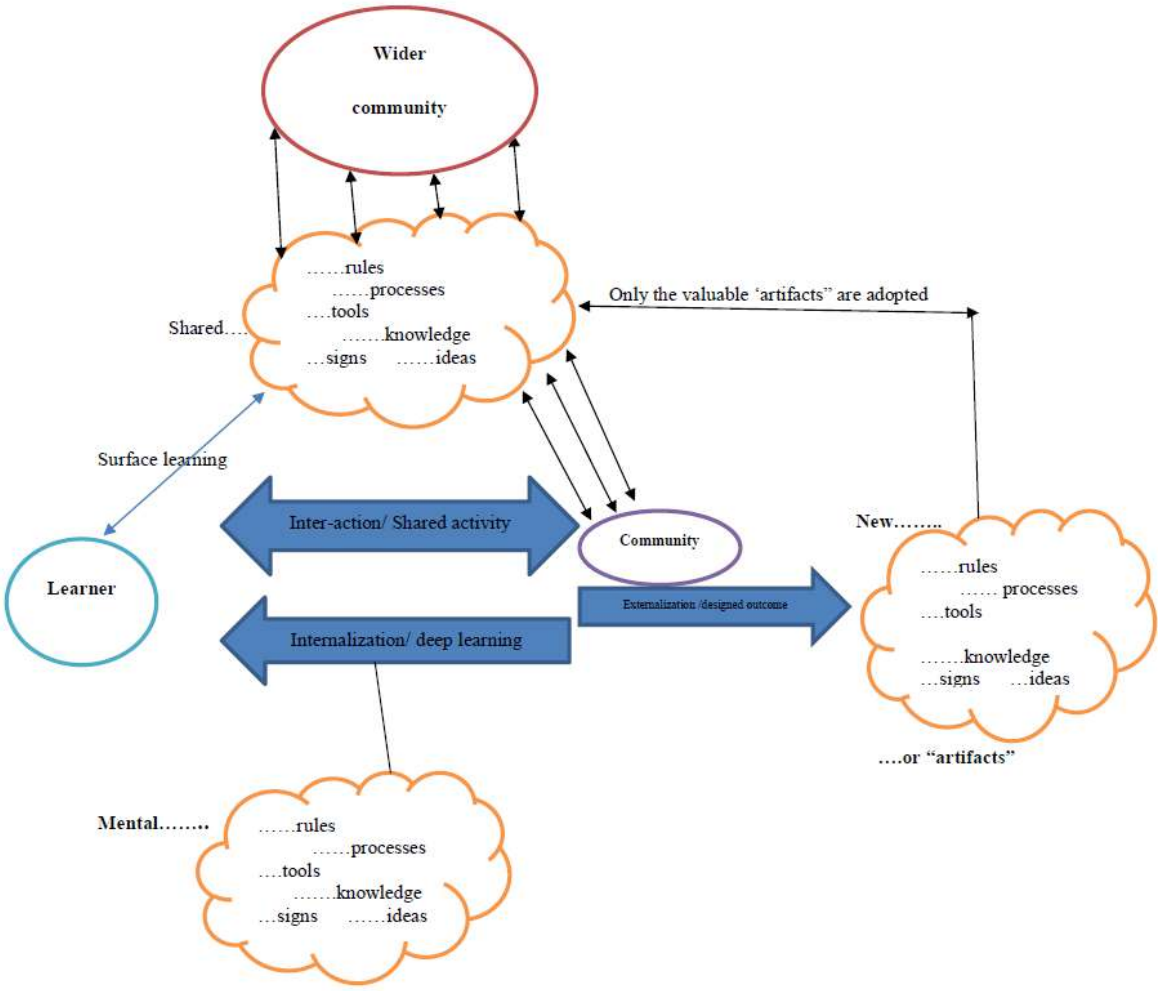

Figure 1. Conceptual model for learning-buy-doing

The above illustration outlines how learning and value creation are interconnected in learning-by-doing and how they reinforce each other. This framework shows how learning (Internalization) and value creation (externalization) are interconnected and can reinforce each other (Lackéus, 2013). The importance of a learner perspective for value creators such as entrepreneurs has been acknowledged before (see for example Cope, 2003). The importance of a value creation perspective for learners has also been acknowledged before (see for example Blenker et. al., 2011), and is perhaps one of the most important contributions that entrepreneurship can make to the educational domain.

Entrepreneurs are frequently thought not to have resources. As a result, they either seek resources from others to provide the "slack" necessary to experiment and generate entrepreneurial opportunities, or they engage in bricolage (Hisrich *et. al.,* 2013). According to Schumpeter, someone is an entrepreneur only when he is able to put together a new combination of resources (Swedberg, 1991:34). Resources, as key factors of production could take many forms such as raw materials, money, human resource or capital that could be employed to cultivate, motivate and remunerate to its greatest possible extent. Entrepreneurs can change the way we live and work. If successful, their innovations may improve our standard of living. In short, in addition to creating wealth from their entrepreneurial ventures, they also create jobs and the conditions for a prosperous society.

Three important databases describe the entrepreneurial activity of countries: The International Labour Organization (ILO) measures self-employment, the Global Entrepreneurship Monitor (GEM) measures start-up rates of new firms, and the World Bank measures the registration of new firms. It is worth

noting that these databases are concerned with formal as opposed to informal firms (Naudé, 2011).

Studies using these databases have uncovered two sets of results. First, there is a lack of clear empirical evidence of whether entrepreneurship drives economic growth, productivity, or employment. Studies find a mixed bag of results. Second, there seems to be a U-shaped relationship between entrepreneurship and a country's level of economic development, as measured by GDP per capita (Naudé, 2011).

The U-shaped relationship implies a higher rate of entrepreneurial activity in low-income countries than in middle-income countries (Wennekers, Van Stel, Carree, & Thurik, 2010). This result may reflect that entrepreneurs in developing countries are less innovative and tend to be proportionately more 'necessity' motivated (Gollin, 2008). Higher levels of GDP may therefore be associated with more 'innovative' forms of entrepreneurship. Another implication is that rather than causality running from entrepreneurship to development, the causality may also run from development to entrepreneurship.

In conclusion, macro-level empirical work has been concerned with how entrepreneurship influences economic measures of development, such as GDP, productivity, and employment. Very few studies have considered non-monetary or subjective measures.

Most micro-level studies focus on the why and how of entrepreneurship, not its impact on development. Nevertheless, studies on the productivity, innovativeness, and growth and female entrepreneurs provide insights on whether and how entrepreneurship matter for development. One lesson is that innovative entrepreneurship matters most for development.

Stam and Wennberg (2009) consider the literature on the impact of entrepreneurship on employment, innovation and productivity growth. They find that entrepreneurs do not spend more on R&D than their counterparts, although the quality and efficiency of their innovation is higher, and that their contribution to productivity growth is low. The majority of entrepreneurs would earn higher incomes as wage employees, and while entrepreneurs create more jobs relative to non-entrepreneurs, the quality of jobs they create is lower (Stam & Wennberg, 2009). Hence not all entrepreneurs drive development, and not all entrepreneurs are innovative.

As these findings refer to the impact of the average entrepreneur, it perhaps suggests that focusing on the average entrepreneur may not be the best policy stance. It may be better to focus on the small subset of innovative entrepreneurs that do make a difference. Studies find that innovative firms, particularly in high-tech sectors, have on average higher levels of productivity, tend to do enjoy higher employment growth, and cause positive spill overs for other firms (Stam & Wennberg, 2009). A study of manufacturing firms in Brazil, with the focus on a panel found that firms who engaged in technological innovation experienced higher growth in employment; net revenue, labour productivity, and market share (Kannebley, Sekkel, & Araújo, 2010).

Female entrepreneurs in developing countries have attracted greater attention in recent years given the key role of women in development and the still widespread discrimination. Evidence to date suggests that a variety of reasons contribute to explaining observed differences in entrepreneurial behaviour between women and men. Some of these differences include that women entrepreneurs' businesses tend to be smaller and to provide less employment grow than those owned by men. Women's businesses also tend to be less profitable than those of men and generate lower sales turnover than men, even in same industry comparisons (Minniti & Naudé, 2010).

These differences in entrepreneurial propensity and performance between men and women reflect disadvantages and discrimination in education and the labour market. Labour market discrimination against women has been argued to lead to a self-selection of the most highly talented women into labour markets. As a result, less talented women will opt for self-employment, a characteristic reflected in their enterprises' lower survival and growth rates. Furthermore, many women may not have sufficient confidence in their ability to start a firm (Kannebley et al., 2010). Yueh (2009) discuss the case of women entrepreneurs in China and supports the idea that lack of self-confidence is a significant constraint hindering women entrepreneurial entry in developing countries.

As a result, they also lack access to credit and face higher start-up costs. Naudé (2011) report

that female-headed households often lack assets or incomes, and that this constrains their ability to diversify their economic activities. In this regard a large number of studies have found that access to micro-credit has improved women's decision-making autonomy, and general household welfare and consumption.

Research methodology

Kothari (2003) defines Research Methodology as the pursuit of truth with the help of study, observation, comparison and experiment i.e. systematic method of finding solutions to a research problem identified. While Creswell (2003) defines research methodology as the procedural rules for the evaluation of research claims and the validation of the knowledge gathered. This research will be guided by a qualitative mode of inquiry called Action Research as a primary methodology. "Action Research is simply a form of self-reflective enquiry undertaken by participants in social situations in order to improve the rationality and justice of their own practices, their understanding of these practices, and the situations in which the practices are carried out" (Carr and Kemmis 1986, p. 162).

Study design

Young (2014) describes a case study as a method of exploring and analysing the life of a social unit, a person, a family, an institution, cultural group or even the entire community. Case study has its roots in clinical observation. It is diagnostic in nature. It is a form of qualitative analysis involving a very careful and complete observation of a person, a situation or institution. For recording what is being observed a case study sheet is developed which documents the identity of the subject, the problem, observations made, planning of remedial action and findings.

Cooper and Schindler (2003), state that a research design is a blueprint for fulling objectives and answering questions. Research designs are about organizing research activities, which include the collection of data, in ways that are most likely to achieve the research aims. However, this research design includes ontological and epistemological issues on how society should move towards SQTD (Bakisa, 2008).

Research design ontology

According to Yin (2002) case studies are vulnerable to a number of criticisms from positivist researchers. He further argues that case studies contend a lot of criticisms because they do not have the rigour of natural scientific designs. Case studies rarely allow generalization to be made from specific cases to the general population but produce huge piles of data that allows researchers to make interpretations they want. Smith *et. al* (2008) contend that all case studies should have a clear design produced before any data is collected and should cover the main questions or propositions, the unit of analysis, links between data and propositions and procedure for interpretation of data.

Source of data

This study used primary data that was collected from the respondents within the study area in Chipata district. Respondents included local women and men in self-employment who were sampled from the population of the study area. These respondents were a source of primary data that was collected using questionnaires and structured interviews.

Furthermore, this study was built upon the foundation of secondary data that came from official institutions such as the Central Statistics Office (CSO), and books, articles, and journals that are listed in the references section below. These sources of secondary data have not only provided the background data about the relationship between entrepreneurship and development and the role of entrepreneurship in economic growth and development, but were also very instrumental as they played a role in enriching the report.

Population and sample size

A population is a universe of units from which a sample is selected or chosen. In this study, the population will be comprised of a sample of women and men in business or self-employment in Chipata district. This is so because those women and men provided first hand data pertaining to the role their entrepreneurial activities have played in growing their income and making their living standards better. A total number of 60 businesses were used as the sample size.

Sampling method

Sampling is a process in which a researcher uses statistical analysis to obtain a predetermined number of observations taken from a larger population (TAU, Research Methodology Course Module 5). This methodology that is used to sample from larger population would depend also on the type of analysis being performed, and would include simple random sampling, systematic sampling and observational sampling. This study employed purposive sampling technique. Purposive sampling involved choosing participants considered to be business men and women. Purposive sampling in this regard ensured that only rich information is gathered for the research as opposed to having a large number of participants.

Data collection techniques

One data collection method was used in this study. This was the use of a questionnaire. Questionnaires were used to collect data from the participants. Questionnaires were very helpful in collecting data effectively and efficiently. Data collector were guiding respondents on what information is required of them, they were free even to speak in their local languages.

Data analysis

Quantitative data was analyzed using Statistical Package for Social Sciences (SPSS) and Microsoft excel in order to generate tables, graphs and percentages in an easier way. Thematic analysis was used to analyze qualitative data so that a description of the role of entrepreneurship in economic growth and development in Chipata district would be generated. Major themes were drawn from questionnaires for easy descriptions.

Validation and reliability

The researcher conducted a pilot study to ascertain the validity and reliability of the questionnaires. In the case of the questions in the questionnaires, the researchers measured their validity and reliability by examining individual responses from participants to ascertain their relevance to the objectives of this research.

Ethical considerations

Ethical precautions were taken into consideration in this study. These included explaining the purpose of the study, thus giving respondents chance to decide on whether or not to participate in the study and keeping their identity anonymous. Confidentiality was put into consideration through verbal appeals that assured the respondents that the information given would be used only for educational purposes. As stated by Francis (2005) and Smith (1995) that privacy and confidentiality are essential components in the study, as the process involves the sharing of information by both the researcher and the participant (respondent). As a general ethical principle governing this study, a clearance and introductory letter was sought from Texila American University to concerned parties. The letter was an assurance and confirmation that the study or survey was purely an academic one.

Findings and discussion

From the survey and with the aim of highlighting the Management skills and competencies of the business personnel (employees and owners) in Chipata district, the findings showed that the majority of the business organizations in Chipata district had management team that had qualification up to certificate levels and was represented by 33 percent, with diplomas had 30 percent, 28 percent had other qualifications while only 8 percent had degrees or higher qualification. From the graph below it was clear that 28 percent personnel having other qualifications was an indication of employees that did not have any formal education and training. This percent possesses a scary danger in the management of SMEs in the district. There is no doubt that the number of business failures could be attributed this one. The percent for degree and higher qualification (8%) was very low in comparison with number of business organizations and even to make the business organizations sustainable in Chipata district. This a clear testimony that education in entrepreneurship management was still lagging behind as opposed to the fierce global business management trends that are taking shape every other day.

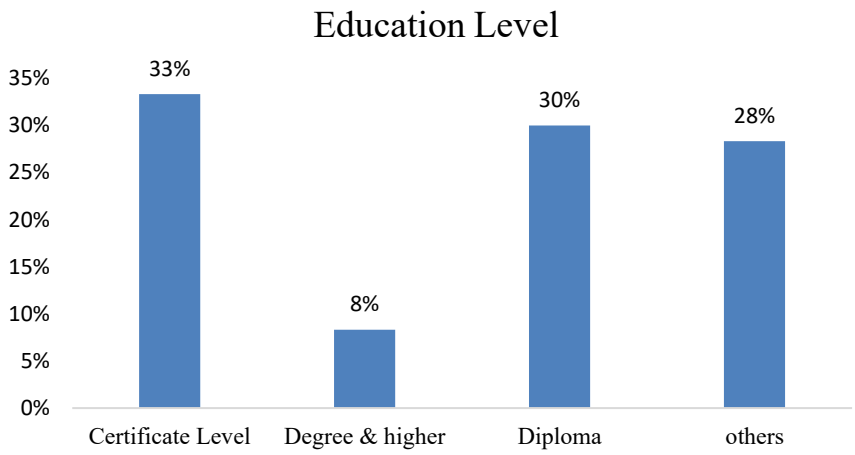

Figure 2. Education level of management

Table 1. Management skills

Areas Surveyed	No	Percentage (%)	Yes	Percentage (%)	Total	Percentage (%)
Do educated employees add value to business	7	12	53	88	60	100
Does business owner have formal training in management?	30	50	30	50	60	100
Does Chipata have a college of business?	0	0	60	100	60	100
Computer literate Personnel	19	32	41	68	60	100

The findings of the study showed that educated employees were thought to add value by 88 percent of the respondents. The findings also indicate that about 30 percent of the businesses had managers trained in management, 100 percent agreed that Chipata had a college of business, and the 68 percent stated that the business organizations had computer literate personnel. From the figures regarding the number of business organizations that had employed educated personnel, 50% of the total surveyed sample appreciated the employment of educated people in the business organizations. However, this figure is not enough looking at the complexity of the business today and the effects of globalization.

The study also investigated the quality of graduates that such Universities and Colleges produce. It was found out that 63 percent had stated they were of good quality, only 2 percent stated that they were poor, and 35 percent stated that the graduates from these Universities and Colleges were of very good quality. This finding underscores the desire and need of having educated members of staff in the running of SMEs in the district. However, a measure of some kind is needed to evaluate or rather quantify the contribution that educated members of staff have to business organizations especially to SMEs and start-up ones.

Though the failure rate for new small business organizations is not clearly measured and verified, it would be correct that one of the contributing factors among many could be ill-qualified members of staff. Firms that close or are not traceable need not necessarily have failed; and not only are there no really accurate data relating to failure, but it is difficult to trace firms that have ceased to trade (Kirby, 2003). There is no definitive reason as to why small businesses fail, but according to Scarborough and Zimmerer (2000), there are many causes of such failure among them are

1. Managerial incompetence
2. Lack of experience and business acumen
3. Inappropriate location

4. of the business

The above reasons though not the only, as a result of lack of Knowledge, Skills and Competency. In short, business organizations run or managed by people with no appropriate education, Ronstadt (1985).

From experience, most SMEs have failed or ceased to trade mainly due to lack of managerial skills and competences (education) that have resulted in financial and human resource mismanagement.

The study also investigated quality of graduates employed by SMEs. The findings show that the quality analysis was done through categorizing the quality levels as very good, good and poor quality. The Pie chart below illustrates that 3 percent was categorized as very good, 55 percent was good, and 42 percent stated that the quality was poor.

As it has been scholarly observed, labour is one the major factors of production other than capital and raw material (Baumol, 1987). All products (both goods and services) are a mixture of these three components, as such the need for quality workforce would be unquestionable part to ensure the growth, development and sustainability of any entrepreneurship.

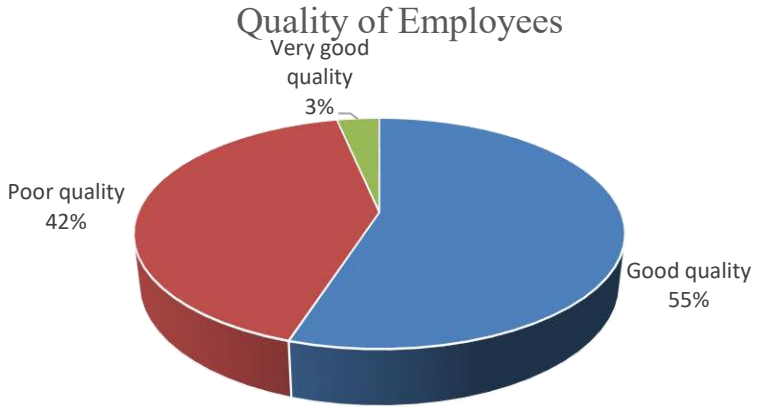

Figure 3. Quality of graduates

The study also looked at an area of career progression, and whether or not the small businesses had a deliberate policy to encourage such among their members of staff. The findings show that very few had a deliberate policy to encourage employees' progress in their career whilst working for them, represented by 43%. While 57% of the respondents claimed that they had no such provision in their business set-up and strategy. This behaviour greatly hinders the education path of the employees and such employees remain stagnant academically. The pie chart below shows how the respondents viewed the career progression of their workforce.

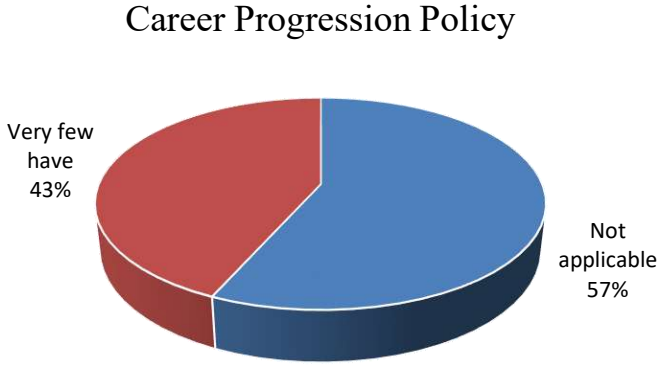

Figure 4. Career progression policy

Conclusions and recommendations

The study concludes that most of the entrepreneurs had employed qualified members of staff. For this reason, it is very essential that business owners acquire basic education in the running of the business at the least. Despite this most businesses do not have a continuous progression policy. It is also very clear that most female entrepreneurs "fear" to take the risk of starting a business venture as education levels for them is still very low. Traditionally, a Girl child does not need to get higher education levels as they don't participate in the economic activities of the District (a case of Chipata district). With the cutting edge of technology and emergence of Generation Z (smartphone group), most business activities are done online, and personal selling strategy is phasing away as much business is done without physical contact between the seller and the buyer.

The study also discussed many other opportunities with regards to entrepreneurship education, such its capacity to trigger deep learning and instill engagement, joy, motivation, confidence and feelings of relevancy among students, but also its stated and to some extent evidenced effects on job creation, economic success, renewal and innovation for individuals, organizations and society at large. Some challenges have also been discussed in the report such as lack of support, time and resources among others in educational institutions. The idea of putting value creation at the heart of entrepreneurial education has been extensively discussed in the study, and conceptual diagram has been put forward to just to illustrate the interconnectivity between education and value creation.

In view of this development, formal training and education for business managers is just inevitable.

Arising from the above revelations, the following investigations were recommended by the study

1. The SMEs should have career progression policy that will directly benefit them in improving the products and services.
2. There is need for the higher education authorities through its universities to facilitate the development of educational programmes that benefit entrepreneurs as they are the key stimulators of micro economic growth.
3. Encourage SMEs in Chipata district to appreciate the role educated employees plays in sustaining the business.
4. Encourage Girl Child education in the district to promote the participation of women in SMEs activities.
5. Revise Religious beliefs and Laws that prohibit the involvement of women in entrepreneurship education and business ventures (i.e. Muslim women in Chipata district).
6. Experience developing an entrepreneurship course that is practical in an organized way with academic support.
7. Strengthen SMEs in their capacity for leadership and teamwork (serious training required) in Chipata district.
8. Learn how to identify business opportunities in a fierce global economy.
9. Learn technical ways of human resources management, production, purchasing, financing, marketing, organization, and implementation that would benefit the SMEs.
10. There is need to create and increase awareness of entrepreneurial education as a pedagogical approach relevant to all students and on all levels of education.
11. There is need for more and closer collaboration between researchers and practitioners in the two domains of education and entrepreneurship.
12. There is need for closing up the gap between stated and desired effects of entrepreneurial education and a need to for increased understanding of when, how and why entrepreneurial education can develop entrepreneurial competencies, especially on primary and secondary levels of education with an embedded approach.

As most studies, this study has certain limitations, which provides opportunities for further research. The study reported on this paper revealed that most SMEs have no lifelong program of business due to lack of business and management knowledge of the business owners. This gap has created a brink on the sustainability strategy of the business, as many such business owners if not all of them lack the three levels of competencies which all entrepreneurs need.

1. **Personal competencies** – creativity, determination, integrity, tenacity, emotional balance and self-criticism.
2. **Interpersonal competencies** – communication, engagement/charisma, delegation, respect.
3. **Business competencies** – business vision, resource management, networking, negotiating skills.

Despite its promising effects on students and society, it is important to note and keep in mind that the field of entrepreneurial education is in quite early stage of development in Chipata district. It is still very much regarded as an innovative but marginal pedagogical approach spurring much interest but also much confusion among various relevant stakeholders in the district. As such, there is tremendous work remaining if we are to succeed in making effective and efficient entrepreneurial education available to a majority of people in the educational systems of Chipata district. The road to achieving such an ambitious goal is still long, winding and risky.

Therefore, the opportunity exists to determine the reason behind these gaps. Furthermore, this study was limited to SMEs in Chipata district of Zambia. Consequently, opportunity exists to conduct a comparative study of all Seventy-One districts of different ethnic groupings and business activities across Zambia.

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"Epidemiology of Human Leptospirosis in HIV Patients Attending Anti-Retro Viral Treatment in Public Hospitals and Clinics in Kabwe Urban"

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Abstract

A cross sectional study was carried out to assess the epidemiology of leptospirosis in 282 participants, 150 were Human immune deficiency virus (HIV) positive patients and 132 non-HIV patients (controls) attending ant retro viral treatment (ART) and outpatient department in public hospitals and clinics in Kabwe, Zambia urban district respectively. Demographic, disease history, co-morbidities and concomitant medication history was captured using a structured 10-point close ended questionnaire. Plasma was tested for the presence of leptospirosis using the enzyme linked immune sorbent assay (ELISA) as screening test and the dark field microscopy technique (DFM) as confirmatory test to determine disease distribution in the population. Plasma found positive with ELISA and leptospires detected by dark field microscopy were considered to have leptospirosis. Results revealed that 50 out of the 150 HIV positive participants were positive for leptospirosis (33%). This was significantly higher (P=0.002) than in the control group, where only 15 out of 132 participants were found to have leptospirosis (11%). 5 tests were discordant as they gave positive results with ELSA yet leptospires were not detected by the dark field microscopy. The leptospirosis confirmatory test was found to have sensitivity of 94%, specificity of 97%, PPV 98%, NPV 92% and efficiency of 95% which were significant parameters to warrant the adoption of the results and determine the epidemiology of leptospirosis in the areas under study. It was concluded that epidemiology of leptospirosis in Kabwe district is 21% after adjusting for false positives.

Keywords: *leptospirosis, Human immune deficiency virus, dark field microscopy, enzyme linked immune sorbent assay.*

Introduction

Leptospirosis is an infection caused by gram negative, corkscrew-shaped bacteria called Leptospira. Signs and symptoms can range from none to mild such as headaches, muscle pains and fevers to severe with bleeding from the lungs or meningitis (1) if the infection causes the person to turn yellow, have kidney failure and bleeding, it is then known as Weil's disease. (2) If it causes lots of bleeding from the lungs it is known as severe pulmonary hemorrhage syndrome (2).

Up to 13 different genetic types of Leptospira may cause disease in humans. It is transmitted by both wild and domestic animals (3). The most common animals that spread the disease are rodents (5).

The disease results in high morbidity and considerable mortality in areas of high prevalence. It is estimated that around 10,000 cases of severe leptospirosis are hospitalized annually worldwide. The disease is usually endemic in areas with rainy season, humidity, and close human contact with livestock, poor sanitation, and workplace exposure to the organism [2]. In recent years, a new trend in human leptospirosis outbreaks has been observed related to recreational activities among wildlife (a form of tourism that is becoming increasingly popular) and army expeditions, either for training

or for combat-related purposes in similar environments [3]. A systematic literature review of Leptospirosis Burden Epidemiology Reference Group (LERG) reports an estimated global annual incidence of endemic and epidemic human leptospirosis ranging from 5 to 14 cases per 100,000. Endemic human leptospirosis rates have varied by region from 0.5/100,000 in Europe to 95/100,000 in Africa. Based on global data collected by International Leptospirosis Society surveys, the incidence was estimated to be 350,000 – 500,000 severe leptospirosis cases annually [4]. Based on CSO 2016 epidemiological and surveillance report, Zambia's disease burden alone is estimated to be at 20/100,000.

However, data emerging from prospective surveillance studies suggest that most human Leptospiral infections in endemic areas may be mild or asymptomatic. Development of more severe outcomes likely depends on three factors: epidemiological conditions, host susceptibility, and pathogen virulence [5]. Fatality rates reported worldwide vary from 5% to 30%. This epidemiological picture is not reliable because in many areas the occurrence of the disease is not well documented. In addition, mild cases may not be diagnosed as leptospirosis [6]. Case fatality for pulmonary hemorrhagic syndrome and Weil's disease is more than 10% and 70%, respectively [5].

Leptospirosis, especially Cerebral Leptospirosis (CL) is one of the most common central nervous system (CNS) opportunistic infections in HIV infected individuals and also the most common cause of focal deficits in patients with AIDS (21). High Human Immunodeficiency Virus (HIV) prevalence rate in Kabwe district of Zambia provides an inherent risk of CL in individuals that may be co-infected with HIV and Leptospirosis.

The aim of this study was to assess the distribution of Leptospirosis in patients living with HIV and ascertain the necessary health care for the disease.

Methods

Study Area: This study was conducted at the ante retro viral treatment (ART) sites in Kabwe district of Zambia. The area has an altitude range of 20-100 m above sea level, is covered by tropical dry forest vegetation, has an average temperature of 24∘C, and receives between 1000 and 2000 mm3 of rain per year. Kabwe is a state devoted to agriculture and livestock production.

Geographically, Kabwe has some streams, rivers and few mountains, it's largely a plateau. These conditions, create habitat conditions that could influence the ecology and distribution of Leptospira serogroups in the district of Kabwe.

The total number of participants recruited in this study was 282. This included 150 HIV positive patients and 132 non-HIV healthy individuals as controls. Purposive sampling method was used to enroll study participants.

Ethical considerations

Ethics approval was obtained from the University of Zambia Biomedical Research Ethics Committee (Assurance No. FWB00000442, IRC0000223 of IOR0000887). Written permission was obtained from Kabwe Mine Hospital. The information sheet about the study was given to patients, translated in Bemba which is the local language or read out to them in cases where they could not read. Patients were informed about the study and given an option to decide if they did not want to take part in the study.

The purpose of the study was explained to all the study participants and those that declined to participate in the study were not forced, but were assured of their protected privileges and other benefits such as being managed by clinicians as per standard treatment and guidelines. The respondents were interviewed individually in a private room and only 4mls of blood specimen was collected from each participant.

Privacy and confidentiality were maintained by using codes for the patients instead of names in the report and data was kept in a locked cabinet and keys kept by the researcher. Respondents were thus assured of utmost confidentiality. Patient's consent to be included in the study was obtained. Patient's comfort and dignity during and after the procedure was paramount. The well-being and prompt definitive management of the patient was first before the research.

Inclusion and exclusion criteria

This study was limited to male and female adults above the age of 18 years. Participants who had a history of having been transfused within 2 to 3 weeks, cancer, or pregnant, were excluded from the study.

Collection of qualitative data

Information relating to HIV and Leptospirosis was obtained from the prospective participants using a questionnaire. A ten-point Structured interview schedule with close-ended questions was used to collect qualitative data. The interview schedule captured demographic variables, knowledge on Leptospirosis common symptoms and factors associated with these symptoms. The questionnaire was administered in the simple English language and translated into local language (Bemba) for those who did not understand English.

ART testing for HIV

HIV testing by ART centres was done by using the Zambian National algorithm were blood samples were first tested using Determine test kit (Abbott Diagnostic Division, Hoofddrop, Netherlands) as a screening test. This is an in-vitro qualitative immunochromatographic immunoassay for the determination of antibodies to HIV-1 and HIV-2. If the test is positive, then SD bio line (HIV ½. 3.0, standard diagnostic Inc.), was used as a confirmatory test. SD Bio line is an immunochromatographic test for the qualitative detection of antibodies of all isotypes (immunoglobulin G [IgG], IgM, and IgA) specific to HIV-1 and HIV-2 simultaneously in human serum, plasma, or whole blood.

Laboratory testing for leptospira

Leptospira IgG IgM ELISA test method

All samples for Leptospirosis testing were analyzed using max 2 ELISA plates and reagents.

The procedure was performed according to manufacturer's instructions. One hundred microliters of pre-diluted samples were pipetted into the microtiter wells and incubated for 30 minutes at room temperature to allow corresponding specific antibodies present, if any, in the patient's serum or controls to bind to the antigens in the wells. This was followed by a washing step, allowing all unbound antibodies to be removed and therefore not obscure any reaction. One hundred microliters of the conjugate were then added followed by a second incubation step of thirty minutes at room temperature. The plate was then washed 5 times and 100µl of the substrate was added. An incubation period of 15 minutes at room temperature was then followed by addition of 100µl of the stop solution.

Results were interpreted according to the manufacturer's instructions. Negative and positive controls were kept with each test run. Cut-off was calculated and reporting of results were done as positive, negative and equivocal as per the manufacturer's guidelines provided along with the kit.

Dark field microscopy (DFM) was used as a confirmatory test to support the ELISA technique in the diagnosis of leptospirosis.

Dark field microscopy (DFM) is a cost-effective and rapid technique, though it requires about 10 leptospires / ml to be seen by DFM. (29).

Procedure for DFM

All HIV positive patients referred from ART centres and HIV negative patients from OPD were subjected to a questionnaire and those meeting the criteria had each 4ml of blood sample drawn from them and put into EDTA container. The sample was then centrifuged at 1000 rpm for 15 min. After this, 10 µl of Buffy coat or plasma was transferred to a new, clean slide and a cover slip was placed over it and the preparation was examined under dark field microscope. Then the remaining plasma was spun at 3000-4000 rpm for 20 min, at the end of which the supernatant was discarded and wet preparation was done with a drop of sediment which was examined under a dark field microscope. (26) The sample was reported negative if no spirochete were observed after screening of approximately 100 fields in each of the preparations.

Data management and statistics

Raw data and results from patients were edited for consistency and legibility on a daily basis. For qualitative data, the close ended responses were pre-coded before the interview to ensure easy entry and analysis of data using statistical package for social science (SPSS) Computer Software and center for evidence-based Medicine (CEBM) calculator. Serological and microbiological data was entered on the data sheet and was used for analysis. Results obtained from the analyzing machines were tabulated in the data sheets. All the parameters were normally distributed and hence reported as the mean +/- standard deviation. The significance of the differences between patients and controls for

normally distributed parameters were determined using the independent samples T-test for continuous variables and the Chi-square test for categorical variables. Risk factors and patient attributes associated with leptospirosis in HIV patients were determined by logistic regression analysis. Odds ratios and their 95% confidence intervals were reported.

Sensitivity, specificity and positive predictive values for the dark field microscopy as a reliable confirmatory test for leptospirosis were calculated from a 2 by 2 table computed in CEBM statistics calculator. P-Values of less than 5% were taken as significant.

Results

This study consisted of a total number of 282 participants. 150 of them were HIV positive patients and 132 were controls, all aged between 18 and >65 years. The majority of the participants in this study were in the age range of 25-34 years (74 out of 282) as indicated in figure 1. The median age in this study was 44.

This study further reviewed that people living with HIV had higher cases of leptospirosis (50/150) than those who did not have HIV, because, only 15 cases were found to be leptospirosis positive out of the total number of 132 controls enrolled in the study. Figure 2. Graphically demonstrates the association between HIV and the probability of developing leptospirosis with the P Value of 0.003 denoting the statistical significance in the distribution of leptospirosis in the cases and controls.

This study comprised of 150 HIV positive participants, 50 of them were found to have leptospirosis. 35 were females representing 23% while 15 were males representing 10% respectively. According to these results, Leptospirosis cases were found to be more among the female HIV positive participants than males HIV positive participants and the difference was significant (P value 0.002) as indicated in figure 3.

From the total number of 282, fifty (50) cases of leptospirosis from HIV positives represented 18% positivity rate and the 15 cases diagnosed from the non-HIV patients represented 5%. Overall, the mean leptospirosis distribution in HIV patients (18%) was significantly higher (P – value 0.001) than in the control participants (5%) as indicated in figure 4.

Table1: illustrates the mean Leptospirosis profile (ELISA, DFM) in patients with HIV and control subjects by stating the statistical significance of the screening (ELISA) test and the confirmatory (DFM) test in terms of the P – value

Table 2; illustrates cross tabulations of the Elisa test in comparison with the dark field microscopy (DFM). The table further reviews that 65 (23%) of the participants were found reactive with ELISA test and deemed to have leptospirosis.

Out of these results, sixty (21%) participants were true positives, implying that both the ELISA and DFM were positive. 5% of the results were false positive test results with ELISA but the patients did not have leptospirosis because the DFM (confirmatory) was negative.

Results from two (1%) participants were false negative, implying that ELISA test results were negative but participants had leptospirosis in the actual fact. ELISA results from two hundred and fifteen (76%) participants were true negatives because both the ELSA and DFM were negative implying that the patient did not have leptospirosis.

DFM had good sensitivity (97%), specificity (98%) PPV (92%) NPV (99%) and efficiency of (97%) as indicated in table 3 respectively.

Discussion

This study revealed that patients aged 25 years and above were at risk of developing leptospirosis than those who were below 25 years old. These results were consistent with the study done by Brenner DJ et al., (2014) who found that the risk group was above 55 years. However, the reduction in the risk age group of leptospirosis observed in this study may be due to a number of factors including HIV itself, poor hygiene, lack of protective wear when working with potentially infectious materials as a result of poor knowledge on the complications of leptospirosis to some extent. On the other hand, the risk of leptospirosis with increasing age observed by Brenner could be attributed to changes that occur in the immune system as a result of aging tilting the scale to leptospirosis in older patients.

This study reviewed that leptospirosis was related to the HIV status of the patients. Respondents with HIV had a higher positivity rate 50/282 (18 %) than control participants 15/282 (5 %). The difference was significant X^2

= 95.92, P = 0.003. This result correlates with David, A et al, (2015) who found an association of 24%, this shows that there is a significant correlation between HIV and leptospirosis among people infected with HIV in Zambia as compared to the general population. Leptospiral infection in humans causes a range of symptoms, and some infected persons may have no symptoms at all. The disease begins suddenly with fever accompanied by chills, intense headache, severe muscle aches, abdominal pain, and occasionally a skin rash. (8) These symptoms are non-specific to leptospirosis and can occur in other infectious diseases. This clinical feature can mislead a doctor to diagnose the disease as malaria, dengue or yellow fever which have similar symptoms. Severe leptospirosis was also associated with liver, kidney, lungs, and brain damage. For those with signs of meningoencephalitis, altered level of consciousness can occur (9). A variety of neurological complications can occur such as hemiplegia, transverse myelitis, and Guillain-Barre syndrome (10).All these signs and symptoms combined may be mistaken for adverse drug reaction due to ant retro viral treatment (ART) if differential diagnosis is not done to rule out other conditions with similarity and thus raising the number of missed leptospirosis cases (21). This in turn leads to high mortality rate among HIV patients. On increased cases of neurological complications, similar finding was previously reported by Alison *et al.* (2016), where they reported 23% of HIV patients presenting with meningoencephalitis and hemiplegia. However, the Relationship between HIV, leptospirosis and neurological complications has not been investigated (11). So, the present study was done to determine the epidemiology of leptospirosis in HIV patients and have an opportunity to understand the relationship between the two conditions and its possible use as a tool to reduce mortality in HIV patients on ART.

The mean leptospirosis positivity rate in female patients with HIV 35/150 (23%) was significantly higher than in the male patients 15/150 (10%), P – Value 0.002. The differences revealed in the positivity rates of leptospirosis between males and females correlate very well with results obtained by Costa F. et al (2015) among Nigerian HIV adult patients with leptospirosis in which positive cases were high in females than males. The main reason why females with HIV tend to have high cases of leptospirosis than males with the same condition is still unclear. This study reveals that the proportion of participants who had leptospirosis differed significantly among different age groups in HIV positive patients. The proportion of HIV positive patients who had leptospirosis was in the age range of 18 – >65 years. The age group with most cases was 25 – 34 with 74 cases (26%). Results obtained in this study correspond to those obtained by Kimura M et al., (2010) who reported a correlation between old age and leptospirosis. These results were also consistent with the study done by Alison, B et al., and (2015) who found that ≥65 years was the most vulnerable age group. Old age tends to decrease resistance against most infections in both males and females due to a number of factors such as atrophying of the thymus were the T lymphocytes are produced which are key in the adaptive immune system. These early hemodynamic changes facilitate the reduction in the production of important immune cells such as the thymocytes. The pick incidence of leptospirosis (42 years) observed in this study, could be associated with the occurrence of early complications which lead to early death as indicated by the decline in the study participants above the age of 55 years.

Leptospirosis is considered as one of the neglected diseases in Africa (25). It is associated with high mortality and morbidity in HIV patients mostly due to misdiagnosis arising from its manifestations which are smiler to other conditions such as malaria. There is currently no diagnostic algorithm and outlined treatment protocol for leptospirosis in Zambia and many other African countries (26).

Current Standard of care for leptospirosis is that Doxycycline is provided once a week as a prophylaxis to minimize infections during outbreaks in endemic regions (27). However, there is no evidence that chemoprophylaxis is effective in containing outbreaks of leptospirosis (9). Pre-exposure prophylaxis may be beneficial for individuals traveling to high-risk areas for a short stay (29).

Effective rat control and avoidance of urine contaminated water sources are essential preventive measures. Human vaccines are available only in a few countries, such as Cuba and China. (30). Animal vaccines only cover a few strains of the bacteria. Dog vaccines are effective for at least one year (27).

For treatment purposes, Effective antibiotics include penicillin G, ampicillin, amoxicillin and doxycycline. In more severe cases cefotaxime or ceftriaxone is preferred.

The motivation for this study was the mounting evidence that preventive measures and treatment for leptospirosis are cheap and readily available. The main challenge in the current care of the disease is mainly misdiagnosis and giving wrong treatment to patients hence contributing to the high mortality observed in this study. These findings are consistent with Haraji et al 2011 results were the main problem in his study was due to lack of approved diagnostic methods in the management of leptospirosis hence most of them were treated for other conditions. The actual cause of high leptospirosis positivity rate in HIV patients is not very clear though Bharti AR et al. suggested that it could partly be due to the disruption in the release of signals by the T helper cells of the adaptive immunity system and this could result in the loss of stimulus to attack invading pathogens by the adaptive immune system. Bharti AR et al (2013) observed that there was a significant high level of positive leptospirosis cases in HIV patients especially in those patients with long term HIV infection and chronic complications. This is consistent with the results of this study. Izurieta R et al., (2014) found that epidemiology of leptospirosis confirmed by DF microscopy was independently associated with other opportunistic complications and suggested that leptospirosis be considered as a separate risk opportunistic infection in HIV patients.

The dark field microscopy had a sensitivity of 97% (95% CI [88.0 – 96.7]), PPV 92% (95% CI [91.9 – 98.7]), NPV 99% (95% CI [83.6 – 94.5]) which were all acceptable parameters to support the reliability and suitability of DFM as a suitable test in determining the epidemiology of leptospirosis.

This study revealed that DFM test had few false negative results leading to high and better sensitivity of 97% (95% CI [88.0 – 96.7]) this implies that the results obtained in this study were reliable and a true reflection of the actual distribution or epidemiology of leptospirosis in the population. DFM test is capable of detecting 97% of leptospirosis cases among HIV patients and only 2% will be missed out as this will be reported as negative. Therefore, DFM test has a high probability of detecting and confirming leptospirosis in HIV patients.

DFM test also had an acceptable specificity of 97% (95% CI [88.8 – 98.2]). This means that, the probability of HIV patients not having leptospirosis was 97% which means 5 (2%) tests gave false positive results.

DFM test had a high PPV 92 % (95%CI [91.9 – 98.7]). This can be interpreted to mean that 60 (92%) positive DFM test results were truly leptospirosis cases.

99% NPV results obtained for DFM in this study means that 215 (99%) of negative DFM test results were true negatives (no leptospirosis) while 2 (1%) were false negatives (had leptospirosis). From the available literature searched so far, no diagnostic study has been done to specifically evaluate the epidemiology of leptospirosis in the population of HIV and non-HIV communities of Kabwe or any other community elsewhere. Long T.W., (2009) reported that the acceptable sensitivity, PPV and NPV should be above 90%. From the results obtained in this study, DFM was found to be a suitable diagnostic and confirmatory test for leptospirosis in HIV patients because all parameters used for detecting suitability were above 90%. Positive and negative predictive values vary according to the prevalence of the condition under study (3). Therefore, it would be wrong for predictive values determined for one population to be applied to another population with a different prevalence. In this case, DFM test results for the determination of the epidemiology of leptospirosis could be used among HIV patients and not the general population because leptospirosis may be absent hence low predictive values even if the test is highly sensitive and specific.

Conclusion

The overall study of 282 participants revealed that HIV patients despite being on ART had higher chances of contracting leptospirosis (18 %) than healthy non-HIV control participants (5 %). Using diagnostic sensitivity and specificity, PPV, NPV and efficiency, it was found that DF microscopy was a reliable test in the confirmation of leptospirosis cases in all the participants. In addition, DF is cheap, readily available as part of the routine microbiology test and easy to perform. Therefore, this study recommends that a lager

study involving bigger population be done and testing algorithm for leptospirosis be put in place in various hospitals in Zambia and Africa as part of the standard care for HIV patients. This will in turn reduce on the mortality levels in HIV patients.

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I wish to sincerely thank all staff at ART sites and other members of staff in Kabwe for contributing to the success of this study in various ways. Others include; Dr Joseph Tembo, Dr. Trevor Kaile, Ms. Leah maneya Nombwende, Mrs. Ireen Mushili Nombwende and All laboratory staff who participated in this study.

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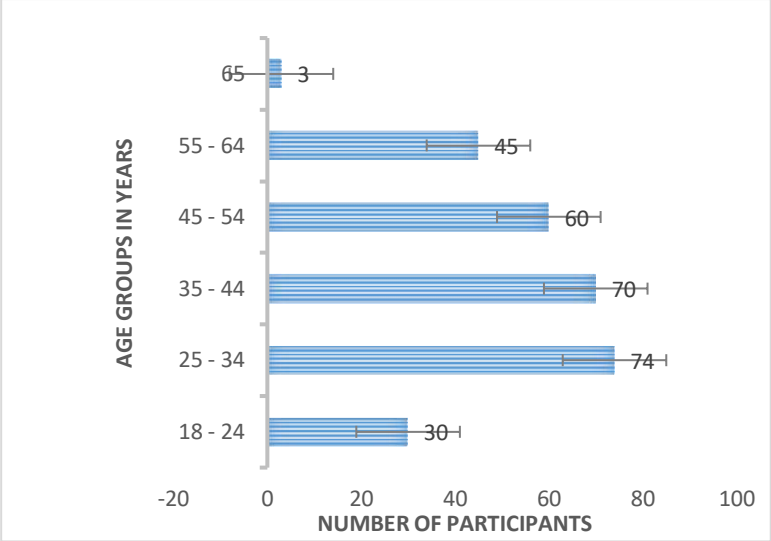

Figure.1. Age distribution (according to years) of respondents

A total number of 150 HIV patients and 132 controls (282 participants), aged between 18 and >65 years participated in this study. The majority (74) of participants were in the age range of 25-34 years as indicated in figure 1 above.

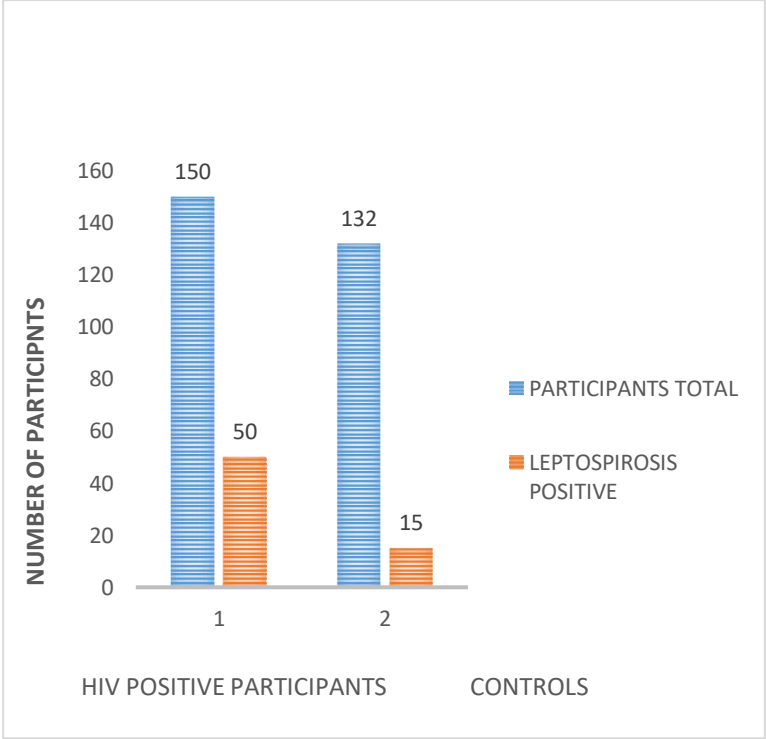

Figure 2. Association between HIV status and leptospirosis

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The figure above indicates that out of the 150 HIV positive patients who participated in the study, 50 were positive for leptospirosis while out of the total of 132 control participants only 15 had leptospirosis. This is an indication that leptospirosis is highly prevalent among HIV patients than the non-HIV patients.

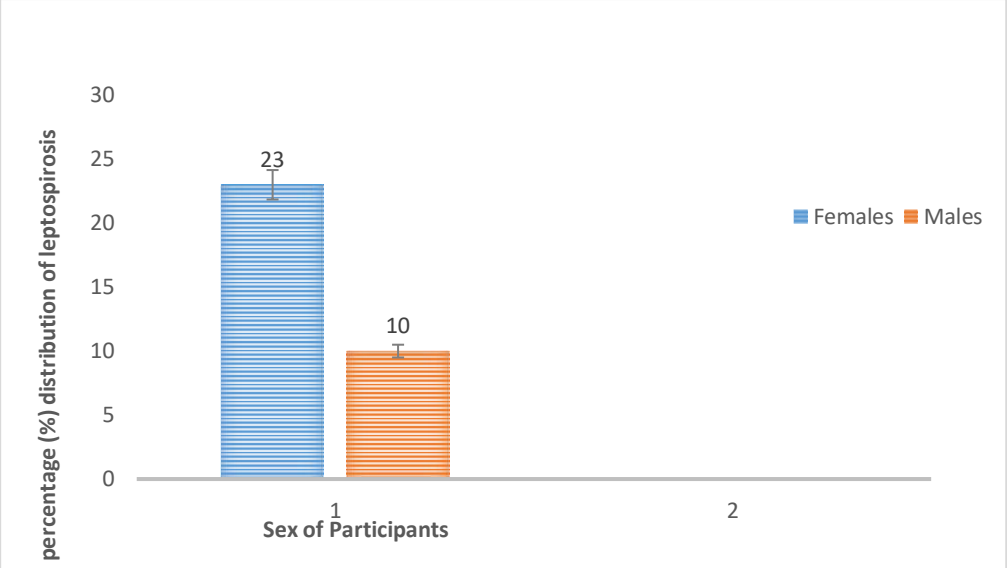

Figure 3. Comparison of percentage distribution of leptospirosis cases in male and female participants

The above figure indicates that the mean distribution of leptospirosis for females with HIV (23%) was significantly higher (P value 0.002) than in the male HIV positive patients (10%).

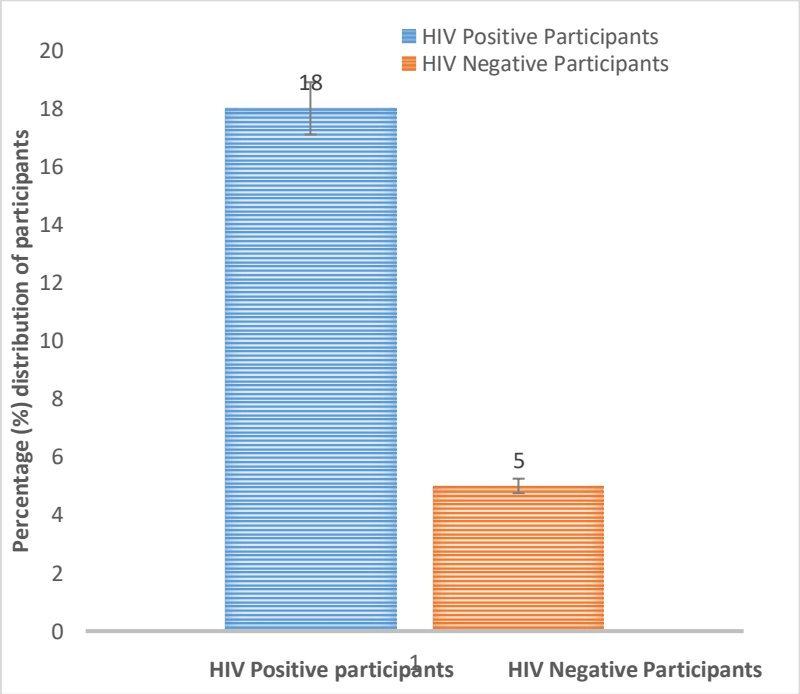

Figure 4. Overall distribution of leptospirosis in HIV positive patient s and control participants.

The overall mean leptospirosis distribution in HIV patients 50/282 (18%) was significantly higher (P – value 0.001) than in the control participants 15/282 (5%) as indicated in figure 4 above.

Table1. Mean Leptospirosis profile (ELISA, DFM) in patients with HIV and control subjects

	Status	**Number of participants**	**Mean (±SD)**	**P - Value**
ELISA*	Control HIV	132 150	250 (±+2.1) 730+4.0	0.003
DFM****	Control HIV	132 150	14.7+3.8 32.2+4.2	0.001

Key: ELISA: Enzyme linked immunosorbent assay

DFM: Dark field microscopy

Table 2. Comparison of ELISA and DFM test results in HIV? Patients with Leptospirosis

ELISA test	DARK FIED MICROSCOPY (DFM)		Total
	Leptospirosis	**No leptospirosis**	
	Leptospires observed	No leptospires observed	
High tests	**TP** 60	**FP** 5	**TP** + **FP** 65
Low tests	**FN** 2	**TN** 215	**FN** + **TN** 217
Total	**TP** + **FN** 62	**FP** + **TN** 220	**TP** + **FP** + **FN** + **TN** 282

Key: TP: True positive = test positive in actually positive cases,

TN: True negative = test negative in actually negative cases,

FP: false positive = test positive in actually negative cases,

FN: false negative = test negative in actually positive cases.

Calculations

(a) Sensitivity = TP/TP + FN x 100 = 60/62 x 100 = 97%

(b) Specificity = TN/FP + TN x 100 = 215/220 x100 = 98%

(c) PPV = TP/TP + FP x 100 = 60/65 x 100 = 92%

(d) NPV = TN/TN + FN x 100 = 215/217 x 100 = 99%

(e) Efficiency = TN + TP/TP + FN +FP + TN x 100 = 275/282 x 100 = 97%

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The Challenges Faced by Human Resource Practitioners in Implementing Strategic Human Resource Management in South Sudan National Organizations: Case study Jubek State

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Abstract

The main purpose of this study was to examine the challenges faced by human resource practitioners in implementing the Strategic human resource management in Jubek State, South Sudan National NGOs. The target population in this study was the Human Resource Practitioners. The research design employed was qualitative approaches. Interviews and focused group where conducted. In this paper primary data was collected by the use of interviews and focus group discussion., documentary and observation method. Content analysis of collecting data was used and results presented through narrative. The findings of the study shown that lack of employee's benefits packages, rigidity of some employees to adopt organization policies and procedures, management interference on human resource role, and political instability are the contributing challenges that affected the human resources practitioners. Conclusion was drawn to improve the challenges faced by HRP which include, provision of refresher training on the policies and procedure, Human Resource unit should be independent, organizational culture need to be understood by the entire employees separated employees should be given their entitlement or separate organ to keep the pension for the employees.

Keyword: *Implementing, strategic, human resource management, Challenges.*

Background

The armed conflict between the Khartoum government in the North and the Southern regions of Sudan which ended with the comprehensive Peace Agreement in 2005, lasted for only 50 years with certain intermissions. In 1955, one year before Sudan achieved independence the resistance against the Khartoum government started when soldiers in the South mutinied, refusing transfer to the North. By January 2011 South Sudan referendum was conducted to determine the South Sudan independence, as such in July 2011 South Sudan became newest Nation in the world and Africa's 54th nation. Thereafter, the independence many hotly dispute erupted that since 2013 to present which made people homeless and take refugees in the POC and Camps in the neighboring countries (Breidlid 2015, p.109-110). Therefore, due to the conflict that is ongoing the department of human resource management in the private and public sectors still faced challenges in the implementation of strategic human resources management, so this paper is to represent the gap. Also, the research used some observation to compare the challenges in Jubek State and other Human resource department in the neighboring countries the indicators shows that there are more challenges faced by the human resource practitioners in NNGOs.

Human Resources is a core functional role in the organizational structure. Human Resources management also is about managing people for examples in educational organization is about achieving results with and through employees. But also, it is about empowering and developing the same people as person, individual and collaborative professional (Coleman 2018). As describe by other authors Human resource management is a strategic and coherent approach to the management of an organization most valued assets the people working there, individually and collectively contributed to the achievement of its objective. Also, strategic human resource management is an approach to the development and implementation of Human Resource strategies that are integrated with business strategies and enable the organization to achieved its goals.

Universally there were many literature describing what reflect the real context of the strategic human resource management in the experience of many scholars which discussed the concepts of human resources strategies which derive from number of theories such as Motivation theories Content Theory, resource based-view, organizational behavior theory, Equity theory and contingency theory, institutional theory, human capital theory, Resource dependence theory, Amo theory, social exchange theory, Transaction theory, Agency theory. In addition to that the challenges facing the human resources professional in implementing the human resource strategies and also how the challenges can be improving.

The strategic human resource management is viewed as an approach to the development and implementation of human resource strategies that are integrated with business strategies and support their achievement. Further argument was that, strategic human resource management is focus on identifying the organizational mission and the strategies, but on the other hands' attention was given to the resource base required to make it succeed. Managers who think strategically will have a broad and long term views of where they are going but they will also be aware that they are responsible of how to allocate resources to opportunities that contribute to the implementation of strategic human resources management in the organization (Thompson and Strickland (1996; P.3). Basically, the fundamental aim of strategic human resource management is to generate organizational capacity by ensuring that the organization has the skills, engaged committed and well-motivated employees to achieve sustained competitive advantage. Alvesso (2009: P.52) argued that strategic human resources management is about how the employment relationship for all employees can managed in such a way as to contribute optimally to the organization's goals achievement.

In essence, strategic human resource management is conceptual; it is a general notion of how integration of 'fit' between HR and business strategies in achieved, the befits of taking a longer terms view of where HR should be goings how to get there and how coherent and mutually supporting HR strategies should be developed and implemented. Importantly, it is also about how the members of the HR functions should adopt a strategic approach on a day-to-day basis, this means that they operate as part of the management team, ensure that HR activities support the achievement of business strategies and a continuous basis, and are consciously concerned with seeing that their achievement add values to the organizational performance (Peter Boxall, 2007).

Storey (2014) argues that the major human resource management issues affecting implementation of strategic human resource management in African Organizations include inappropriate use of foreign models, over reliance on particular practices driven by local institutional and legislative regimes, lack of transparency in decision making and concern with procedural and transactional human resource management rather than strategic focus. The most tangible aspect of strategic human resource management is therefore the set of human resource policies and processes in existence in an organization and how they address various aspects of people management such as recruitment, diversity, management development, reward and employment relations.

Research methodology

Overview of the study

This paper was conducted through qualitative research method which was divided in to three Theme, research design, Target population, Sampling, research instrument. This methodology was mainly focused to addressed the research question, Objective of the study which was descriptive in nature. Furthermore, documentary was used to collection some of the information to enrich this paper.

Research design

This paper employed qualitative approach was employed which provides an in-depth, intricate and detailed understanding of meanings, actions, non-observable as well as observable phenomena, attitudes, intentions and behaviours, and these are well served by naturalistic enquiry. Cohen et al (2018, p.287) describe qualitative research as a form of social inquiry that tends to adopt a flexible and data-driven research design, to use relatively unstructured data to emphasize the essential role of subjectivity in the research process, to study a number of naturally occurring cases in details, and to use verbal rather than statistical forms of approach, so at this points the

data collected was presented and interpreted through narrative.

Population

In this paper the targeted population were the human resources practitioners, the population of the NNGO consist of approximately 200 registered in which the researcher selected 4 four of which the group 8 participant were selected randomly.

Data collection instrument

The study used primary Data, which was used to collected through structured interviews which was describe as a flexible methods of data collection. In other words, is based on the conversations of daily life and is professional conversations, it is an inter-view, where knowledge is constructed in the inter-action between the interviewer and interviewee. Focus group and observation method were also use to collect data. The participant of the study were mainly the human resource practitioners. Also focused group discussion was used to obtained first-hand information from the respondents.

Validity and reliability

Validity

Validity is an important key to affective research, validity is concern with the nature of what is valid. Mores so validity explain the extent to which interpretations of data are warranted by the theory and evidence used. It was notes that, in qualitative data collected the intensive personal involvement an in-depth responses of individual secure a sufficent level of validity and reliability as such the data selected must be representive of sample, the whole data set on the field, that is the must addressed content concurrent validity(Cohen et al, 2018, p.247-8)

Reliability

Reliability pertains to the consistency and trustworthiness of research findings; it is often treated in relation to the issue of whether a finding reproducible at other times and by other researches. This concerns whether the interview subjects will change their answers during an interview and whether they will give different replies to different interviewers. In addition to that in qualitative research, reliability can be regards as a fit between what researcher record as data and what occurs in the natural setting that is being researched, a degree of accuracy and comprehensiveness of coverages (Cohen et al, 2018, p). Reliability according to Joppe (2018) a research instrument results of a study can be reproduced under a similar methodology; measure should produce similar or the same result consistently if the same data are similar. The author also added that the extent to which results are consistent over time and an accurate representation of the total population under study is referred to as reliability and if the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable (Joppe 2018, p.1).

Data analysis

In reference to Polit and Hunger 2017 he describes data analysis as a systematic organization of data in the categorizing, ordering, manipulating and summarizing the data and describing them in a meaningful term. Since this was qualitative research it employed qualitative data analysis which concerns how we move from the data to understanding, explaining and interpreting the phenomena in question. Data analysis focus on in-depth, context-specific, rich, subjective data and meanings by the participant in the situation, with the researcher herself/himself as a principal research instrument, it involves; data reduction in order to avoid often serious issue to data overload.

Ethical consideration

Ethical concern was viewed in this paper as the major factors for its success, because in research ethical concern reflected in the growth of relevant literature and in the appearance of regulatory codes of research practices formulation by various scholars. Ethic has been defined as a matter of principled sensitivity to the right of others, educational researchers must take into account the effects of the research on participants; they have a responsibility to participant in such a way as to preserve. Ethical issues where put forward in this research paper, first the informed consent, gaining of access in the field and the confidentiality was addressed before data was collected from the participants.

Results and discussions

The interviews and focus group discussion conduct with various participants shown that there were many challenges faced by the human

resource practitioners in implementing the strategic human resource management in Jubek State, South Sudan which include. Rigidity of some staff to adopt to new changes introduced by in the organization. It was found that the nonexistence of coordination among the HRP has been a challenge in which it became difficult for the organizations to share information that concern with the employees from various organizations, this explain the point of networking forum that are used to bring professional together and share information or to harmonize certain organizational policies.

It was also revealing that interference of Senior management on HR activities for instance the HQ/RO issues related to HR are presented by head of office as such it discourages the practitioners in performing their roles as the organ of the organizations. In relation to that one of the participant echoes that even decisions making in most case is done by the senior management leaving the human resource unit speechless in the organization. More so, political instability due to the ongoing conflict in the country it became difficult to some extend to find the qualified candidates since many of the persons are staying in the IDP camps and other in camps in the neighboring countries all this factors affect the implementation of strategic human resource management in the organizations.

The interviews result presented that lack of employees benefit packages in some of the organization has placed some HR practitioner end up been jail because staff after end of services expect to go home with entitlement, this is due to the poor system of managing entitlement of the employees after services and this issues had placed some of the human resources personnel in to harassment, torture and jail as separated staff were not paid the final benefits.

Data analysis on table form

Table 4.1. Lack of employee's benefits packages

25-35 Years	Frequency	Percentage
35-40	4	50
45-50	1	12.5
55-60	3	37.5
65-70	0	0
total	8	100%

Table above shows that 50% fully agreed that lack of employee's benefits is the challenge faced by the human resources HRP in implementing the strategic human resources management in the selected NNGOs in Jubek state. While 37.5% agreed that lack of employee's benefits has a negative impact on implementation of human resources strategies in the selected organizations, also the results revealed that 12.7% did not agreed.

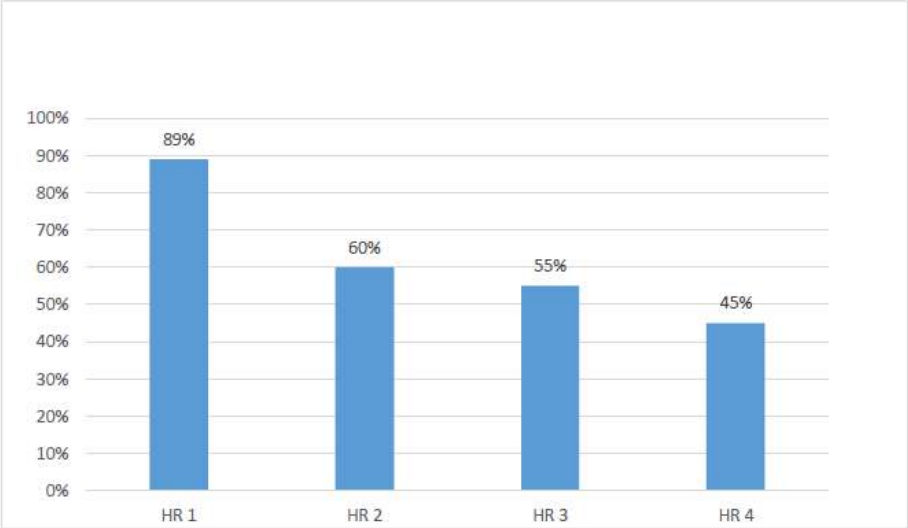

Figure 4.1. Rigidity of some employees to adopt the organization policies and procedures

HR1=Strongly Agree,
HR2= Agree,
HR3=Disagree
HR4=no ideas

The highest percentage of 89% strongly agreed that the challenges faced by the HR practitioners in the selected organization was the rigidity of the employees to accept the existing organizational policies and procedures. Some 60% of the participant eco that in their organization this stand the challenges in most cases faced by the HR team, employees pay less interest to know what the organization policies and procedures is talking about, hence affected the work. More importantly 55% participate disagree on the rigidity of employees as a challenge because for them they believed that it is the responsibility of the organization to ensure that the employees were provided with the available policies and procedures, while 45% of the participants have no ideas on the questions, they left uncompleted.

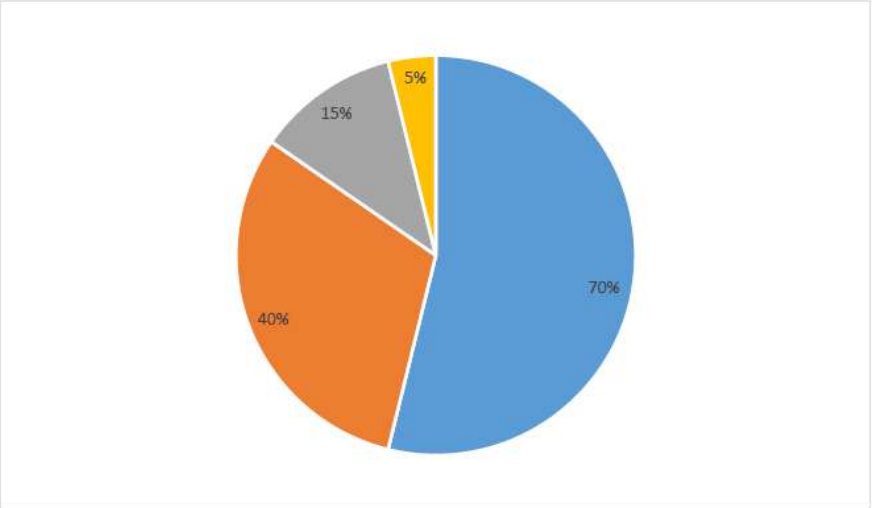

Figure 4.2. Management interference on HR roles in the organization

Out of the selected HR practitioners in the NNGOs majority (70%) strongly agreed that management interference on HR roles, for examples on the decision making and senior positions are handling by the management which has a negative impact, meaning some of them were planning to leave the organization. In the inclusive interviews 40% of the participant confirmed that they also agreed on the issue of management interfering on the role of human resources team, so this has been an ongoing therefore, most of the HR colleagues had no voice in the organizational decision making, hence not able to work independently.15% of the participant did not agree on the point of management interference as a challenges, as such it is difficult to conclude. While 5% of the informant has no ideas on the topic whether this is a challenge or not.

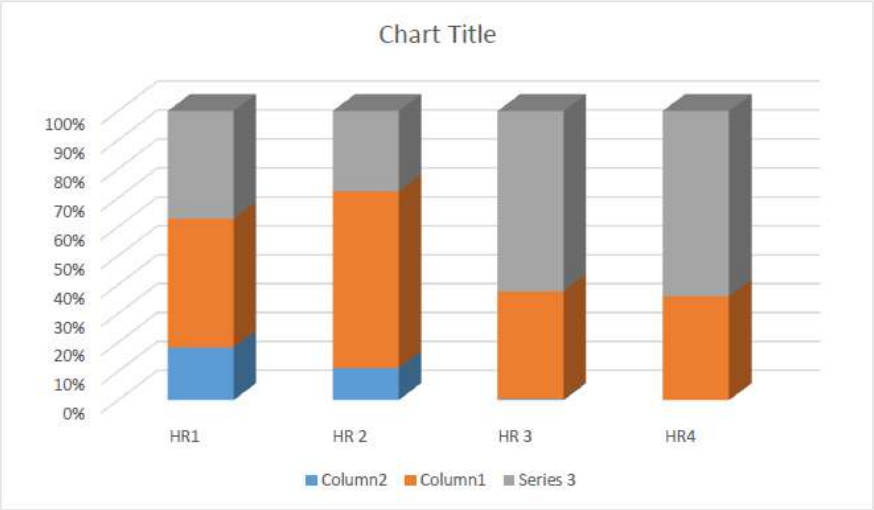

Figure 4.3. Political Instability

In the table above data collected shows that 90% of the participant strongly agreed that the most alarming challenges faced by HR practitioners in the organizations was the political instability which has seriously made the work difficult to get the most talent qualified employees during recruitment and selection, for examples since the war broke in 2013 till present were many of the people are living in the POCs and others in the neighboring countries of Uganda, DRC and Kenya. In relation to that 80% of the participant agreed that the political instability was the hindrance factors for the HRs in the organization as many able people left the country. Furthermore, 2% of the informant did not agreed with the views that political instability affect employment specifically in hiring suitable candidates. Finally, 0% of the participant have no ideas. In generally analysist the major challenge faced by the HR practitioners was the political instability in the country that have a significant effect on the employment of staff in the selected organizations

Conclusion

In the broader point of views, the research work has answered the main objective of the study and the research question. The results revealed that there was lack of employee's benefits packages, Rigidity of employees to adopt the organizational policies and procedures, Management interference, and political instability had made the work difficult for the practitioners to implementing the strategic human resource management. one of the participants mentioned that they are subject to jail, beaten and harassment some time with the separated staff who have not been paid their final benefits on time, therefore this affected their work. In addition to that lack of coordination among the HRP within the organization made it difficult to share knowledge and experience because each organization have different internal policies and procedures. The results indicated that there is political instability that has affected the work of human resource personnel in the organizations in the way that many of the qualified applicant are in the camps, so it made it difficult to get the candidate on boar as expected, the same job kept on been re-advertised for several time which wasted a lot of time.

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My deepest gratitude goes to the almighty God for his protection throughout this study. More importantly I acknowledge the great support from my Guide Dr. Nandita Mishra who continuously guide in the process. Also, I recognize the word of encouragement from my mother, sister and brother for their effective support till the end of this paper. In Addition, the distinctive thanks go to all the participants who entirely maintained the confidentiality in giving out the information required for the study.

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Peace Counselling Education and National Security: Case Study of Niger Delta Region of Nigeria

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Abstract

The absence of a formidable structure for peacebuilding counselling and security development hampers the development of the Niger Delta region of Nigeria resulting to both economic, political as well as social challenges to the inhabitants of the nation as a whole and the Niger Delta region in particular. This study examined how education counselling can influence the promotion of peacebuilding specifically in Ughelli North Local Government of the Niger Delta region of Nigeria and its ability to reduce structural violence already being experienced in the region. The study adopted the quantitative descriptive survey method using primary sources of data collection such as the questionnaire and literature reviewed from secondary sources like journals, books, and online articles. For the primary data, a sample size of 1000 was adopted for the questionnaire from a population of 441,600 after using Cronbach Alpha to test the level of reliability of the instrument. The results from the test of correlation between peace education counselling and national peace building showed a significant relationship between the two variables with a mean score of above 164 in support of a significant relationship as against less than 25 against. This showed the level of appreciation and relevance of peace education counselling. It is recommended that peace education counselling be used by teachers and owners of schools and National Education Policy Makers incorporate this into the school curriculum to lay a proper foundation of peace for the younger generation in tandem with the idea of catching them young.

Keywords*: National Security, Peace Building, Peace Education.*

Introduction

The Niger Delta region of Nigeria hosts the highest reserve of oil from which the Federal Government has throughout the years sustained its ever-unstable economy as oil has remained the mainstay of the economy. In spite of this great support from this region of the country, the region has remained one of the poorest in terms of infrastructure and even human capital development as many of the inhabitants are considered unemployable by the oil companies exploiting the oil in their region. This semblance of being in the water and at the same time thirsty is one of the major factors that has prompted the youths in the region to take to violence through which government gives a listening ear to their plight albeit only giving temporal solutions. The persistent neglect of the region especially when juxtaposed with the rapid rate of development of other parts of the country feeding from the oil in the Niger Delta creates more room for bitterness and triggers violent reactions whenever the opportunity presents itself. (Niger Delta Human Development Report, 2006).

It is even unfortunate to note that majority of those agitating for the equitable reallocation of resources in order to address the injustice are usually being silenced. Prominent amongst some of these past victims is the late Nobel Peace Prize Nominee Ken Saro-Wiwa who led a peaceful protest against the environmental degradation of the Ogoni Land in particular and Niger Delta region as a whole. (Oshionebo, 2009)

The oil exploration and exploitation which started in the late 50s increased revenue generation for Nigeria at the expense of Niger Deltans who became further impoverished due to environmental degradation and no commitment by the oil companies to give back to the environment (Olubayo 2012 reporting Ukiwo, 2010).

Statement of the problem

The absence of peace building and security development is a major virus mitigating the economic and well-being of many regions in Nigeria, particularly in the Niger Delta. Security is seen as the situations that exist as a result of the establishment of measures for the protection of persons or individuals, information and properties against hostile persons, influence and actions.

However, the reverse is the case in some parts of the country with its attendant increase in crime, structural violence, the absence of peace initiations and reconciliations, lack of education for women and children, lack of food and clean water and gross violation of human rights, absence of security from physical harm, corruption, vandalization of oil installations, armed robbery and kidnapping as a result of neglect of the region's development by oil exploration. All these vices are manifestations of regional and national insecurity that threatened peaceful co-existence and promoting poverty and development. In the past, programmes like, the National Youth Service Corps, Federal Character Principle, National Policy on Education etc. all played a role to strengthen national and regional integration and peaceful co-existence within and between regions. The term "peace" is globally considered as a fundamental basis for stability, progress and development in human societies

It is believed that education is utilized in society's struggles to overcome poverty and enhance peace building and security. An alternative to violence is the introduction of peace education inculcating the morals and values needed for peace building. In the same vein, school counsellors reverse the potentialities of teaching of different sectors operators in the region, specific skills such as goal getting processes, stress reduction (relaxation) techniques using programmes like the intentionally structured groups in order to drive the interest that will promote peace building. Education in its functionality is an all-round development of individuals which includes intellectuals, physical moral emotional and social aspect as well as acquisition of vocational skills and aesthetic sense. This is exemplified in the volume of the potentialities that should reflect in the different aspects of regional development in the myriad of challenges confronting the region under investigation that gave birth to the military introduction of Operation Python Dance I and II, the question exists: is the Nigerian educational system relevant in addressing the nation's problem of insecurity and deprivations? What indices in the educational system can promote peace, education counselling to bring about peace building in the areas of study? How will government utilize the potentialities of peace education counselling on challenges of insecurity as a result of insecurity and community clashes? These questions remain the course of this study. It is in view of the importance of peace education counselling in promoting peace building that the researcher deemed it necessary to embark on this study.

Research question

The study was guided by the following questions

1) To what extent has peace education counselling influenced the promotion of national peace building in Ughelli North local government area?
2) What is the level of peace education counselling in reducing structural violence in Ughelli North local government area?
3) How has peace education counselling reduced the rate of conflict in Ughelli North local government area?
4) How has peace education counseling promoted peace initiatives and reconciliation among conflicting communities in Ughelli North Local Government Area.

Hypothesis

1) There is no significant relationship between peace education counseling and reduced rate of conflict in Ughelli North Local Government Area of Delta State.
2) There is no significant relationship between peace education counselling and promotion of peace initiations among conflicting communities in Ughelli North local government area of Delta State, Nigeria.

Objectives of the study

The objective of the study is to ascertain the role of peace education counselling among communities in Ughelli North local government, Delta State in Nigeria in promoting national peace building the specific objective are as follows:

1) To ascertain the role of peace education counseling among communities in Ughelli North Local Government Area of Delta State in Niger Delta of Nigeria in promoting National peace building.
2) To examine whether peace education counselling has reduced the level of structural violence in Ughelli North Local Government Area communities in Delta State of Niger Delta.
3) To investigate how peace education counselling reduces that rate of conflict in Ughelli North Local Government Area communities of Delta State in Niger Delta of Nigeria.
4) To find out how peace education counselling has promoted peace initiatives and reconciliation among conflicting communities in Ughelli North Local Government Area communities in Delta State of Niger Delta.
5) To ascertain the extent to which peace education counselling enhanced the provision of security from physical harm in Ughelli North Local Government Area communities in Delta State of Niger Delta.

Significance of the study

The importance of peace education counselling in promoting national peace building among communities with attendant conflicting issues cannot be over-emphasized. The study seeks to highlight the beneficial effect of peace education counselling in promoting national peace building. The importance of peace education is holistic because its benefits cut across individual' communities, institutions, societies and various groups of humanity. Such benefits include;

Counsellors: It is believed that the finding of this study would be of immense benefits to Counselling Departments of Schools. The study will enable the counsellors to better understand the importance of the subject matter and have more direction to areas that need proper development in the course of executing their various tasks of counselling people in conflicting communities.

Community leaders: It is anticipated that the story would go long way in generating the much-needed information that would be used by community leaders to improve on peace education counselling situation in their domains. The study will enable community leaders understand the importance of the subject matter and have more direction in areas that need proper development in course of carrying out their role as peace builders.

School owners: It is believed that the findings of this study would be of immense benefits to school owners, both public and private in seeing the need for incorporating peace education counselling in their school curriculum. This is imperative because proper understanding of how pace education counselling can influence peace building would greatly peaceful co-existence in our communities.

Teachers and Students: The study will enable teachers to have deeper insights on the importance of the subject matter to enable them understand the situation and device means of educating students in having a positive Orientation and attitude in handling communal issues that borders on promoting peace. Through the study, the assessment results could be a guidepost that would help students identify their areas of strength and weakness and make necessary adjustments to fill the gaps in their efforts where necessary to appropriate directions of needs as stakeholders in preserving peace.

Definition of terms

Peace: According to the United Nation (2014), peace means dignity, well-being not just the absence of war. Emphasizing this, the United Nations Secretary General stated "we know that peace cannot be nurtured through the dignity, right, and capacities of every man and woman" (Ban Ki-Moon, UN news 2014).

Education: According to UNESCO (2017) education is a means to empower children and adults alike to become active learners and should also focus on the values, attitude and behaviors which enable individual to learn to live together in a world characterized by diversity and pluralism

Peace Education: This refer to the process of acquiring the values, the knowledge and developing the attitudes, skill and behaviors it's like in harmony with oneself, with other and with the natural environment

Peace Building: in contemporary times peace and security are measured not only in term of the absence of conflict. According to the UN (1999), lasting peace requires economic development, social justice, environmental protection,

democratization, disarmament and respect for human rights. Peace can be durable if only economic and social development are guaranteed (Basic facts about the united nation (2018) in other words peace building refers to an intervention technique or method that is designed to prevent the start or the resumption of violent conflict by creating a sustainable peace.

Counselling: this is a face to face profession guidance of the individual by utilizing psychological method and skills especially in collection case history data using various techniques of the personal interview and testing interest and aptitudes.

Literature review

The literatures related to the study were reviewed under the following sub-headings:

- Theoretical framework
- Concept of peace education counselling
- Concept of peace building

Theoretical framework

The theoretical framework review of this study is based on two theories. According to Anugwon (2009) a theory is a valid statement presented to offer a comprehensive explanation of some observable uniformity and consistency in the social and natural world. This implies that theories are empirical statements with a connection between phenomena and variable and are premised on cause and effect. Naturally theories share a relationship with research for the help in specific relationship between the variables being studied.

Social conflict theory

The social conflict theory was propounded by Karl Marx (1818-1883) who is regarded as the father of modern social conflict theory Marx was a revolutionary thinker who believed in the irrepressible unanimous power of the masses in redressing their social conditions of existence. According to Ollman (1976), Marx maintained that social classes identify a particular way of relating among themselves, Marx argued that social conflicts arise from relations of production, in such case "people come to reify classes and as a result these classes come to have a life of their own that constraint the actor" (Ritzer, 1996). Marx tended not to have explicitly seen classes from a reified perspective but as a dynamic entity, oriented ambiguous pattern of writing to understand his usage of classes in the analysis, whether they were used as a framework or as a theory.in this respect, Anugwom (2009) averred that Marx concept of social conflict centers on the manifestation of social classes in his capitalist regime.

Frustration and aggression theory

The frustration and aggression theory, as propounded by Dollard and his colleagues in a published monograph, explains the causes of conflict and why people exhibit aggressive behavior (Zillimann 1979). The issue of aggression has attracted the attention of scholars in recent times, especially on the role it plays in generating and escalating conflicts. The theory posits aggression is generally traceable to frustration usually caused by people's actions tend to hinged of accumulated anger targeted at an individual's group with the aim of inflicting pains on them (Dill & Anderson 1979). The model outlined by Berkowitz (1989) highlights the danger associated with justifying aggressive behavior. This is comparable to the situation on Ughelli North Local Government Area under investigation in the Niger Delta where most people have justified youth restiveness and violence with economic and environment injustice to the extent that more social movements were formed with increased agitation. The revised frustration aggression hypothesis maintained that:

a) Frustration investigates behavior that may or may not be hostile or aggressive.
b) Any hostile or aggressive behavior that occurs is caused by frustration. (Miller et al 1941; Dill & Anderson 1997)

In other words, aggressive behavior is occasioned by frustration (Zillman 1979). The relevance of frustration and aggression theory to this study id hinged on the ground that denial of access to provision of quality education to women and children, food insecurity and access to clean water, human right abuse, lack of adequate protection from harm, structural violence may have formed the embers of violence in Ughelli North Local Government Area. People are frustrated when they are denied basic necessity of life or aggressive behavior. This development in turn no doubt degenerates to violence. However, through peace education counselling by way of promoting peace initiations and reconciliation inculcations of

democratic values through special programmes and the entrenchment of peace education counselling in our school curriculum, many of the community members especially children who have been properly thought may imbibe the culture of peace in pre-conflict, conflict and post conflict situations.

Concept of peace education counselling

Peace education counselling as defined by Smith & Carson (1998) is a multidisciplinary field of study dedicated to discover the roots of violence in the promotion of peaceful alternatives which incorporates the essential ideas the peace means to understand the structural violence which preserve inequality and injustice. However, a broad definition of peace education is provided by UNICEF.

The process of promoting the knowledge, skills and attitudes and values needed to bring about behavior changes that will enable children youth[s] and adults to preserve conflicts and violence. Both overt and structural: to resolve conflict peacefully and to create conditions conducive to peace whether at intrapersonal, interpersonal, intergroup, national and international level (Fountain 1999:1)

Our modern world may be considered a dangerous place to live in. "there is widespread consensus that we are still living with a deep-rooted culture of violence" (Toh, 2017). The UN human development report (2010) mentioned that in 1998 there were 36 major conflicts, and that during the 1990s about five million people died in conflicts and there were more than ten million refugees and five million internally displaced persons (IDPs). Humanity has been able to master the complex technologies and to produce and immense variety of products and services to satisfy human needs, but also weapons that can destroy the planet. In addition, while the gross production of the world could be a decent standard of living to every person, the sad reality is that there is a big gap between poor and rich people and poor and rich countries. Structural violence and essential concept in peace education counselling, is the unequal and unjust distribution of power and resources responsible for the tragic situation that about half of humanity, or about three billion people live on less than $2 a day (Toh, 2017).

Peace education counselling is only about a decade old (Hicks, 1998). After the end of the world war II, UNESCO provided one focus for peace education (Burns & Aspeslagh, 2016).

The goals of peace education counselling that were cited mist frequently were intercultural awareness, global perspective, insights into present injustice, lack of equality in the world ability to generate alternative visions and readiness to work for justice and more equal distribution of resources. UNESCO started promoting the shift from a culture of violence to a culture of peace, and this culture consisted of values, attitude, behavior and ways of life which were grounded on non-violence and respect for the right and freedoms of others (Adam 2015). Conflict was going to continue being part of life but by cultivating a culture of peace those conflict could be resolved in an amicable manner. Conflict exists in all societies but also societies have some elements of peace (Boulding, 2010).

The present approach to peace education counselling is that it applies across the curriculum. Pike (2010) proposed two methods for implementing peace education counselling across the curriculum with relevant peace education knowledge, skill and attitudes to real world situations. Peace education counseling is a multidisciplinary field of the study dedicated to discover the roots of violence and to the promotion of peaceful alternatives (Smith & Carson, 1998). It also incorporates the essential idea that peace means to understand the structural violence which preserve inequality and injustice.

The indices of peace education counselling

There are several indices that make up specific dimensions of peace education counseling. Some of the are disarmament education for understanding, human rights education development education, multicultural education, environment or sustainable development education, global education and future education. Each of these specific types of education refers to an aspect of peace, although all the indices are interconnected to one another. It is not possible to talk about index without implicitly or explicitly talking about all the others. Peace encompasses them all more.

Each of these indices has specific goals which pertain to the specific focus of the index. Disarmament education, for example, has the main goal of ensuring has the main goal of ensuring the elimination of weapons, mostly weapons of mass destruction but preferably all

kinds of weapons constitutes a great risk to humans because leaders that I vest in weapons are likely to use them eventually, if they are sufficiently threated. However, this index, according to Reardon (2012), needs to become more user friendly because without "intelligent, responsible use of sound knowledge of the issues and problems, citizens can never be a constructive constituency for disarmament". Education for international understanding attempts to understand the feelings and interest of the other, to eliminate miscommunication among the parties and to reconciliation and healing.

Human rights education's attempt to ensure the promotion of all types of human rights around the world. Although all nations have subscribed to this principle and are signatories of the Universal Declaration of Human Rights, in practice most countries violate some human rights; and some countries violate most of them. Human right education attempts to make people aware of the differences between principles of human rights and their practices in the different parts of the world. Development education attempts to produce peace helping people develop their human and natural resources with the purpose the purpose of eliminating poverty, reduce the gap between the rich and the poor and encourage the participation of the poor people in the development process development education provide the tools for underdeveloped countries to become develop or to advance further along their development model. Development is a fundamental human right and peace is a necessary condition for development (Burns & Aspeslagh, 2016) this index of peace education has probably changed the most throughout the last few decades. During the 1940s and 1950s the organization concerned with the aspect's development where religious and humanitarian organization using charitable and assistance-based approach (Mesa 2003). However, this later leads to vast programs of foreign aids such as the "Alliance for progress" in Latin America and the enactment in 1960 of the UN first decade development have included ideas such as a new world order, the inclusion of a gender dimension and the need to consider the effect of development on the environment. Development education follow the traditional industrialization model (Smith & Carson 2008).

Multicultural education has been around in educational circles for quite some time. It attempts to understand the different cultures that inhabit a territory, or a region or even the world. It allows participants to have a better understanding of people who are different or come from different culture: what they think, what they believe in, what has been in their history. By understanding people from different cultures, this type of education provides a way to integrate the social, ethnic and religious difference and eventually, help in global, help in global understanding tolerance and peace.

Obviously, all these types of education, and development education, is complemented by the goals of environment education or sustainable development education. The index of peace illuminates the connections between people and their environment, and provides a framework to analyze and understand the manner in which human actions affect our surroundings, many times in a negative manner.

Global education promotes the importance of the interconnectedness of the world, nations and people. Humans and countries are not isolated entities but suffer from what happens in other parts of the world. This index of the education promotes the idea of global citizenship by reducing or eliminating narrow nationalistic ideas and promoting every person's obligations towards the rest of humanity. Future education applies to all the strands in one way or another. A better and peaceful future cannot be created unless it is first imagined. Students need to explore the range of solutions that are proposed to address the different issues (Hicks, 2014). This strand of education allows for participation to create this vision and arms them with the necessary tools students to work towards the peaceful future that they have envisioned.

A pathway to peace

Educating for a culture of peace includes many approaches. There are many ways in which a culture of peace can be created and maintained. A holistic framework for peace education presented by Prof. Toh includes the following components: educating for dismantling the culture of war; educating for living with justice and compassion; educating for promoting human right and responsibilities; educating for building cultural respect, reconciliation and solidarity; educating for living in harmony with earth and educating for cultivating inner peace (Toh, 2017). Each of these parts is broad and linked to each other. they are

presented by a flower, and the "vital pathway" is the peaceful and non-violent resolution of armed conflicts and disputes.

Teachers can help facilitate the creation of this culture of peace, not only by what they say but also how they interact with students. Teachers should respect the students as well as respect themselves because nothing can justify the degradation of human beings (Freire, 2008). Teachers are social agents and not neutrals. Freire (Ibid), for example, mentioned that he rejected the present system of capitalism which was responsible for the aberration of misery in the midst of plenty.

In many cases, the same values subscribe many or all of the indices, such as the concept of justice, cooperation, equality, fraternity, trust, responsibility, reconciliation, mutual respect, solidarity, compassion, understanding, interconnectedness, harmony, dignity, non-violence, sustainability and of course, hope and love. Hicks (1998) mentions that value underlying peace are non-violence, economic welfare, social justice ecological balance and participation and that procedural values includes values such as tolerance, fairness and respect for reason and truth. According to Burns & Aspeslagh (2016) in order to promote peace through education, certain peace education programmes have been practiced in different historical, socio-political, economic, cultural and educational context, with various ideas, values, objectives, approaches contents and methods.

At the same time, some common objectives and characteristics can be found across many programmes. Some common areas of learning include knowledge, skill, attitude, behavior, and values which are necessary for non-violent conflict resolution and peace building (Johnson & Johnson 2015). This means that peace education is not only education about peace (gaining knowledge), but also 'education for peace' which nurturing skills, attitudes, behavior and values, since it requires a close relationship ends and means, content and forms. As Reardon (1996) states, the important task for peace education is teaching the skill and capacities necessary to create and pursue alternative to the present other, considering the present situation in which the current wars and militarism have been legitimized by formal education.

In view of the above mentioned, the broader aims of peace education counseling, as stated by Hicks (1998a) are: to explore the concept of peace both as a state of being and as an active process; to enquire into the obstacles to peace and causes of conflict, both in individuals, institutions and society; to resolve conflicts in ways that will lead towards a less violent and a more just world; to explore a range of different alternative futures, in particular ways of building a more just and sustainable society. According to Johnson & Johnson (2015), peace education counselling aims to give student opportunities: to express their feelings, to gain knowledge and insights into today's reality and necessary skills and values to prepare them to build peaceful relationships with other people to work for peaceful solutions without resorting to violence at all levels as future citizens. They further stated that the ultimate goal of peace education counselling is for individuals to be able to maintain peace among aspects of themselves (intrapersonal peace), individuals (interpersonal peace), groups (intergroup peace), and countries, society and cultures (international peace).

With the emphasis on the connection between these different levels of peace, Hicks (1988b) states that:

Education for peace is initially about individual actors on the world stage. That is to say it is about people, individuals and groups, and the way in which they interact …it is, of course about individuals, pupils, teachers and schools about how they too interact and how they to each other. It is about conflict, and violence in our daily lives and immediate experience. (Hick, 1988b: 248).

Therefore, considering that peace is about people and their relationship at different levels, Hicks (1998b) argues that, one focus in school thus needs to be very specifically on personal growth and development but, unlike many programmes in personal and social education, set in the broader context of both political and planetary awareness. Similarly, Bjerstedt (1990) considers the peace education is not only preparation for actions in the personal arena. But also, preparations for actions in a wider, political arena, stressing the importance of peace education counselling in the long run, in terms of preparedness for non-violence, world citizen responsibility, egalitarian attitudes, and readiness to search critically for alternatives.

With these definitions and aims, the principles and practices of peace education utilize a range of

approaches according to preferred view in different contexts. Just as peace education reflects socials reality and social goals, current issues and discoveries in the present.

Social violence and warfare can be described as a form of pathology, a disease. Peace education through counselling tries to inoculate students against the evil effects of violence by teaching skills to manage conflict non-violently and by creating a desire to seek peaceful resolution of conflicts. Societies spend money and resources training doctors to heal the ill. Why should not they also educate their citizens to conduct affairs non-violently? Peace educators use teaching skills through counselling to stop violence by developing a peace consciousness that can provide the basis for a just and sustainable future.

Concept of peace building

Since her independent in 1960, Nigeria has been experiencing one form of violence or the other. The pattern and complexity of such violence is indeed worrisome to the extent that it no appears as if the country is teetering at the verge of a precipice the 2011 Amnesty International Report. Further pointed out that there is unabated human rights violations and unlawful killings as well as torture, enforced disappearance and ill treatment in the country. The context of violence in Nigeria is such that intertwined direct, cultural and topologies of violence, with factors responsible for the violence are closely tied together in a way that defines complex conflict dynamics. While frustration occasioned by factors relating to human security and obnoxious policies, among others, largely defined structural violence the physical expression of such development in form of verbal and physical attacks resulting in physical harms and killings largely describe violence. At times, the perpetrators of such violence attempt to justify their action on deconstructed religious sentiments, customs traditions and cultural beliefs, while others anchor their justification on conditions of human insecurity such as joblessness, hunger, and environmental problems among others thereby resulting in cultural violence.

Indigenes-settler conflict is and age-old problem in Nigeria. Historically the indigenes settlers' question is responsible for the indigenes-settler's nature of violent conflict in the country. The Indigenes-settler question permeates the various geo-political zones of Nigeria and has indeed led to blood shedding. For instance, between 1999 and 2000 all settlers in the state of Enugu, with the exception of those whose husbands are employed in the federal institutions in the state, were retrenched from their appointments in the state, and this result in serious acrimonies and generated conflicts between the indigenes and the settlers or non-indigenes, (Institute for peace and Conflict Resolution, IPCR, 2008);

The different crises in Nigeria ranging from ethnic-religious crisis to agitation for resource control break-up of the country, but the religious especially the recent Boko Haram insurgency has attracted international attention and concern. The fallout of these crises is threatening the country's unity and development. A popular saying – "united we stand, divide we fall"- a pointer to the fact that unity is strength and division is punishment. This statement depicts the life of the people living in a divide society like Nigeria, because different scholars have described Nigeria as a divided society. It is believed that one of the most challenging aspect of divided society is that they face a particular obstacle in maintaining peace. This exist where political divisions follow very closely, and especially concern lines of objective social differentiation, especially those particular salient in a society." Segmental cleavages may have religious, linguistic, regional, cultural, racial, or ethnic dimensions. In essence, a divide (that is, plural) society is defined by the coexistence of incompatible institutional systems and. Therefore, force must be used to maintain order. Osaghae & Suberu (2015) described Nigeria as one of the most deeply divide states in Africa because of its complex web of politically salient identities and history of chronic and seemingly intractable conflicts and instability.

In Nigeria, ethnic cultures have been wrongly exploited to brand the country with tribalism and manipulation of religious sentiments as well as regionalism, largely explain the unequal development of the country in addition to the perennial social tension and political instability. I quote. "as a result, ethnic sectarianism has left a trail of destructive violence and even threatened the territorial integrity of Nigeria" (IDEA, 2011). Over 40% of ethno-religious occurred in Nigeria with the earlier years of its fourth republic.

Besides there appears to be a continuous rise of such violence in the country (Salawu 2010).

Gender-based violence is another common type of violence in Nigeria. Gender describe behavior, attributes or character and roles expected in the society of individuals on the basis of been born of male or female (Uwameiye & Iserameiya, 2013) and gender-based violence is most often against the women and the girl child and also mainly within the family. Gender based violence is and age-old psycho-social issue deeply rooted in the dwindling concept of gender inequality which is a kind of structural violence within any social system. Gender based violence is broadly used as "violence against women and it also highlight gender inequality in which most violence is rooted" (USAID, 2006). The Beijing Declaration and the Platform for Action defined it as "any act of gender based violence that results in, or is likely to result in physical, sexual, or psychological harm or suffering to women including threats of such acts, coercion or arbitrary deprivation of liberty whether occurring in public or private life. Among the various forms of violence against women are battering by spouse, rape, verbal assaults, female genital mutilation, incest, child marriage, forced marriage, denial of women work opportunity, denial of women right to own property, denial of girl child right to her husband, denial of girl child access to her education, child labour, girl child trafficking and using girl child for commercial sex purposes, among others.

Gender based violence manifest in different forms such as physical, sexual, economical, emotional metal and psychological. However, the physical aspect is the most prevalent of the various forms of intimate partner violence Intimate Partner Violence is often cloaked with denial shame and silence of the victims and it occurs between two persons in a relationship whether current spouse or erstwhile spouse or dating partners. It is the "actual or threatened physical or sexual violence or psychological abuse directed towards a spouse, ex-spouse, current or former boyfriend or girlfriend or current or former dating partner" and it is increasingly replacing the term domestic violence (WHO, 2005a).

A culturally based form of violence against women in some part of Nigeria is female genital mutilation or female circumcision which is said to affect at least 40% of women according to the 2008 national baseline survey this is also an age-old practice in the Igbo tribe which involve shaving of hair and making a woman drink from the water used in washing the corpse of her deceased husband as a way of testing her involvement in the death of the man. These are also serious cases involving battery, beating and all manner of assault during domestic violence against women. For instance, in a survey conducted by an NGO known as Project Alert in 2000, 25 cases of women murdered by their husbands were recorded. There are cases of old women who are confronted with ceaseless abuse due to their childlessness and some branded as witches and thus subjected to abuse, furthermore, incidents of trafficking of women and children as well as other cases of sexual harassment also abound. Going by statistics about 60-70% of Nigerian young women are subjected to sex trade in Italy by the traffickers while over 80% of the 12 million children in labour in Nigeria are trafficked victims (Ajamagbo-Johnson, 2012). There also appears to be cases of policemen, who acting under unprofessional conduct sexually assault some incarcerated women as well as committing human right abuse by some police men who through their action inflict violence on some innocent citizens, probably through illegal 20-naira exploitation especially by some police in the road blocks.

Politically related violence in Nigeria predates to 1966 when the first military interregnum occurred in the country, since then, a number of coup d'état giving way to military head of state to stir the affairs of the country in manner that many believed mainly contributed to the entrenchment of systemic violence in the country. The Olusegun Obasanjo begot the second republic in Nigeria, and the process leading to Shehu Shagari-led second republic was however not devoid of violence as the first republic. Political cum electoral instability largely dotted the various military regimes including the democratic second and third republic that were also truncated by the military, who also gave birth to the fourth republic in 1999. The pattern has not played out without consequences as deaths and loss of properties by its victims including threats to national unity at the various stages of the political development. The 2003 experience however came "after a relatively peaceful, if not perfect election in 1999 (Hazen & Honer 2007) in Nigeria, allegations of fraud, disenfranchisement

and violence overwhelmed the election, and according to Hazen & Horner (2007) the use of violence in electoral processes, rigging of elections, involvement of armed groups and dismal performance by the electoral commission led to the discontent of the electorate in 2003. Also, the 2007 election was characterized by intentional delay, bias and ineffective preparation for the election which contributed to the political violence (Bekoe, 2007).

The conflict in the Niger Delta is a resource-based conflict, and it has undergone various phases since its inception. The struggle which is centered around oil exploration in the region including gas flaring is mainly rallied round the negative externalities of the oil exploring activities of the multinational oil companies in the Niger Delta cauldron. Its impacts on the people of the region, and a decade of development neglect of the area not withstanding its role in the Nigerian economy, including the benefits accruing to the oil companies operating in the area. The objection of members of oil communities in the region is against the Federal Government and the Oil Companies working in constant with the government to exploit Oil in the region without adequate beneficial attention to the people of the Niger Delta who have been at the receiving end following the environmental degradation occasioned by the oil exploration activities in the region.

Over the last years when the Boko Haram was formed in Maiduguri, the challenges of violence in Nigeria has snowballed into a pattern that post danger to the corporate existence of the country as the country now seems to be left teetering at the edge of a precipice. According to Punch newspaper dated 12th of June 2012, death tolls following Boko Haram's attacks were officially put at 1200 as at march 2012. Dozens of others have also been killed in six states of the North-East, Kano and Kaduna since then. The Nation 19th of June, 2012, estimated that within the first half of 2012 more than 580 persons lost their lives on violence based on the sect. thousands of others since fled their places of abode to the neighboring countries of Chad, Niger and Cameroun or to South-Ward, North-Central and southern states of the country. According to statement contained in punch dated 12th of June 2012 and credited to Oluseyi Petirin, Nigeria's former Chief of Defense Staff, "Boko Haram is a religious sect that initially started by condemning Western knowledge in Nigeria and blossom into a terrorist group that unleashed mayhem on unsuspecting victims Boko Haram has killed over 1200 persons in Nigeria, including Christians, Muslims, and most internationally remembered was the bombing of the UN house in Abuja that killed 23 people". He described them a s people with no clear-cut ideology.

In addition to direct violence the people of Nigeria are also largely confronted with structural violence, such as unemployment, quality quota system, poverty, poor health facilities and schools including inadequate social amenities and infrastructural facilities – good roads, electricity, and pipe born water. Violence in high school has also increased astronomically in the country. From high schools to higher institutions, violence largely threatens smooth learning experiences as gangsterism and secret cultism seem to have taken roots in some citadel learning, casting doubt into the largely envisaged beautiful future educational horizon for our dear country.

Methodology

The study adopted quantitative research, descriptive survey method using primary sources of data such as questionnaire to gather data and also secondary sources such as related literature review from previous articles on the topic, published in books, journals, from both state and national sources as well as online sources. The study adopted a descriptive correlation design so as to determine the relationship between peace education counselling and national peace building in Ughelli North Local Government Area of Delta State in Promoting National peace buiding in Nigeria.

The population of the study is Ughelli North Local Government Area of Delta State which is having according to population commission of Nigeria (2016) a population 441 600.

The research instrument used for this study is structured questionnaire titled: Peace Education Counselling and National Peace Building Questionnaire (PECNPBQ)". It is designed to elicit information from residence in communities in Ughelli North Local Government Area. The instrument was validated by two experts who are senior lecturers from the department of educational management. The reliability of the instrument was tested through a pilot study using test-retest method. Thirty (30) copies of the instrument were administered to residents of

Ughelli North Local Government Area twice within an interval of two weeks. Thereafter Cronbach Alpha was used to determine the level of reliability of the instrument. Finally, data collected was subjected to analysis using percentage, Pearson Product Moment Correlation Co-efficient.

Result

1) **Research Question one:** To what extent has peace education counselling influenced the promotion of national peace building in Ughelli North Local Government Area?

Table 1. Peace education counseling and national peace building cross tabulation

	Peace Education Counselling			
National peace building	**Strongly agreed**	**Agreed**	**Disagreed**	**Strongly Disagreed**
RQ1	112	55	11	22
RQ2	121	45	11	13
RQ3	110	56	23	11
RQ4	77	100	11	12
RQ5	101	44	34	11
TOTAL	**521**	300	90	34
MEAN SCORE	**104.2**	60	18	6.8

Table 1: shows the mean score rating as regards peace education counselling and national peace building. From the results, it shows that a total of 501 (104.2) strongly agreed 300 (60) agreed, 90(60) disagreed while a total of 34(6.8) strongly disagreed. This indicated that majority of the respondents perceived the role of peace education counselling in the building of national peace within and outside the Ughelli. This result is in line with UNDP (2010) report and corroborates its emphasis on peace building initiatives as highlighted in the reviewed literature of this study. From this analysis, the study reveals that the peace education counselling plays its role in national peace building in Nigeria.

Research Question two: What is the level of peace education counselling in reducing structural violence in Ughelli North Local Government Area?

Table 2. Peace education counseling and structural violence cross tabulation

	Peace education counselling			
Structural Violence	**Strongly Agreed**	**Agreed**	**Disagreed**	**Strongly Disagreed**
RQ6	111	44	34	11
RQ7	88	67	23	22
RQ8	78	88	12	13
RQ9	89	67	22	11
RQ10	166	11	23	11
TOTAL	**523**	277	114	68
MEAN SCORE	**106.4**	55.7	22.8	13.6

Table 2: shows the mean score rating as regards peace education counselling and structural violence. From the results, it shows that a total of 503 (106.4) strongly agreed 3277 (55.7) agreed, 114(22.8) disagreed while a total of 68(13.6) strongly disagreed. This indicated that majority of the respondents perceived the role of peace education counselling in curbing structural violence within and outside the Ughelli. And this corroborated the assertion Avruch (2013) who stated that structural dynamics of conflicts have been a contemporary concern and Toh (2017) highlighting the indices of peace which highlighted among other structural violence and also education as a means of mitigating violence and its effects. From this analysis the study revealed that peace education counselling plays its roles in order to stop hooliganism and

aggression among youth, peace education would imbibe in the in the youth co-operation loyalty and respect for the leaders, help them in handling issues that concerns the Nation without prejudice and make the youth to be law abiding citizens within and outside Ughelli.

Research Question three: How has peace education counselling reduced the rate of conflict in Ughelli North Local Government Area?

Table 3. Peace education counseling and reduction of conflict cross tabulation

	PEACE EDUCATION COUNSELLING			
REDUCTION OF CONFLICT	**STRONLY AGREED**	**AGREED**	**DISAGREED**	**STRONGLY DISAGREED**
RQ11	111	55	23	11
RQ12	88	78	34	-
RQ13	33	99	57	11
RQ14	22	66	78	34
RQ15	44	67	78	11
TOTAL	**298**	365	270	67
MEAN SCORE	**59.8**	73	54	13.4

Table 3: shows the mean score rating as regards peace education counselling and national peace building. From the results, it shows that 365(73) agreed, 270(54) disagreed while a total of 67(13.4) strongly disagreed. However, an appreciable number of respondents 270(54) disagreed while a total of 298(59.6) strongly agreed. This attested to the fact that peace education counselling actually changes the mindset of individuals, and is a sustainable value changing value measure. The literature review supported the responses given by majority of the respondents that peace education helps in conflict reductions especially when looking at the indices of peace education counselling by Toh (2017) such as disarmament education, development education among others as a vital pathway to a peaceful co-existence. Rummel (2016) underlining the currency of conflict throughout history emphasized the management of these conflicts will ensure stability in the society and this can best be achieved through the education for all program as enshrined in the Millennium Development Goals (MDGs).

Research Question four: How has peace education counseling promoted peace initiatives and reconciliation among conflicting communities in Ughelli North Local Government Area?

Table 4. Peace education counseling and peace initiatives and reconciliation

	PEACE EDUCATION COUNSELLING			
Peace Initiatives and reconciliation	**Strongly Agreed**	**Agreed**	**Disagreed**	**Strongly Disagreed**
RQ16	114	48	12	11
RQ17	114	48	12	16
RQ18	88	89	23	11
RQ19	68	99	30	-
RQ20	89	77	21	11
TOTAL	**473**	317	98	49
MEAN SCORE	**59.8**	63.4	19.6	98

Table 4: shows the mean score rating as regards peace education counselling and peace initiatives and reconciliation. From the results, it shows that a total of 473(94.6) strongly agreed, 317(63.4) agreed, 98(19.6) disagreed while a total of 49(9.8) strongly disagreed. This indicated that some of the respondents perceived the role of peace education counselling in initiating peace and reconciliation within and outside Ughelli as significant. From this analysis, the study revealed

that the peace education counselling could serve as a means of initiating peace and reconciliation. This view is equally reflected in the literature review by Toh (2017) who emphasized peace

education as a vital pathway to peaceful co-existence which incorporates the spirit of reconciliation and forgiveness.

Discussion

Having examined the data analyzed from the responses to questions from the instrument, the role of peace education counseling in promoting national security was established as majority of respondents with a mean score of 164.2 were affirmative that peace education has influenced the promotion of national peace building which includes security in Ughelli North Local Government Area. This is however against a mean score of 66.8 that rejected the assertion. The affirmation of this assertion that peace education counseling promotes national peace building is supported by UNESCO (2017) which states that education is a means of empowerment that has capacity to change values, attitudes and behaviors. When looked from the perspective of Toh (2017), there is widespread consensus that we are still living with a deep-rooted culture of violence. As such, peace education counseling can go a long way. To support this statistic, Burns and Aspeslagh (2016) posited that development is a fundamental human right and peace is a necessary condition for development.

From the results gotten from the question of peace education counseling having an impact on structural violence and insecurity it shows that a total of 503 (106.4) strongly agreed 3277 (55.7) agreed (162.1 in the affirmative), 114(22.8) disagreed while a total of 68(13.6) strongly disagreed (36.4 disagreeing). This indicated that majority of the respondents perceived the role of peace education counselling in curbing structural violence and insecurity within and outside the Ughelli. And this corroborated the assertion by Avruch (2013) who stated that structural dynamics of conflicts have been a contemporary concern corroborating Toh (2017) who highlighted the indices of peace to include education as a means of mitigating violence and its effects. From this analysis the study revealed that peace education counselling plays its roles in order to stop hooliganism and aggression among youth, peace education would imbibe in the youth co-operation loyalty and respect for the leaders, help them in handling issues that concerns the Nation without prejudice and make the youth to be law abiding citizens within and outside Ughelli.

As such peace education counseling can help address issues centered on national development and security by reducing violence and rate of conflict as well as promote peace initiatives and reconciliation especially in communities in Ughelli North Local Government Area of Delta State.

Conclusion

From the above data collected and analyzed, it can be concluded that peace education counselling has the potentials of causing a change of attitude especially among the young ones in the Niger Delta region through education as they are the most used in cases of violence within the region. Such change of attitude through peace education counselling will help to restore the needed peace that will engender development within Ughelli North Local Government in particular and the Niger Delta region and Nigeria as a whole.

Recommendations

It is therefore recommended from the study conducted that the following should be implemented if a change for the better is to seen or appreciated in Ughelli North Local Government Area of the Niger Delta in Nigeria;

- Community leaders, chiefs, Local Government heads, school heads in the region as well as religious leaders should be trained on the use of peace education within their different areas of jurisdiction. As such the concept of peace will easily permeate within the society and bring about the much-needed stability for development to take place.
- Education policy makers are hereby also advised to ensure that courses or subjects on peace education be added into the school curriculum so that children at a very tender age should learn and practice peace as this will enable them to always choose the part of peace to resolving their differences.
- Government should make an effort to encourage education in general so as to give the individuals in the region a sense of importance. This is because psychologically when someone is empowered through

education, they will not easily be tools in the hands of merchants of conflict who will use them for their selfish ends.

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An Analysis of the Acceptance of the Government of Ghana's Electronic Pay (e-pay) Slip System

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Abstract

This study analyses the acceptance and use of the e-pay slip system by public sector workers in Ghana. Examination of the literature showed that no research has been done to verify the process of adoption and use of the e-pay slip system in Ghana. The General Linear Model (GLM) procedure, specifically, the Multivariate Analysis of Variance (MANOVA) was employed to analyse and explain the adoption. The constructs used for the survey include; behavioural intention, attitude, perceived usefulness, perceived ease of use, subjective norm, systems accessibility and personal innovations, which were developed based on the extended Technology Acceptance Model (TAM). The results confirmed that the extended TAM was an excellent theoretical model to understand users' acceptance of the e-pay slip system. The findings showed that the accessibility and subjective norm of the e-pay slip system were the most significant constructs that influenced the model.

Keywords*: e-pay slip system, general linear model (GLM), technology acceptance model (TAM), information systems, public sector, employees.*

Introduction

Service delivery in the public sector in Ghana has been fraught with challenges such as reliance on manual administrative and financial systems which impedes quick decision making. To improve public service delivery through effective provision of administrative and financial services, the government has embraced information technology to drive its business. Fully automated systems have been installed and are now operational in key government financial management services in Ministries, Departments and Agencies (MDAs) and Metropolitan, Municipal and District Assemblies (MMDAs).

Government payroll systems have particularly undergone immense transformation. The Controller and Accountant General's Department (CAGD) is the government outfit in charge of processing and paying public sector workers. The CAGD has fully computerized public payroll and with it comes speedy provision of pay and other related information such as pensions, loans outstanding and affordability levels. Employees can now access their pay slips and other vital information electronically via the electronic pay slip (e-pay slip) system.

E-pay slips are basically pay slips in electronic or digital format that are accessible online over the internet. It serves the same purpose as an ordinary paper printed pay slip which is a document that normally contains information on basic pay, the period covered, salary deductions, among others (The Call Beat, n.d) There are a number of benefits regarding the introduction of e-pay slip system by the government of Ghana. Employees are able to access vital and detailed information about their pay real time. Before the advent of the e-pay slips, workers had to endure an anxious wait before printed pay slip arrives. In some cases, printed pay slips were not provided at all. It was a rarity and more often a welcome relief when workers obtain their pay slips before payment of salaries. These were the agonies workers went through for decades before payroll enhanced automation brought in its wake Epay slips providing relief to many public sector workers.

The growth of the internet and mobile technology has fueled this shift of the provision of Epay slips. In addition, the increased use of mobile banking also meant that people are now more comfortable accessing their financial information over the internet. E-pay slips are becoming increasingly popular in Ghana as they provide fast, secure and cost-effective way of delivering pay-slip information to employees. E-pay slips have a number of advantages over a printed pay slip.

Among the advantages of E-pay slip is its easy accessibility via the internet. This ensures the availability of the pay slip for convenient viewing and printing by the employee 24 hours a day at practically any place in the world that has an internet connection (The Call Beat, n.d). E-pay slips come as part of a fully integrated online computerized payroll management system, which is usually a subset or module or a more comprehensive human resource information management system such as the Ghana Integrated Financial Management Information System (GIFMIS) implemented by the government of Ghana. According to Ghana's Controller and Accountant General's Department (nd), the e-pay slips were introduced to foster easy, faster and improved access to pay information which also provides several advantages to staff including the following:

i. They are more secure than printed pay slips since they are accessed via www.gogpayslip.com with a strict individual employee ID and password, which are known to only staff.

ii. They can be accessed quickly and easily from any computer or mobile phone with internet access.

iii. Staff can access previous cumulated pay slips.

iv. E-pay slips help the Controller and Accountant General's Department (CAGD) to meet its commitment to making workers' pay slips readily available, effectively serve Government of Ghana (GOG) staff and correct some of the logistics challenges faced with the delivery of printed pay slips around the country.

Some of the advantages of the e-pay slips include the convenience in which they can be accessed online. This allows employees to obtain the pay slips where and when they needed it devoid of without the hassle and time-consuming process that characterized the previous printed pay slip from CAGD where an employee has to go to the company office, request a copy of the pay slip whilst spending money, time and effort in the process (The Call Beat, n.d). E-pay slips can be produced and reprinted at the convenience of employees as when needed for purposes of for instance loan application. Electronic pay slips are stored on the system indefinitely and employees can look up the history of their pay slips. Finally, as a computerized system, e-pay slips are quickly prepared and, in most instances, made available earlier than usual.

Objectives

The objectives of this study are:

i. To assess the demographic characteristics of users of e-pay slip system in Ghana.
ii. To assess Government employees' intention to use the e-pay slip
iii. To examine Government employees' attitude towards e-pay slip
iv. To investigate perceived usefulness of the e-pay to Government employees
v. To investigate perceived ease of use of the e-pay to Government employees

Research Questions

i. What are the demographic characteristics of users of the e-pay slip system in Ghana?
ii. What behavioural factors of user's intention, attitude, perceived usefulness, perceived ease of use and personal innovations influence the adoption and use of the e-pay slip system in Ghana?

Research Hypotheses

In accordance with the previously stated objectives and consistent with the related literature, this study tested the following hypotheses:

i. H_1: The intention of public sector employees to use Epay slip will have a positive impact on their attitude (H_{11}), perceived usefulness (H_{12}), perceived ease of use (H_{13}), personal innovativeness (H_{14}), subjective norm (H_{15}), Epay slip accessibility (H_{16}), computer and high-speed internet connectivity.
ii. H_2: Public sector employees' attitude of the e-pay slip will have a positive impact on their perceived usefulness (H_{21}), perceived ease of use (H_{22}), personal innovativeness (H_{23}),

subjective norm (H_{24}), e-pay slip accessibility (H_{25}).

iii. H_3: Public sector employees' perceived usefulness of e-pay slip will have a positive impact on the perceived ease of use (H_{31}), personal innovativeness (H_{32}), subjective norm (H_{33}), e-pay slip accessibility (H_{34}).

iv. H_4: Public sector employees' perceived ease of use of e-pay slip will have a positive impact on personal innovativeness (H_{41}), subjective norm (H_{42}), e-pay slip accessibility (H_{43}).

Literature Review

An organization's strategic direction influences its choices. Consequently, strategic paths inform the kind of technologies and applications, governance processes and performance metrics a firm utilizes to create value to its stakeholders (Mithas & Rust, 2016). Public organizations in their bid to deliver public goods and services have also embraced technology to drive the provision of essential services. Citizens are becoming increasingly savvy and are loud in their demand for better and efficient delivery of public services. This has led to the establishment of IT departments and deployment of efficient information systems in order to provide services efficiently and effectively (Previtali & Bof, 2009).

The CAGD of Ghana has introduced a number of reforms aimed at improving public sector financial management. One of its flagship reforms is the provision of electronic pay slip System (E-Pay slip). The e-pay slip was introduced in 2013 to facilitate online access to pay slips by employees who receive their salaries through the mechanized payroll. According to N.n. (n.d), the patronage of the E-Pay slips system has been very encouraging with over 380,000 employees registered and actively utilising the system. In-spite of this hefty numbers, there remains considerable number of public workers who have not patronized the e-pay service. The government of Ghana's Epay slips service provides a self-service pay slip facility that enables employees to access their pay slips directly from a secure web site (https://www.gogpayslip.com/index.php?action=Login), thereby, reducing costs and offering the highest level of service anytime. A study conducted by Previtali and Bof (2009) on the effects of organizational environment (size and service demand) and organizational characteristics (professionalism, resource slack, and administrative performance) on e-pay slip adoption in governments revealed that government size and professionalism are the primary determinants of the adoption of computer technology.

Technology has often been leveraged for transformation in delivering value to stakeholders. Technology driven transformational brings new and often radical understanding of society as a network of information flow, which changes the structure of business models from "bricks-and-mortar" to "clicks-and-mortar" incorporating internet-based transactions (e-services) to reduce transaction cost of business processes between organizations and their stakeholders (Castells, 2001; Córdoba-Pachón & Orr, 2009). This paradigm shift is the result of a new techno-economic paradigm, which has propelled the emergence of new technologies such as e-commerce, enterprise resource planning, cloud computing, e-government, e-procurement, e-pay slip, and others as part of innovations which transforms the structure of work in modern societies (Córdoba-Pachón & Orr, 2009).

These innovations in information systems influence almost every aspect of human endeavor since information has become pivotal in-service delivery and consumption. The transformational perspective also highlights issues of control which tends to limit the scope of human agency in managing the adoption and use of information technologies in both the public and private sectors. The apparent dominance of technology in recent times suggest that societies can still achieve goals related to boosting economic growth and social inclusion and these goals depend on how optimistic governments become at using the potential offered by technologies, and how active individuals and groups become in making their concerns heard by government institutions nationally or internationally (Castells, 2001; Córdoba-Pachón & Orr, 2009).

The second perspective, gradual change, focuses on the dynamics of change where influential groups of stakeholders influence the "shaping" and use of systems and technologies in different realms (Córdoba-Pachón & Orr, 2009 ; Mansell, 2002). This perspective aims to understand and manage new forms of living and working where information systems are adopted as a sociotechnical tool in which stakeholders – including governments – have a degree of choice to adopt, reject or transform technology design

and use (Mansell, 2002). The gradual change with technology is preferred to a radical transformation which often emphases on full replacement of living and working via technologies. A gradual change was used in the implementation of the e-pay slip system. It involved working to generate communities of learning that facilitate participation and knowledge exchange where challenges were seen as opportunities for social engagement rather than consequence (Beck, Madon, & Sahay, 2004). The government of Ghana through the CAGD has implemented the GIFMIS project and is also coordinating the various modules including the e-pay slip systems. This initiative is to facilitate a smoother transition from the manual processes to e-services platform to quicken the life cycle of business process and reduce the cost of doing business in the country with appropriate technologies for stakeholders.

Theoretical background

Several theories and models have been developed, over the years, to establish factors that affect individuals' decision to adopt and use information systems to enhance performance and boost user satisfaction (Imran & Grego, 2007). Earlier researches that have been carried out can describe how application of existing theories in technological context can assist in the development of specific technology adoption approaches. These dimensions are applicable since a user's decision to select a specific electronic service delivery system over more traditional one can be considered as an issue regarding technology adoption (Gilbert, Balestrini, & Littleboy, 2004).

Various models have been developed to investigate levels of acceptance and usage of new information systems. Such models include Delone and Mclean's Information System (IS) success model to investigate the effects of system quality on perceived usefulness, user satisfaction, and system usage (DeLone & McLean, 2004) and the theory of reasoned action (TRA) (Athmay, Fantazy, & Kumar, 2016; Fishbein & Ajzen, 1975) which was used to explain information systems usage and the acceptance behavior of a range of factors on the adoption of e-government services. The Technology Acceptance Model (TAM) developed by Davis (1989) to address challenges confronting the field of information technology and systems. The objective of the TAM was to assess why the gains made in the implementation of information systems were often inhibited by a user's unwillingness to accept new technology (Cowen & Kowalczyk, 2009; Davis, 1989) by adapting TRA. The TAM was purposively developed to model user acceptance of information systems with the aim of expounding the behavioural intention to use the system (Bayraktaroglu, Kahya, Atay, & Ilhan, 2019). According to Park (2009), TAM provides a basis for tracking how external variables influence belief, attitude and intention to use, as well as the two cognitive beliefs posited by TAM: perceived usefulness and perceived ease of use information technology. According to Davis (1989), user acceptance of technological innovations has drawn sustained interests amongst information systems researchers. Legris, Ingham, and Collerette (2003) suggest that TAM has proven to be a theoretical model that assists in explaining and predicting user behavior of information technology. The actual use of technological innovations is influenced directly or indirectly by the user's behavioral intentions, attitude, perceived usefulness of the system and perceived ease of the system according to TAM. This suggests that external factors affect intention and actual use through mediated effects on perceived usefulness and perceived ease of use (Park, 2009). According to Sang, Lee, and Lee (2010), the external variables that impact the perceived usefulness and perceived ease of use are not completely explored in TAM.

Existing literature indicates that research conducted in the sphere of social norms (such as level of attachment to a phenomenon) reveals that where the attachment is intense, it will lead to a high prospect of utilization of the phenomenon such as technology (Karahanna, Straub, & Chervany, 1999; Lucas & Spitler, 1999). This development led to updating of the TAM by integrating subjective norms to produce what is now termed TAM2 (Venkatesh & Davis, 2000).

The researchers selected the extended technology acceptance model (TAM2) with the inclusion of the constructs system accessibility and personal innovativeness adapted from (Park, 2009; Varol & Tarcan, 2009) to explain the adoption and use of the e-pay slip systems by the government of Ghana's employees who draw their salaries through the CAGD. According to (Karahanna, Ahuja, Srite, & Galvin, 2002; Varol & Tarcan, 2009), personal innovativeness is an external factor which is added to TAM to

influence the adoption processes of information systems. The TAM2 model was selected primarily because several studies reviewed in the literature had used it to explain how people adopt and use technology. Some of the studies include (Park, 2009; Selim, 2003) who stated how important it is to examine TAM with web-based systems. Selim (2003) implemented a web-based system called the course website acceptance model (CWAM) and tested the relationships among the constructs using the structural equation modeling techniques. The conclusion was that the model was suitable for the data used and suggested that the constructs perceived usefulness and perceived ease of use were good determinants of the acceptance and use of a web-based system. The model was also selected because the researchers believe its applicability may vary in different countries and were also convinced that it was very appropriate for both the research objectives and hypotheses.

The hypothesis of the research gives rise to a structural model that depicts the theoretical model tested and analyzed by (Park, 2009). In the said model, called the Theoretically Interesting Model, arrows are used to link constructs (latent variables) specifying the hypothesized causal relationships towards the arrows' directions. According to Park (2009), the perceived ease of use and perceived usefulness may be regarded as cognitive constructs whilst attitude as an effective construct. In addition, he suggested that the intention to use could be observed as a behavioral construct. The model (Fig. 1) has been simplified to exclude all observed indicators and the arrows connecting them to the constructs (latent variables) in order to fit in the available space provided below.

Methodology

The study was conducted by surveying government of Ghana workers who draw their salaries through the CAGD in the Greater Accra region of Ghana.

Measurement and Data Collection

In this study, a survey instrument was developed on the basis of established measures of constructs from the information systems literature. The items for the constructs used for this study were adapted and revised from previous research studies that had been found to exhibit strong content validity. The scale for the constructs used was modified from studies built on TAM and Structural Equation Model (SEM) (Ayeh, Au, & Law, 2016; Park, 2009; Varol & Tarcan, 2009). The constructs subjective norms and system accessibility were adapted from Park (2009) with some items modifications. Subjective norms as social influence factors were measured. The items of the constructs were measured using a five-point Likert-type scales with anchors ranging from strongly disagree (1) to strongly agree (5) with three labeled as neutral.

To investigate the users' acceptance of the e-pay slip system using the extended TAM2, a self-administered questionnaire which was divided into two sections was designed. The first part consisted of five questions for eliciting demographic data, while the other section captured twenty-two (22) items related to the constructs. The questionnaire was pre-tested on 70 government of Ghana employees who draw their salaries from CAGD and were conversant with the e-pay slip systems in Ghana. The purpose of the pre-test was to identify any ambiguity in the wordings and ensure that it had strong face validity. The analysis of the pre-test and experts review remarks by five academics from the University of Professional Studies, Accra showed a strong face validity, hence, the adoption of the questionnaire for this research. According to Cronbach (1971), face validity refers to whether respondents perceive the construct items to be applicable and credible.

In order to achieve the research objectives and address the research hypotheses, the General Linear Model (GLM) was used. The main reason for using the GLM is its ability to predict one variable (usually called the dependent or response variable) from one or more other variables (usually called independent, predictor, or explanatory variables) (na, nd). The GLM also has two additional features namely an intercept and prediction error.

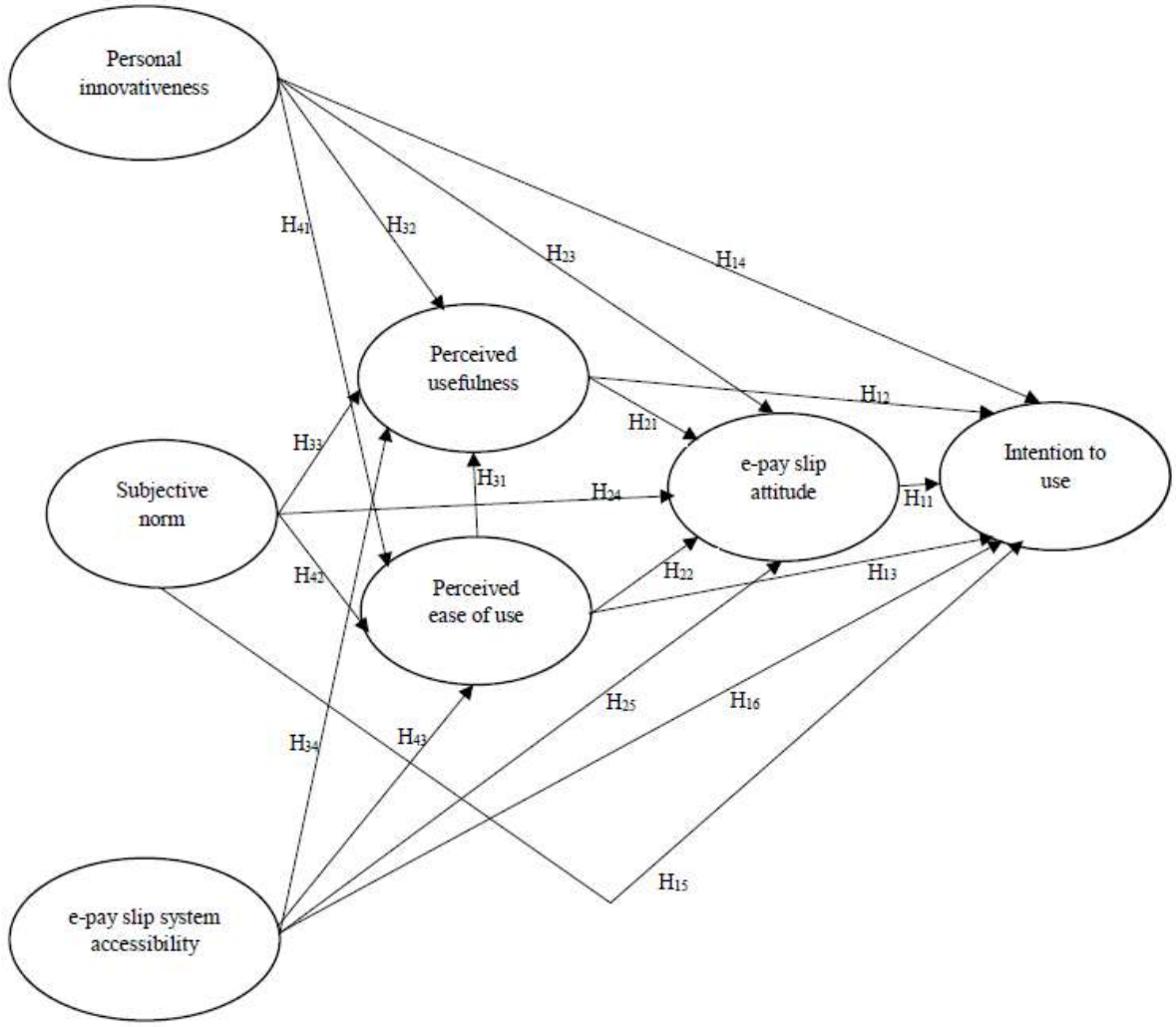

Figure. 1. Theoretically interesting model (Park, 2009)

The GLM can be used to generate statistical test procedures such as T-Test, Analyses of Variance (ANOVA), Multiple Regressions, Descriptive Discriminate Analyses (DDA), Multiple Analyses of Variance (MANOVA), structural equation modeling, and canonical correlation analyses and as such is very useful in data analyses (Graham, 2008).

The GLM provides an important conceptual framework that is applicable to all parametric procedures that suggest structural coefficients and effect sizes. It pervades all statistical procedures in common use in the fields of psychology and education (Graham, 2008).

GLM is mathematically stated as $Y = \beta_i X_i + \varepsilon$… (1). The GLM is used for predicting one or more variables from one or more independent variables. Thus, the GLM is used for univariate and multivariate test analyses. The Y in equation 1 represents the response or dependent variable, where the X's represents the independent or explanatory variables. The ε is the error term associated with the model. The GLM, as a linear model, fits only straight line. This implies that all explanatory variables and response variables are to have single exponents. Generically, it uses k predictors or independent variables to explain the variations in the response variable noted as Y. This is specified as $Y = \sum_{i=0}^{k} \beta_i X_i + \varepsilon$ … (2a), also expressed as $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \cdots + \beta_k X_k + \varepsilon$ …(2b).

The estimated GLM is differentiated from equation 2 by having a cap on the respondent variable i.e. $\hat{Y} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \cdots + \beta_k X_k$…(3) and the difference between equation 2 and 3 gives the prediction error of the GLM. The GLM uses the least square criterion in estimating its parameters which minimize the sum of the squared difference between observed and predicted values (Graham, 2008). The estimated β_i indicates the weighted contribution of the explanatory variable to the variability of the

response variable. The GLM uses the R-square and the adjusted R to determine the fitness of the model that is how well the independent variables predict the variability in the response variable (ibid). In most GLM studies the Adjusted R-square is preferred to the R-square due to its ability to correct biases associated the R-square. According to Graham (2008), GLM just like any other model has some underlining assumptions which it satisfies this include linearity, normality of the residuals; equality of residual variances and fixed independent variables.

From the research hypotheses stated earlier, the following four empirical models are established:

$$Yit1 = \beta_0 + \beta_1 ATit + \beta_2 UFit + \beta_3 EASEit + \beta_4 PIit + \beta_5 SAit + \beta_6 SNit + \beta_7 ICit + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

$$Yit2 = \beta_0 + \beta_1 UFit + \beta_2 EASEit + \beta_3 PIit + \beta_4 SAit + \beta_5 SNit + \beta_6 INit + \beta_7 INT + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

$$Yit3 = \beta_0 + \beta_1 EASEit + \beta_2 PIit + \beta_3 SAit + \beta_4 SNit + \beta_5 INit + \beta_6 INTit + \beta_7 AT + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3)$$

$$Yit4 = \beta_0 + \beta_1 PIit + \beta_2 SAit + \beta_3 SNit + \beta_4 INit + \beta_5 INTit + \beta_6 ATit + \beta_7 UF + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (4)$$

The dependent and the independent variables are captured in table 1

Table 1. The dependent and the independent variables

Dependent (D) and Independent (I) Variables	Description
Y_{it}1 (D)	Intention to use e-pay slip system by employee i at time t
Y_{it}2 (D)	Attitude towards the use of e-pay system by employee i at time t
Yit3 (D)	Usefulness of e-pay system to employee i at time t
Yit4 (D)	Ease of use of the e-pay system to employee i at time t
AT (I)	Attitude of employee i towards the use of the e-pay system at time t
UF (I)	The usefulness of e-pay system to employee i at time t
EASE (I)	Ease of Use of e-pay system by employee i at time t
PI (I)	Personal Innovations of employee i on the use of e-pay system at time t
SA (I)	System Accessibility of employee i on the use of e-pay system at time t
SN (I)	Subjective Norms on the use of e-pay system by employee i at time t
IC (I)	Internet connectivity to use the e-pay system by employee i at time t
INT. (I)	Intention to use the e-pay system technology by employee i at time t

Using the SPSS software, the above GLM models were estimated to achieve the study objectives that seek to understand the adoption of web-based learning management system in higher education in Ghana.

The population and sample size

The population for the study is five hundred and seventy-nine thousand, five hundred and twenty-four (579,524) people who are the users of the e-pay system. The current monthly payroll report, June 2017 report of the Controller and Accountant General's Department (CAGD, 2017) gives the number of the government of Ghana employees who have registered on the e-pay slip system and are currently accessing various resources as 579,524. According to Gefen, Straub, and Boudreau (2000), the minimal sample size required for Partial Least Square (PLS) analysis is at least ten (10) times the number of items in the most complex construct. Assuming that all the seven constructs used in this survey are complex, then ten (10) times the twenty-two (22) items of these constructs will give a sample size of 220. However, the sample size for this study would be based on a confidence level of 95% with a margin of error or confidence interval of 5% of the population 579,524. Since the eligibility criteria are employees who draw their salaries from CAGD payroll and also use the e-play slip system, then the population for the survey is 579,524.

Analyses and Discussions

Demographic Characteristics

A total of 650 questionnaires were administered out of which 599 were properly completed, returned and captured in the SPSS for analyses.

The high response rate of 92.15 % can be attributed to the number of follow-ups the researchers did to ensure almost all questionnaires administered were returned. The highest number of follow-ups made was five (5).

From Table 1, the number of males who participated in the survey were more than females. The males accounted for 378 representing 63.1% whilst the females 221 representing 36.9%. The age category that dominated in the survey was 31-40 years which accounted for 325 of the sample population representing 54.3%, followed by 41-50, 196 (32.7%), below 31, 52 (8.7%) and the least being 50-60 accounting for 26 (4.3%). Respondents with bachelor's degrees were the majority representing 74% whilst those with master's degree qualifications or higher accounted for 26%. 97.8 %of the respondents had personal computers or smartphones either at home or work whilst the remaining 2.2 % did not have. This higher percentage is not surprising because according to Jumia, Africa's leading e-commerce company, the Ghanaian mobile telecommunication sector is one of Africa's largest mobile markets with about 34.57 million subscribers and a penetration rate of 119% (Zaney, 2018).

Table 1 also shows that 76.1 % had high-speed internet either at home or work whilst 23.9 % did not have. Interestingly, this is in line with Jumia's report which attributes the relatively high use of internet in Ghana to the recent push by regulators for telecommunication firms to expand their network coverage, availability of cheap smartphones from China and a robust legal regime.

It was revealed from the survey that 8.8% of the respondents often used the e-pay slip system, 31.2% of the respondents sometimes used it whilst the remaining 59.9% rarely used the system. 36.9 % of the respondents said they have ever requested for information using the e-pay slip systems as against 63.1% who never did. From Table 1, all those who requested information through the e-pay slip system never got a response, therefore, the manages of the system should fine-tune the system to make it more interactive and user-friendly.

The Intention of government employees to use the e-pay slip

In order to know government employees' intentions to use the e-pay slip, respondents were asked "How would you (they) use the e-pay slip if you (they) have access to it?" in the questionnaire. The results from the MANOVA agree with the hypotheses that the intention of an individual to use the e-pay slip is influenced by his/her attitude, perceived usefulness and perceived ease of use, personal innovations, subjective norms, system's accessibility and internet connectivity. From Table 2, the adjusted R-square value of 0.831 reveals 83.1% of the variability of the independent variables of the model explains employees' intention to use the e-pay slip.

Table 2. Demographic information of the sample

Variable	***Frequency (f)***	***Percent (%)***
Gender		
Male	378	63.1
Female	221	36.9
Age		
Below 31	52	8.7
31 – 40	325	54.3
41 – 50	196	32.7
51 – 60	26	4.3
Educational qualification		
Bachelor	443	74.0
Masters and above	156	26.0
Availability of PC/smartphone at home/work		
Yes	586	97.8
No	13	2.2

Variable	*Frequency (f)*	*Percent (%)*
Availability of high-speed internet at home/work		
Yes	456	76.1
No	143	23.9
How often do you use the e-pay slip		
Rarely	359	59.9
Sometimes	187	31.2
Often	53	8.8
Have you ever made a request for information on the system before?		
Yes	221	36.9
No	378	63.1
If you, did you get a response to your request?		
Yes	221	100.0
No	0	0.0

Further, apart from internet proficiency, all the independent variables came out strongly to determine an individual's intention to use the e-pay slip as can be seen in the findings in Table 2. The findings indicate that perceived usefulness had predictive power in terms of effect size of 17.0 % on the intention to use the e-pay slip at a 5 % significant level. It can there be generalized that an employee's intention to use e-pay slip can be determined by how useful he/she finds it. It can also be seen in Table 2 that about 33.0 % of the variability in an employee's intention to use the e-pay slip was largely affected by his/her perceived ease of use. Even though the study observed that perceived ease of use and attitude both had a significant positive power on the intention to use the e-pay slip, comparatively, attitude came out slightly stronger than perceived ease of use with 33.3 % predictive power.

Table 2 also demonstrated that the accessibility of the Epay slip system had a high influential role in determining one's intention to use Epay slip than personal innovations. The study depicts e-pay slip accessibility predictive of 29.3 % as against 25.6 % predictive power of personal innovation which shows significant inferences on one's intention to use the e-pay slip.

Subjective norms also had a predictive power of 22.1 % on one's intention to use the e-pay slip. It manifests in Table 2 that internet connectivity failed to have a significant impact on one's intention to use the e-pay slip despite its positive predictive estimate of 0.4 %. Even though internet connectivity had insignificant influence on one's intention to use the e-pay slip, it does not rule out its impact due to the direct relationship established by its effect size estimate. The analysis has, therefore, revealed how users are influenced by the easy access of the e-pay slip, their personal innovations and subjective norms.

Employees' attitudes toward e-pay slip usage

In establishing users' attitudes toward the use of the e-pay slip system, government employees who draw their salaries through CAGD were asked in one of the survey questionnaire that "How do you (they) plan using the e-pay slip if you (they) have access to it". The MANOVA estimates in Table 3 address the second hypothesis of the study. The justification for this hypothesis was that employees' attitude towards the e-pay slip can be influenced by variables such as perceived usefulness, perceived ease of use, personal innovations, systems accessibility, subjective norms, internet connectivity and their intention to use the system. The adjusted R-square estimate of 0.585 demonstrates a higher proportion of the variability of one's attitude towards the e-pay slip which is explained by the model.

Unlike previous conditions where internet connectivity had insignificant influence on one's intention to use the e-pay slip, it appears in Table 3 that internet connectivity moderately has a significant influence on one's perceived attitude towards e-pay slip with a positive predictive power of 4.6 %. Also, from Table 3, employees' perceived usefulness, perceived ease of use, personal innovations, system's accessibility, subjective norms and intention to use the e-pay slip had a significant influence on their attitude towards using it. Subjective norms and system's accessibility had significant predictive factors of 31.7% and 22.6% respectively to influence one's attitude towards using the e-pay slip. Even though the two variables had a significant impact on the use of the e-pay slip, the influence of subjective norms is much higher than the system's accessibility. In addition, Table 3 demonstrates that one's intention to use had a significant positive predictive power of 15.0% to influence one's attitude towards using the e-pay slip.

Table 3. Dependent variable: government employees' intention to use the e-pay slip

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Effect Size
Corrected Model	619.760[a]	25	24.790	118.618	.000*	.838
Intercept	143.874	1	143.874	688.413	.000*	.546
Usefulness	24.495	4	6.124	29.301	.000*	.170
Easiness	58.909	4	14.727	70.467	.000*	.330
Attitude	59.580	4	14.895	71.271	.000*	.333
Innovations	41.081	4	10.270	49.141	.000*	.256
Accessibility	49.553	4	12.388	59.276	.000*	.293
Norms	33.833	4	8.458	40.472	.000*	.221
Internet connectivity	.454	1	.454	2.174	.141	.004
Error	119.544	572	.209			
Total	9100.000	598				
Corrected Total	739.304	597				
a. R Squared = .838 (Adjusted R Squared = .831)						

Interestingly, the findings demonstrate the important role systems accessibility, subjective norms, and the intention played in impacting on the attitude of government employees to use the e-pay slip system.

Perceived Usefulness of E-Pay Slip to Government Employees

To ascertain perceived usefulness of the e-pay slip to government employees, an analysis was ran on the survey data on the survey the questionnaire's question, "Whether the e-pay slip enhances their day-to-day business transactions". Respondents perceived the e-pay slip to be useful as the trend was evident in the relationship proposed by the model as shown in Table 4. The adjusted R-square estimate of 0.567 demonstrates a higher proportion of the variability of one's attitude towards the e-pay slip which is explained by the model. There were significant positive influences of the following constructs; perceived ease of use, system's accessibility, subjective norms and attitude on employees' perceived usefulness of the e-pay slip with predictive powers of 16.0%, 12.8%, 16.7%, and 14.1% respectively. Subjective norm had the highest predictive power of 16.7 %. The following constructs; personal innovation and intention, had a moderate significant influence on perceived usefulness of the e-pay slip with predictive powers of 4.1% and 8.2% respectively whilst the construct internet connectivity had insignificant influence on one's perceived usefulness of the e-pay slip.

Per the analysis above, the most valuable construct that influences the perceived usefulness of the e-pay slip systems is the subjective norm. It is, therefore, important the CAGD who deployed the system fine-tune it to make it more interactive. Inclusions of valuable services to the system, for example, being able to respond to one's online request promptly and adding some enhanced features have a high potential of attracting many more government employees to use it.

Table 4. Dependent Variable: Government employees' attitude towards the e-pay slip

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Effect Size
Corrected Model	249.256[a]	25	9.970	34.672	.000*	.602
Intercept	286.045	1	286.045	994.739	.000*	.635
Usefulness	16.876	4	4.219	14.672	.000**	.093
Easiness	22.486	4	5.621	19.549	.000*	.120
Innovations	13.096	4	3.274	11.385	.000**	.074
Accessibility	48.112	4	12.028	41.828	.000*	.226
Norms	76.342	4	19.085	66.371	.000*	.317
Internet connectivity	7.973	1	7.973	27.727	.000**	.046
Intention	29.075	4	7.269	25.278	.000*	.150
Error	164.483	572	.288			
Total	6604.000	598				
Corrected Total	413.739	597				
a. R Squared = .602 (Adjusted R Squared = .585)						

Perceived ease of use the e-pay slip

Table 5 demonstrates a high degree relationship between the constructs and one's perceived ease of use of the e-pay slip as projected by the model. In table 5, the model estimates an adjusted R-square value of 0.835. The question respondents were asked in order to elicit information on their perceived ease of use of the e-pay slip was "To what extent do you find e-pay slip easy to use? All the constructs personal innovation, systems accessibility, subjective norm, internet connectivity, intention, attitude and perceived usefulness had a significant relationship with the perceived easiness of the e-pay slip. This suggests that the constructs are needed to influence employees' judgments about how easily the e-pay slip can be used. Apart from the construct perceived usefulness that showed a slightly significant impact on how one perceives easy use of the e-pay slip with the predictive power of 4.9 %, the rest of the constructs showed significant influence. From table 5, the construct systems accessibility was the strongest influencer on employees' perceived ease of use of the e-pay slip with a predictive power of 63.5 %, followed by subjective norm with a predictive power of 40.5 %. The following constructs intention, attitude, internet connectivity, personal innovations, and personal innovations had significant impacts on ones perceived ease of use of the e-pay slip with predictive powers of 36.7%, 15.7%, 12.8% and 10.9% respectively.

It is remarkable to note that the construct that had the greatest effect on perceived of use was systems accessibility followed closely by the subjective norm. Once users are not restricted from accessing the e-pay slip system from any electronic device using any internet browser, it made it acceptance much easier. This high impact of systems accessibility on how users' perceived ease of use can also be attributed to the fact that the price of mobile data is affordable in Ghana and hence users may be prepared to buy their data whenever they find it necessary. According to (Howdle, 2018), Ghana is ranked the 25th country in the world with the cheapest mobile data. The high impact of systems accessibility also buttresses the transformational perspective espoused by the information society which sees the advancement of new technologies such as e-pay slip and others as part of innovations which transforms the structure of work in modern societies (Córdoba-Pachón & Orr, 2009).

Results

The results of the study revealed that the intention of an individual to use the e-pay slip is hampered by his/her attitude, perceived usefulness and perceived ease of use, personal innovations, subjective norms, system's accessibility and

internet connectivity. The outcome of the study indicates that internet efficiency either at the work place or at home is determined by an individual's intention to use e-pay system. This issue is attributable to poor internet connectivity in certain parts of Ghana.

Lack of education on the use of e-pay systems also influenced the workers intention and attitude to use it. As the system was rolled out without any prior education of the workers on its usage at their various work places.

Table 5. Dependent variable: government employees' perceived usefulness of the e-pay slip

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Effect Size
Corrected Model	385.579[a]	25	15.423	32.227	.000*	.585
Intercept	122.975	1	122.975	256.960	.000*	.310
Easiness	52.015	4	13.004	27.172	.000*	.160
Innovations	11.801	4	2.950	6.165	.000**	.041
Accessibility	40.064	4	10.016	20.929	.000*	.128
Norms	54.881	4	13.720	28.669	.000*	.167
Internet connectivity	1.619	1	1.619	3.382	.066	.006
Intention	24.496	4	6.124	12.796	.000**	.082
Attitude	44.879	4	11.220	23.444	.000*	.141
Error	273.747	572	.479			
Total	7449.000	598				
Corrected Total	659.326	597				
a. R Squared = .585 (Adjusted R Squared = .567)						

Table 6. Dependent variable: government employees' perceived ease of use of the e-pay slip

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Effect Size
Corrected Model	473.227[a]	25	18.929	122.206	.000*	.842
Intercept	840.741	1	840.741	5427.843	.000*	.905
Innovations	10.859	4	2.715	17.526	.000*	.109
Accessibility	154.136	4	38.534	248.776	.000*	.635
Norms	60.376	4	15.094	97.446	.000*	.405
Internet connectivity	13.038	1	13.038	84.174	.000*	.128
Intention	51.281	4	12.820	82.768	.000*	.367
Attitude	16.472	4	4.118	26.586	.000*	.157
Usefulness	4.567	4	1.142	7.371	.000**	.049
Error	88.599	572	.155			
Total	9516.000	598				
Corrected Total	561.826	597				
a. R Squared = .842 (Adjusted R Squared = .835)						

This is confirmed by the outcome of the survey that revealed that, out of the number of respondents to the questionnaire, 36.9% of them who tried to enquire on the use of the e-pay system never had any response and 63.1% never enquired nor had any form of education on its usage. In view of this lack of education and inability to be provided with the needed help through the e-pay system, some workers in Ghana are doubtful of the perceived usefulness and perceived ease of use of

the system. As a section of workers in the country are computer illiterate and added to the fact that most workers do not own computers at home, their personal innovativeness are affected by some these challenges. The results also state the important role systems accessibility, subjective norms, and the intention played in impacting on the attitude of government employees to use the e-pay slip system. It is imperative CAGD who deployed the system tries to make it interactive and user friendly.

For some time, in the past, Ghanaian workers are used to paper pay slips (hard copy payslip). These paper slips were always printed and made available to workers in their offices. The sudden switch to e-pay slip or paperless payslip might have affected their subjective norm and their attitude towards its usage. Even though, the e-payslip is accessible everywhere in the country where one can be hooked onto the net. However, lack of internet connectivity in certain parts of the country make workers get frustrated whenever they are in urgent need of their pay slip. In such instances, they have to join vehicle and ply through the poor road network to the district centers where they can have access to the internet cafés and printing machines before, they can get the hard copy of their payslip. Sadly, the law in Ghana still requires that documents be submitted in hard copies for official purposes. This law still compels workers to look everywhere, no matter how long it will take them and how much it will cost to get their e-pay slips printed before they could present official documents for consideration.

In view of the cumbersome processes involved, some workers still prefer the old system of paper payslips. Nonetheless, technology has come to stay and its winds continue to blow across the nook and cranny of every nation.

Contribution of the paper

Prior empirical studies on the adaption of the electronic system mainly focused on one or two issues. For instance, a study conducted by Previtali and Bof (2009) on the effects of organizational environment and organizational characteristics on e-pay slip adoption in governments, the research only limits the independent variables to organizational environment (size and service demand), organizational characteristics (professionalism, resource slack, and administrative performance). Similarly, a research conducted by Park (2009) used the perceived ease of use, perceived usefulness, attitude as the main independent variables against the adoption of electronic system, but went further to suggest that intention could be incorporated as one of the explanatory variables. This has created a research gap in the studies of electronic based system. The contribution of this paper is that it has incorporated the intention to use e-pay slip together with the attitude, perceived usefulness, perceived ease of use, personal innovativeness, subjective norm, e-pay slip accessibility, internet connectivity. Therefore, the relevant of this study cannot be over-emphasised.

Conclusion

The analysis and discussion section of the study demonstrates that most of the constructs of TAM have a direct influence on the acceptance of the e-pay slip systems by the government of Ghana employees who draw their salaries from the CAGD. The findings of the study also show that majority of the respondents had smartphones with mobile data and were willing to access information they found useful. The higher penetration of smartphones, cheap mobile data, easy accessibility of e-pay slips and the non-requirement of any formal training before accessing the e-pay slip systems and other TAM constructs have influenced the high acceptance of the e-pay slip system. The implementers of the system need to fine-tune it with additional features to make it more interactive and user-friendly.

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Modern Movement and the Debates of Tradition and Modernity in Iran

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Abstract

This article considers and analyses the historical events of 200 years (i.e., 1779–1978) and two dynasties: the Qajar and the Pahlavi in Iran. Arguments proceed chronologically. The main intentions of the leaders of the modern movement, social modifications and related criticisms are analysed.

From a historical point of view, this article explores the history of the modern movement and the debates around modernity in Iran. From an analytical point of view, this article considers the background of Iranian criticism against Westernisation and analysed the situation that led to raising the debate on modernity.

Criticisms against modernity are considered in this essay. In addition to eco-social changes, it explores criticisms about modernity in different fields such as philosophy and literature. This essay also highlights that from a philosophical point of view Gnosticism became important as an alternative to Westernism. In this respect, the perspective of Nasr, an avant-garde scholar, is outlined.

Keywords: *Modern movement; westernism; Gnosticism; history of Iranian modernisation; Social modifications and its impact on Iranian architecture.*

Qajar Era (1779–1925)

Welcoming the modernity

Historically, a preliminary movement towards modernity began in the *Qajar* era (1779–1925). This movement was scattered and occurred slowly. To analyse the modern movement in Iran, it is necessary to understand that modernity was welcomed in the *Qajar* period. In this section, the Iranian movement towards modernity, its influence on Iran and, more specifically, its influence on architecture and urbanism are discussed. This movement was dependent on prominent individuals (such as ministers or princes) and, consequently, there was no conformity in its strategies. Two important authorities, Abbas Mirza (x–1833) and Amir Kabir (1844–1889), played an important role in this respect. The movement towards modernity in the *Qajar* era can be divided into three periods. The first period relates to Abbas Mirza, while the second and the third periods relate to the Amir Kabir and Mashroteh revolutions, respectively. There are two reasons for this categorisation. First, there was a considerable gap between the first and the second periods. Second, modifications in the third period were the result of the earlier endeavours. The effect of modernity can be seen more clearly in Iranian society in the third period, which occurred after the industrial revolution in France.

The first period occurred when Abbas Mirza was in power as the crown prince. A war between Russia and Iran acted as trigger for the early movement in modernity, as Iran was defeated due to a lack of modern equipment. Consequently, Abbas Mirza realised that the only way to increase Iranian power was to outfit Iran with European knowledge and technology.[1] Architectural historians[2] believe that before this time, Iran's relationships with European countries meant that it already had some familiarity with modernity in Europe; however, it was only when the Iranian Royal Family's power was threatened that modernity became important in Iran. The first steps towards modernity taken by Abbas Mirza included sending students and labourers to Europe,

[1] Vahid Ghobadian, *Sabk Shenasi Va Memari Nazari Dar Memari Moaser Iran*, 26.
[2] Ghobadian, Katozian and Masoud.

translating European sources, increasing trends between Iran and Europe and running small factories based on European methods.[3]

When Abbas Mirza died, the first stage of the modern movement came to an end. Historians such as Bani believed that, compared to other countries such as Egypt and Turkey, a lack of support from the King made Abbas Mirza unsuccessful.[4] A lack of funds and unrest within Iranian boundaries meant that there had been no serious decision to adopt modernisation strategies. Further, changes to the Iranian military occurred more slowly than expected and European regimes suspended their support from time to time on the basis of the political situation.

A few years later, Amir Kabir began a path known as the second period of the *Qajar* era. The changes Amir Kabir made were based on observations from his travels to Russia and Turkey (this reveals why no conformity can be seen in his actions).[5] In contrast to Abbas Mirza who attempted to send students to France in accordance with an agreement between Iran and Napoleon,[6] Amir Kabir established a new school for higher education; he also opened new weapons factories and various organisations within the Iranian army.

The movement towards modernisation by Abass Mirza and Amir Kabir's in the *Qajar* era lacked a theoretical basis. Indeed, it was based only on their observations and understandings of modernism. Their endeavours were undertaken to gain power against Western countries and their neighbours. Communications and exchanges between Iran and Western countries led to some superficial modifications at the top levels of Iranian society and changed the expectations of Iranians towards their government. By way of example, Naser Al-Din Shah Qajar (1831–1896) was the first Iranian king to travel to Europe three times. These travels led to changes to the furniture of his court and changes to the clothes of his courtiers. It is unclear why similar modifications were not seen in middle class Iranian society, as they too would have been under influence of the modern movement; however, religious beliefs may have been the reason for this.

As a result of Amir Kabir and Abbas Mirza's endeavours, communication between Iranians and Europeans modified some major parts of Iranian society. These modifications can be categorised as follows:[7] (1) Industrialisation: The importation of Western products to Iran created a movement towards industrialisation. This also forced Iranian manufacturers to modify their traditional systems to be more effective. (2) Exportation: Iranians began exporting their agricultural products, including tea, sugar and tobacco. (3) Migration to cities: Increased income in rural areas and the increased activity of brokers and investors in agricultural products led to migration from rural areas to cities.

Importantly, the changes that occurred in the first and second periods supported the movement towards modernity in the third period. From 1903 to 1905, under the influence of intellectual and educated people, protests occurred in which the middle classes opposed the Royal Family. These protesters wanted to reduce the king's power and found a parliament similar to that in European countries, particularly England. It was called "Mashroteh", which translates as "conditional."

From Ghobadian's point of view, Mashroteh was informed by: (1) the Iranians becoming familiar with European countries, their power systems and social rights over recent decades; and (2) the poor education and hygienic systems in Iran.[8] Some historians (such as Bani) referred to the influence of people who visited Western countries in this movement; however, modern schools and publications were the most important factors in the Mashroteh movement. In addition, religious clergymen and intellectuals encouraged people to insist on limiting the government's power through the creation of a parliament. Interestingly, while both intellectuals and clergymen criticised the government and the King, their approaches

[3] Ghobadian, *Sabk Shenasi Va Memari Nazari Dar Memari Moaser Iran*, 27.
[4] Amir Bani Masud, *Memari Moaser Iran, Takapoei Beyn Sonat Va Modernite (Iranian Contemporary Architecture, an Inquiry into Tradition and Modernity)* (Tehran: Honare Memari, 2009), 15.
[5] Ibid, 18.
[6] Ghobadian, *Sabk Shenasi Va Memari Nazari Dar Memari Moaser Iran*, 27.
[7] Masud, *Memari Moaser Iran, Takapoei Beyn Sonat Va Modernite*, 21.
[8] Ghobadian, *Sabk Shenasi Va Memari Nazari Dar Memari Moaser Iran*, 91.

differed. Intellectuals believed that a lack of commonwealth law, updated knowledge and an abundance of religious superstitions had led to a despotism that had to be broken by the Mashroteh. Conversely, clergymen believed that the unlimited power of Royal Family had led to corruption.

In summary, movements towards modernity in Iran began after it was defeated in war due to a lack of modern equipment. Consequently, to maintain power, the Iranian Royal Family took steps towards modernity and forming relationships with Western countries. They began by modifying the Iranian army and educational system at a high level. These changes were followed by the emergence of services such as hospitals, a newspaper, trains, electricity and banks. The relationship between Iran and Europe also led to reform in Iranian agriculture and manufacturing. After a few decades, and as Iranians' knowledge of European societal rights and the limitation of the power of European governments increased, protests broke out that led to the establishment of a parliament in Iran. Ultimately, the Royal Family could not control the consequences that had arisen by their welcoming modernity into Iran.

Pahlavi Era (1925–1978)

Accelerating modernity (1925-1941)

In this section, historical events and eco-social forces (seen in light of the modern movement in Iran) will be analysed. Particular attention is given to the influence of modernity on politics and how the new economic situation, the increasing the role of women in society and educational plans accelerated the modern movement in Iran.

Historically, modernity appeared in Iran in the *Qajar* era; however, the first *Pahlavi* is known as the beginning of modernity in Iran for three reasons. First, in the *Qajar* era the influence of modernity was mostly limited to the noblesse (i.e., the upper-class) and castles. Conversely, in the first *Pahlavi* era almost all social classes were affected. Second, in the first *Pahlavi* era the scale of influence of modernity was considerable and could be seen in both the economy and society. Third, all these influences happened in less than 20 years and modernity became pervasive in a short time.

Despite differences in speed, scale and area, modernity appeared in both eras; however, in relation to power, modernity had opposite influences. The last king of *Qajar* was overthrown because he could not manage the government. Following this, Reza Khan became King and established the *Pahlavi* dynasty in 1925. Reza Khan was an opinionated person and despite not believing in democracy, he obtained power through parliament (a result of modernity from the *Qajar* era). Thus, modernity caused despotism.

Despite the despotism of the first *Pahlavi* era, the Iranian people were mostly satisfied, as the King controlled and managed the country. They may have compared their present situation to the late *Qajar* period in which rebels made parts of Iran unsafe. In addition to safety, the economic situation improved during this time. While oil was discovered in the late *Qajar* period, oil trading first began in the early *Pahlavi* period. It made the King rich and allowed him to take steps towards industrialisation and modernity. A railway system was the first step; Reza Shah connected the Caspian Sea in north to the Persian Gulf in south. Then Iran National Bank also granted many low rate loans to encourage industrial investors to run modern factories. Resultantly, the number of industrial factories increased 17-fold in a short period.[9]

Reza Shah was opposed to the influence of religion in politics and in this period tried to cut its roots in power and society. With this aim, Reza Shah changed the system of justice from Islamic to non-Islamic. In the *Qajar* era, clergymen were judges in the courts; however, Reza Shah changed this and employed judges from Switzerland. Additionally, a translation of French Commonwealth law was used instead of Islamic law.[10] Reza Shah also banned the majority of religious ceremonies, changed the Iranian Islamic calendar and, more importantly, banned the veil for women.

In encouraging the middle class towards modernity, Reza Shah took three steps. First, women were encouraged to engage in social activities and discrimination based on gender became a serious crime. Consequently, women were able to work in hospitals, schools and even

[9] Mikhaeil Ivanove, *New History of Iran*, trans. Houshang Tizabi (Tehran: Eslouj, 1977), 80.
[10] Masud, *Memari Moaser Iran, Takapoei Beyn Sonat Va Modernite*, 186.

factories. Second, based on Western fashion, national clothes were designed that everyone (men and women) had to wear them in public. Third, music schools were opened that taught traditional and Iranian music, as music in Islam had been forbidden, this action was a step towards the Westernisation of Iranian society.

These changes show Reza Shah's desire to make Iranian people similar to Western people. However, other than his modifications to the industrial fields and educational system, many of these actions were merely superficial movements towards modernity. Changes to the educational system played an important role. Reza Shah implemented a French educational system in place of the traditional system to ensure that adolescents would be ready to study higher degrees at universities. He also established the first university in Iran; that is, Tehran University (1934). The academic staff and the lecturers of Tehran University came mostly from European countries and were assisted by Iranians who had graduated from European universities.

Eco-social Forces and Modernity (1941-1978)

At the close of the Second World War, the Allies had occupied Iran and Reza Shah had been exiled to South Africa. With the support of the Allies, Reza Shah's eldest child, Mohammad Reza, became King and the second *Pahlavi* era began in 1941. This section considers the continuation of the modern movement in this period, particularly, the influence of modernity on Iranian society, economy, urbanism and architecture. In addition to criticisms on modernity, the issues of tradition and modernity generally and in architecture specifically will be considered.

Following the rule of Reza Shah, power was not transferred to Mohammad Reza easily. As Mohammad Reza was quite young and inexperienced, England and Russia interfered directly in Iran's internal and external affairs. These interventions made the dominion of Mohammad Reza weak and fragile. In 1953, he dismissed the Prime Minister, who had attempted a coup against him, with the support of America to increase his own power. This was the first time that America would play a role in Iranian contemporary history. From then on, Mohammad Reza paid particular attention to America (rather than Europe) in a variety of areas, including politics, economy and technology. Thus, the US became the prototype for leaders of the modern movement in the second *Pahlavi* era.

At the beginning of the *Pahlavi* era, Reza Shah directly dictated some changes to society in light of modernism; however, these changes were not all supported by society. The passing of time allowed these changes to become more balanced and stable. Thus, in this period, the natural influence of modernity appeared in Iran society and Mohammad Reza was able to follow his father's policies with some flexibility. A high income also accelerated these social modifications.

Social Changes and the Emergence of a New Social Level

Two decades into Mohammad Reza's period, social indicators (including education, the hygienic system, the rate of migration, social class differences and prosperity) changed rapidly due to the high income of the government derived from land modifications[11] and oil exports.[12] The numbers of students at different levels grew by 77 per cent. Additionally, universities received more support and became more popular. Consequently, the number of students at universities increased by 65 per cent.[13] The hygienic system improved because of the increasing number of hospitals and clinics. However, as the number of general practitioners and dentists only increased by 43 per cent, the government had to employ foreign doctors at public hospitals and clinics to meet the needs of society.[14] It is important to note that all these improvements occurred unevenly across rural areas and cities.[15]

As mentioned above, because of the increasing number of people migrating to major cities to find better jobs, the model of population

[11] Land modifications were part of the White Revolution conducted by Mohammad Reza Shah to limit the power and wealth of landowners.

[12] Exploiting oil occurred nationally early in the second *Pahlavi* era. Consequently, exporting oil became the primary source of income for the government.

[13] Said Laylaz, *Moje Dovom: Tajadodsazie Amerane (Second Wave: Dictated Modernity)* (Tehran: Nilofar, 2013), 472.

[14] Ibid, 473.

[15] Ibid, 471.

density in Reza Shah's period changed.[16] It also increased in Mohammad Reza's period as people began attending universities and seeking better medical services. Increasing the number of higher educational centres in the major cities was not only an attraction for young rural people; it also led to the expansion of the middle class. These individuals, trained in the light of modernity, were called intellectuals and the government described them as the modern models for the entire society. Generally, the middle class was secular and held a positive attitude towards modernity.[17]

The middle class was the main target for the cultural strategy of Mohammad Reza. The government adopted a strategy as part of the modern movement that had two main aims. The first aim was to revive Iranian pre- Islamic culture and promote the idea of "returning to our ancient roots."[18] For example, Mohammad Reza called himself the heir of Cyrus (the most famous king of the Iranian Empire in 500 BC) and changed the Iranian calendar from solar to Imperial. The second aim was to promote Westernisation.

Some historians such as Bani Masoud argued that these two aims were in conflict with one another.[19] However, following these principles can be interpreted in the debates of tradition and modernity. Mohammad Reza was more liberal than his father and, consequently, religious people had more freedom to follow their rituals and ceremonies; however, it should be noted that he was anti-Islam for the same reasons as his father and heterogeneous principles assisted him in this respect.

Another point of view

Generally, there is a negative attitude towards the Mohammad Reza era in books published after the Islamic revolution in 1978; however, Abrahamian (1940) analysed this period with a positive attitude in his book *A History of Modern Iran* (2008). He believed that Mohammad Reza's economic policies and plans, especially the "White Revolution", improved Iran's economy and created many job opportunities in the private sector and, more importantly, led to a small industrial revolution.[20] Further, Abrahamian argued that Europe was not an ideal model for Mohammad Reza, but that the King sought a lifestyle superior to Western countries and blamed European countries for their economic and social issues. The King believed that he could present a model better than capitalism and communism by combining the pre-Islamic style with modernism. Conversely, some Western authorities stated that, like Napoleon, Mohammad Reza was too ambitious.[21]

Abrahamian (and other historians) noted that there was a gap between the various levels of the society, but his description of the middle class differed from others. In his view, the middle class was not limited to secular and modern people. He argued that approximately 22 per cent of Iranians could be placed in this level and should be divided into two groups of "traditional" and "white collar." The second group included people employed by organisations in either the private or public sectors. People working in bazaars (i.e., traditional business) belonged to the traditional group. It is important to note that despite a reformation and modernisation of the economy, more than 50 per cent of trade continued to be conducted at the traditional bazaars. Further, these traditional businessmen had a strong relationship with clergymen and religious groups who supported their ceremonies, traditions and religious schools. It should also be noted that some oil income was spent opposing modernity.[22]

Social tensions

Mohammad Reza planned the White Revolution to prevent any possible communist revolutions; however, the White Revolution caused serious tension in society and eventually led to the Islamic revolution of 1979.[23] Three eco-social problems can be recognised as a

[16] Katozian, *Eghtesad Siasei* Iran, 322.
[17] Seyyed Alireza Azghadi, *Tarikh Tahavolat Siasi Va Ejtemaei Iran (The History of Political and Social Modifications in Iran)* (Tehran: Samt, 2004), 161.
[18] Jalal Satari, *Derbi Dolat Farhangi, Negahi Be Barkhi Takhavolat Farhangi Va Honari Dar Bazpasin Salhaye Nezampishin* (Tehran: Markaz, 2000), 236.
[19] Masud, *Memari Moaser Iran, Takapoei Beyn Sonat Va Modernite*, 256.
[20] Ervand Abrahamian, *A History of Modern Iran* (New York: Cambridge University Press, 2008), 241.
[21] Ibid, 240.
[22] Ibid, 250.
[23] Ibid, 252.

consequence of the White Revolution. First, the White Revolution in rural areas granted land to peasants, but as there were insufficient arable lands, many peasants had to migrate to cities where there was a lack of job opportunities and the expense of living forced them to settle in very poor conditions. Thus, the gap between the middle and lower classes became wider.[24] Second, despite expectations, the White Revolution did not distribute wealth evenly and Iran had the worst distribution of wealth of any country in the 1970s.[25] Third, despite increasing the number of social indicators (such as students and hospitals) most people were unsatisfied, as there was an uneven distribution of hygienic, educational and other social services. For example, while only 20 per cent of the population lived in Tehran, the city was home to more than 60 per cent of government employees, 82 per cent of companies, 50 per cent of factories, 66 per cent of university students, 50 per cent of physicians, 42 per cent of hospitals and 72 per cent of publications.[26] Overall, the eco-social situation of Iran appeared to be worse than in neighbouring countries (such as Iraq and Syria) with less income.[27] Eminent leaders such as Dr Ali Shariati and Ayatollah Khomeini reflected these social tensions in their opposition to the government. Dr Shariati, a graduate from France, was quite popular among the younger generation, including university graduates.

Criticisms on modernity

In *Qajar* era, as modernity spread in Iranian society, it began meeting with opposition. Modernity lacked a theoretical basis in Iran; however, this was not the reason it was opposed; rather, individuals seeking personal benefits opposed it. These opponents came from different backgrounds and fields and, while not against modernity, opposed it because the modifications caused by modernity threatened their benefits.[28]

In the first part of *Pahlavi* era, the modern movement in Iran has been criticised from different perspectives, including by advocators of traditionalism or Islam. However, even scholars who agree with the essentiality of modernity have criticised the modern movement in Reza Shah's period.

Before considering the nature of criticism on modernity in the *Pahlavi* era it is significant to note that from a philosophical point of view modernism is not the same as modernity. Abd Al-Karim Soroush argued that modernity refers to the condition of becoming new unintentionally and by nature, while modernism is an ideology for replacing the new with old. In this ideology, the new is preferred to the old.[29] Thus, in modernism, new demands, customs and ideas bring about a new series of relationships between manufacturing, economy and society. Conversely, modernity is based on a new attitude and cosmology that are made internally and cannot be exported. However, it should be noted that Iranian historians have not always acknowledged these differences in definitions and these terms have often erroneously been used interchangeably.

Many historians, such as Katozian, Bani Masoud and Kianei, have criticised the modern movement in Iran on the basis that it was not ideological; for example, Kianei argued that a superficial understanding of development and innovation identified the external situation of Western societies as a symbol and reason for modernity. Consequently, social behaviour, literature and even clothing became important so that Iranians would be viewed as the same as their Western equivalents.[30] Katozian referred to this as being "pseudo-modernist"; this brought a new meaning to Westernism.[31] Katozian believed that the modern movement was based on an irrational attitude towards Iranian Islamic identity and a passionate excitement for Westernisation.[32] Due to their national humility, the King and, consequently, the government

[24] Ibid.
[25] Ibid.
[26] Ibid, 256.
[27] Ibid, 257.
[28] Masud, *Memari Moaser Iran, Takapoei Beyn Sonat Va Modernite*, 24.

[29] Abdalkarim Soroush, *Biger Than Ideology* (Tehran: Serat, 1996), 350.
[30] Mostafa Kianei, *Memari Dore Aval Pahlavi (Architecture of Fisrt Pahlavi Era)* (Tehran: Institute of Study for Contemporary History of Iran, 2004), 156.
[31] Mohammadali Katozian, *Eghtesad Siasei Iran (Political Economy of Iran)* (Tehran: Papirous, 2006), 145.
[32] Mohammadali Katozian. "Dolat Va Jame Dar Doran Reza Shah," (Society and Government in Reza Shah Period) in *Dictated Modernity* ed. Toraj Atabaki (Tehran: Ghoghnous, 2006), 150.

were keen to follow Western countries in all aspects even beyond rational boundaries.

Similarly, Bani Masoud believed that the Iranian movement towards modernity was a partial reflection of rationalism in Europe. He interpreted rationalism as a combination of actions used to establish new organisations in society, the secularisation of government and society and the industrialisation of economy. He defined the relationship between the government and its people. In this model, materiality was given priority over spirituality.[33] Bani Masoud did not explain the term "partial reflection", however, it appears that the speed at which these modifications occurred was at least six times faster than that in Western countries (e.g., if compared to the Renaissance).

Alternately, Ghobadian argued that the difference between the modern movement in Iran and Europe depends on its application. The modern movement in the first *Pahlavi* era was conducted by the government and was not fully developed, particularly in politics. Thus, Ghobadian referred to this as "governmental modernity." Conversely, in Europe, modernity began with the middle classes and was conducted mostly by intellectuals.[34]

Criticisms of Westernism and the Emergence of Gnosticism

In addition to the social and political tensions mentioned above, the main criticisms related to the combination of Western and Iranian pre-Islamic cultures and the ignoring of Islam. Nodoushan (1925), for example, stated that the result of this combination was unrelated to Iranian culture. The government, as the cultural leader, was confronted practically and theoretically by Iran's original culture and it could not be separated from Islamic culture.[35]

Another criticism related to the exaggeration of Westernisation. The number of scholars criticising Westernisation increased in the middle of the second part of *Pahlavi* era; for example, Al-Ahmad (1923–1969) wrote an influential book about Westernisation in which he stated: "Instead of following the west we should leave it … since the west is not a hero."[36] Al-Ahmad also identified Westernisation as being similar to colonialism and stated:

When "the West" passed the ignorance period of Middle Ages, it called us "the East" (from west coast of Mediterranean Sea to India). And in quest of sun, spice, silk and other goods, the West first came to East as spiritual Christian pilgrims (Bethlehem, Nazareth, etc.); after that as armoured crusaders, merchants, Christian missionaries, and by the support of its ships cannons and finally as representative of modernity. This very latter is absolutely nonsense for the term "Estemar" (exploitation) is derived from "Omran" (constructing) and those who are searching for it deal with "Medina" (city).[37]

Naraghi is another scholar who criticised Westernisation. He argued that the West had nothing special to offer the East. However, he suggested a combination stating: "today it is necessary for the East to borrow Western technology while keeping its own cultures and civilisations because following Western growing models especially in the field of culture will result a negative consequent for Eastern societies."[38]

Other scholars such as Dariush Shayegan and Borujerdi shared similar views to Naraghi. Borujerdi compared Western and Eastern philosophy and stated that Western philosophy was based on reason, while Eastern philosophy was based on intellect and that is why metaphysics is ignored in Western countries. In his view, the social crisis in the West was caused by this ignorance.[39] Similarly, Shayegan stated that there was a clear difference between Western and Eastern cosmologies and it was not possible to welcome Western technology without its side effects.[40]

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[33] Masud, *Memari Moaser Iran, Takapoei Beyn Sonat Va Modernite*, 184.

[34] Ghobadian, *Sabk Shenasi Va Memari Nazari Dar Memari Moaser Iran*, 130.

[35] Mohammadali Islami Nadoshan, "Bar Iran Chegozasht? Edare Iran Ba Farhang Gheyre Irani" (What Did Happen for Iran?), *Etelaat*, Januarary 29, 1978, 5.

[36] Jalal Al Ahmad, *Gharbzadegi (Westernisation)* (Tehran: Jamedaran, 1986), 6.

[37] Ibid, 24.

[38] Ehsan Naraghi, *Anche Khod Dasht (What He Had)* (Tehran: Amirkabir, 1976), 7.

[39] Mehrzad Borujerdi, *Roshanfekran Irani Va Gharb (Iranian and Western Intellectuals)* trans. Jamshid Shirazi (Tehran: Farzan Rooz, 2005), 230.

[40] Importantly, similar to Seyyed Hussein Nasr, Shayegan believed that

The majority of criticisms about modernity in the second *Pahlavi* era were aimed at Westernisation, with scholars emphasising the advantages of Eastern philosophy over Western philosophy. They sought to remind intellectuals of the privileged position of the East. In the Middle East and from a philosophical point of view, philosophy cannot be separated from Islam; however, the government issued considerable propaganda against Islam. All these matters formed the basis for an emerging mysticism that was understood as a Persian version of Islam.

Talinn Grigor explained this situation as follows:

For the duration of the 1960s and 1970s, the government intensified its assaults on the religious establishment. It cut off Ulama income from shrine and mosque endowment; declared the King as both religious and political leader of Iran; portrayed the clerics as "medieval black reactionaries"; discouraged the historical use of mosques and Madressas; prevented publications on religious matters; intensified the activities of the religious corps in rural areas; and in 1975 replaced the Muslim calendar with the royal calendar, beginning not with prophet Muhammad[s] but with Cyrus the great. The discourse on aesthetics, which ran the whole gamut from anti-colonialism to *Sufi* spirituality, was in tune with the political tides of the time.[41]

Nasr should be considered the most prominent scholar in introducing mysticism and particularly *Sufism* to contemporary scholars and intellectuals in the 1970s. The following section reviews his criticisms about Westernisation and fundamentalism and, more significantly, the mystical role of Man.

Seyyed Hossein Nasr

It has been noted by some historians such as Bani Masoud that the idea of bringing together Western technology and Islamic culture was similar to the ideas of Nasr; however, this is inaccurate, as Nasr believed that Islam should not be limited to rituals and *Sharia* laws.[42] Additionally, Nasr believed Western understandings of Islam interpreted it as being part of fundamentalism (as suggested by some scholars), whereas he believed that despite some superficial similarities between Islam and fundamentalism, there were clear and important differences. He stated:

One must distinguish in all religions and civilization, not only between traditional and the modern, but also between authentic tradition and that pseudo-tradition which is also counter-traditional, but which also displays certain characteristics outwardly similar to traditional … pseudo-traditional perspective is often identified with one form or another of "fundamentalism."[43]

Nasr believed that the new interpretations of Islam and tradition would lead to a combination of modern technology and tradition that would not protect the East against the West. He also argued that without metaphysical knowledge, Man would not be successful, even in the West. He stated:

Although science is legitimate in itself, the role and function of science and its application have become illegitimate and even dangerous because of the lack of a higher form of knowledge into which science could be integrated and destruction of the sacred and spiritual value of nature. To remedy this situation the metaphysical knowledge pertaining to nature must be revived and the sacred quality of nature given back to it once again.[44]

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[41] Grigor, *Building Iran*, 162.

[42] Seyyed Hossien Nasr, *Traditional Islam in the Modern World* (New York: Chapman and Hall, 1990), 373.

[43] Ibid, 18.

[44] Nasr also emphasises this matter in another book, stating: "The *Quranic* verse cited above defines the situation of man in this world in a manner that is at once perennial and universal. Man was created in the best stature *(a/:zsan taqwim)* but then fell into the terrestrial condition of separation and withdrawal from his divine prototype, a condition which the *Quran* calls the lowest of the low *(asfal safilin).* And inasmuch as the situation described in this *Quranic* verse pertains to the innermost nature of man it is a permanent reality that he carries within himself. No amount of supposed evolution and change can destroy the divine image which is his origin or the state of separation and hence wretchedness and misery in which he finds himself due to this very separation from his spiritual origin. Man carries both the image of perfection and the experiential certainty of separation within himself and these elements remain as permanent aspects and conditions of the human state above and beyond all historical change and transformation." Seyyed Hossein Nasr, *Sufi Essays* (London: George Allen and Unwin Ltd, 1972), 25.

In Nasr's view, modern peace was not achievable because civilisations had become devoid of metaphysics. However, he believed that Gnosticism and particularly *Sufism*, coming from the spirit of Islam, could bring peace and offer integrity between Man and his nature. He stated:

Islam has quite unjustly been depicted as a religion of the sword and of war whereas it is a religion which seeks to bring about peace through submission to the Will of God, as the name Islam in Arabic meaning both peace and submission, indicates; and this is only made possible by giving each thing its due. Islam preserves a remarkable equilibrium between the needs of the body and those of the spirit, between this world and the next. No peace is possible in a civilization which has reduced all human welfare to animal needs and refuses to consider the needs of man beyond his earthly existence. Moreover, having reduced Man to a purely terrestrial being, such a civilization is not able to provide for the spiritual needs which nevertheless continue to exist, with the result that there is created a combination of crass materialism and an even more dangerous pseudo-spiritualism, whose opposition to materialism is more imaginary than real. And thus we are faced with the endangering of even the terrestrial life which today has come to be cherished as the final end in itself. One of the basic messages of Islam to the modern world is its emphasis on the importance of giving each thing its due, of preserving each element in its place, of guarding the just proportion between things. The peace that men seek is only possible if the total needs of man, not only his capacity of a thinking animal but also as a being born for immortality, are considered. To be concerned only with the physical needs of men is to reduce men to slavery and to produce problems even on the physical plane that are impossible of solution. It is not religion but modern medicine that has created the problem of over-population. But now religion is asked to solve this problem by accepting to forgo the sacred meaning of human life itself, if not totally, at least in part…Islam possesses all the means necessary for spiritual realization in the highest sense; *Sufism* is the chosen vehicle of these means. Now because *Sufism* is the esoteric and inner dimension of Islam it cannot be practised apart from Islam; only Islam can lead those who have the necessary aptitude to this inner court of joy and peace that is *Sufism* and which is the foretaste of the "gardens of Paradise". Here again the characteristic of the contemplative way of Islam, or *Sufism*, is that it can be practised anywhere and in every walk of life. *Sufism* is not based on outer withdrawal from the world but on inner detachment.[45]

Unlike other Iranian philosophers, Nasr considered the place of art and architecture. In his view, Westernisation, through secularisation and fundamentalism, had a destructive influence on architecture in Islamic countries and limited the concept of architectural elements to their exoteric meanings, changed the attitude of architects and building users, and reduced their spiritual senses. Most importantly, he believed the current architecture revealed a downgrading of Western architecture.[46]

Conclusion

This article highlights that in Iran the tendency to modernity flourished in the *Qajar* era, the modern movement sped up in the first part of *Pahlavi* era and reached a peak in the second part of *Pahlavi* era.[47]

These above analyses show that leadership influenced the movement. The aims and intentions of leaders differed. While Europeans tried to limit the power of governments through political development, in Iran, at the end of *Qajar* era, the Royal Family had initially welcomed modernity to increase Iranian military power; however, because it limited his power in parliament, Mohammad Shah became the most important and powerful person to oppose modernity. From a similar perspective, Reza Shah wanted to limit the power of his opposition—clergymen—to retain his power. Thus, modernity provided a justification for Reza Shah to secularise Iran so that he could ban religious ceremonies and reduce the power of clergymen.

The essay also demonstrated that from a philosophical point of view, Gnosticism became important in the debates on modernism as a privileged feature of Eastern culture against

[45] Ibid, 169.

[46] Nasr, *Traditional Islam in the Modern World*, 373.

[47] The second *Pahlavi* era ended with the Islamic revolution (it should be noted that the modern movement continued after the revolution, but this is beyond the scope of this study).

Western culture and Seyyed Hussein Nasr was an avant-garde scholar in this respect. In this respect, the essay concludes that Nasr played a key role in the debates on modernity by promoting the esoteric aspect of Islamic philosophy, and particularly *Sufism*, as a Persian interpretation of Islam against Western culture, while the Reza and Mohammad Reza Shah issued considerable propaganda against Islam as a non-Persian culture.

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Gender and Psychological Planning towards Retirement: The Perspectives of Tutors in Ghanaian Colleges of Education

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Abstract

Introduction: *A fundamental concern as one contemplates retirement is "will I have enough money on which to live?" This study, conducted in colleges of education in Ghana,* investigated into gender influence on psychological planning and preparation towards retirement among tutors in Ghanaian Colleges of Education.

Methods: *The study employed mixed-method sequential explanatory design. Stratified and simple random sampling techniques were used to select 54 college tutors from two (2) colleges of education for the survey, while six (6) out of the 54 tutors were purposively sampled for interview. The data collected via self-developed questionnaire (Cronbach's alpha = 0.78) and semi-structured interview guide were analysed quantitatively using frequency count, percentage, and inferential statistics (independent samples test), and qualitatively through thematic analysis — responses from respondents were categorized into themes.*

Results: The study found that most of the tutors were not psychologically ready for retirement. *The study revealed a significant but marginal gender differences in psychological planning towards retirement among male and female tutors ($p \leq .05$).*

Conclusions: This study established the evidence of significant gender differences in psychological planning and preparation towards retirement among formal and informal sector workers, including college tutors. *There is the need for teacher unions, employers and other stakeholders in Ghana to engage the services of professional financial services advisors and investment institutions to roll out financial investment schemes for tutors besides public pension schemes for a better secured post-retirement life.*

Keywords: *Retirement, gender, psychological planning, psychological wellbeing*.

Introduction

Retirement is an inevitable event and stage in life, but most people think and worry about it. From the psychological perspective, retirement is an individual's exit from the workforce, which accompanies decreased psychological commitment to, and behavioural withdrawal from work [1]. This implies that retirement is a stage in life that not only corresponds to decreased levels of physical activities and productivities, but also involves lowered stress and less responsibility to others in day-to-day life. One of the major outcomes associated with retirement is psychological wellbeing. Wellbeing is a state of being well, healthy and contented [2]. Wellbeing means quality of life [3]. Wellbeing has three aspects which are physical, mental and social, but without the first, the other two are unattainable [2]. A retiree's psychological wellbeing refers to the extent to which the person is generally content with his/her psychological states and enjoys effective psychological functioning [4]. A retirees' financial, physical, and psychological wellbeing has important influences on their longevity and mortality [5]. This suggests that retirement requires a lot of preparation for a better quality of life to offset the post-retirement awful experiences and crisis.

In Ghana, it appears only few teachers make the necessary provision for post-retirement life, so when the time comes for their retirement, they find it difficult to exit formal sector work and face crisis like emotional and psychological trauma which make life difficult for them. A study buttresses that pre-retired people are not adequately prepared for their retirement [6]. Retirement seems to be a threat to most formal sector workers in Ghana, particularly tutors in Ghanaian colleges of education. Oftentimes,

retirement triggers crisis for an individual who fails to plan for it. This suggests that retirement requires planning. Extant studies have been conducted on retirement planning, however, only a few studies have focused on psychological planning in Ghana [6]. A study, among German retirees observes gender differences in psychological wellbeing of the retirees [7]. However, a study by Okai failed to reveal the differences related to thinking about retirement among sexes [6]. This gap relates to gender differences in psychological planning retirement, and this creates an empirical gap. Filling this gap by exploring gender differences in psychological preparedness towards retirement among tutors in Ghanaian colleges of education is desirable. Hypothetically, many male retired teachers will likely engage in post-retirement jobs than their female counterparts. This calls for investigation. This paper debates that formal sector workers, including tutors in Ghanaian colleges of education, are not psychologically prepared for retirement. It is also hypothesized that *there are no statistically significant gender differences in psychological planning towards retirement.* Given that retirement preparation involves some behaviour change, including anticipatory and proactive behaviours [6, 8], there is the need to plan towards it. This calls for the adoption of a behavioural change model. This study adopts the trans-theoretical model (TTM) by Prochaska and Di Clemente to guide the processes involved in psychological preparation towards retirement [9]. The TTM perceives change not as an event, but a series of processes associated with change. TTM posits that individuals engage in change processes in stages. The stages associated with the TTM are: pre-contemplation, contemplation, preparation, action and maintenance [10].

Psychological planning appears to be a much broader construct, but lacks a basic definition. Accordingly, there is not a clear conceptualization of psychological retirement planning. Notwithstanding, psychological planning has been defined in a very specific area such as leisure or social planning [11]. Few studies [6, 11] have broadened the definition of psychological planning to include specific activities (for example, social and leisure) involved in retirement planning. Simply put, psychological planning is talking, thinking, and reading about retirement. Most scholars [6, 12, 13] who examined psychological planning have asked workers to report how much they have talked, thought, or read about retirement. Thus, psychological planning is simply reading or talking about retirement. In addition to thinking and talking about retirement, psychological planning has been defined as having an intention for retirement, that is, intentions to stop work, reduce work, or no plan) and having an estimated age of retirement [12]. It also involves social planning towards retirement, for example, making sure one has adequate social support for life in retirement [11] or activity planning such as being involved with hobbies or other constructive uses of time in retirement [14].

Psychological planning has been explained as thinking about retirement, reading a book, publication or an article to help plan for one's retirement and contacting someone for advice or counselling on retirement planning [6]. It also involves discussions with spouse and children about retirement in the future [6]. Additionally, it is about the intentions to pursue leisure and social activities after retirement. It involves social planning towards retirement, and activity planning such as being involved with hobbies or other constructive uses of time in retirement. A deficiency associated with the use of thinking about retirement as a factor to predict psychological planning is whether thinking about retirement actually motivates people to make concrete plans towards retirement [6]. Okai identified the measures or indicators for psychological planning as follow: thinking about retirement; reading a book, publication or an article to help plan and prepare towards retirement; contacting someone for advice or counselling on retirement planning; discussions with spouse and children about retirement in the future; solicitation of information on retirement planning from significant others (work mates and bosses) at the workplace; participation in pre-retirement educational programmes such as retirement preparation seminars for workers at workplaces; intentions and anticipated plans to pursue leisure and social activities such as participation in hobbies or other constructive uses of time after retirement; and solicitation of counselling on retirement planning [6].

The usefulness of psychological planning to the pre-retiree are numerous. Psychological planning contributes to retirement satisfaction, positive retirement expectations, self-efficacy and well-being. Lastly, psychological planning

helps pre-retirees to engage in anticipatory socialization [15, 16]. Studies found that retirement preparation seminars changed the savings behaviour, decision making competences and attitudes toward retirement. In conclusion, though psychological planning as a domain of retirement planning has no clear conceptualization, measurement and a theory to guide it, a gamut of predictors has been used to study it [17, 18]. These predictors include thinking, reading about retirement, talking to someone about retirement and solicitation of information on retirement.

Gender as an individual's characteristic has been identified to explain retirement planning in previous studies [11, 19]. For example, regarding gender effect on the retirement process, it has been found that men are more likely to have specific concrete retirement goals, whereas women have general and abstract goals (for example, be happy) [20]. Another study found that male retirees are more likely than female retirees to engage in career bridge employment than full retirement [21]. The 1999 retirement confidence survey found that males have higher confidence than females [19]. Women's retirement confidence survey also showed that women have lower confidence and retirement preparation than males as stated by Employee Benefit Research Institute [22]. A study found that women are more likely to engage in formal planning (for example, pre-retirement programmes) than men and if formal planning methods are not available, women do little or no planning for retirement [23]. Men on the other hand reported engaging more in informal (that is, psychological planning) methods of retirement preparation (that is, talking, reading, thinking). Men also participate in psychological planning earlier in the retirement process (most participate years in advance) when compared to financial planning. A number of studies have found that men think more about their future life in retirement [24] and their future finances [13] and are more likely to discuss retirement with friends, relatives, and co-workers [13]. A number of studies have found that men think more about their future life in retirement [24] and their future finances [13] and are more likely to discuss retirement with friends, relatives, and co-workers [13].

Materials and methods

This research adopted quantitative and qualitative paradigms using the mixed-methods sequential explanatory design. The choice of this design allowed the researcher to explore the attitudes and behaviours of the tutors in Ghanaian colleges of education with regard to financial preparedness towards retirement. The population for the study was 96 tutors from two colleges of education: Koforidua SDA and Akropong Presbyterian Colleges. Stratified and simple random sampling techniques were used to sample 54 tutors for the study. The choice of these sampling techniques ensured representativeness, heterogeneity and eliminated sampling bias, and higher statistical efficiency. This also ensured fair representation of tutors from the colleges by sex and age groups. Maximum diversity type of purposive sampling was also used to select six (6) college tutors for interview. This technique ensured heterogeneity, representativeness and eliminated sampling bias. Questionnaire and semi-structured interview guide were used to gather data. The questionnaire which contained close-ended items was used to collect quantitative data. The semi-structured interview guide was used to collect qualitative data from the six (6) tutors. The questionnaire had a reliability coefficient (r) of 0.78. The quantitative data were analysed using descriptive statistics (frequency count and percentage) and inferential statistics (independent samples test or t-test). The t-test was done at a significance level (p-value) of $p \leq 0.05$ (2-tailed) at a Confidence Interval (C.I) of 95% with a margin of error of ± 5. The interview data collected were analysed qualitatively using thematic analysis —— responses from respondents were categorized into themes.

Results

Demographic information

Table 1. Demographic characteristics of respondents (n = 54)

Variable	Variable category	Freq	%
Sex	Male	41	76
	Female	13	24

It is observed from Table 1 that the sampled respondents comprised 41 (76%) male and 13 (24%) female tutors. This result implies that there

were more male than female tutors in Colleges of Education in Ghana. There is a likelihood of gender differences in psychological planning towards retirement. This conjecture led to the formulation of the hypothesis that, "*There is no statistically significant gender differences in psychological planning towards retirement".* This assumption was statistically subjected to independent sample test (t-test) at a significance level of $p < .05$. The t-test result which is shown in Table 4 was used to determine significant gender differences in psychological planning towards retirement.

Gender perspectives on psychological planning towards retirement among tutors in Ghanaian Colleges of Education

The data presented and discussed under this theme bears on psychological indicators or attributes such as feelings, thoughts, information seeking and sharing on retirement, seeking advice or counselling on retirement, and concrete psychological preparations about planning by the tutors.

Table 2. Psychological attributes and planning towards retirement by tutors in *Ghanaian Colleges of Education (n = 54)*

Psychological indicator	**Response**		
	Yes	**No**	**Indifferent**
Feelings about retirement	12(22)	32(60)	10(18)
Thought about retirement	21(38)	34 (62)	0(0)
Information seeking and sharing on retirement	31(57)	23(43)	0(0)
Seeking advice or counselling on retirement	21(39)	33(61)	0(0)
Satisfaction on concrete psychological planning and preparedness towards retirement	23(43)	18(33)	13(24)

Note: the figures in parentheses are in percentage.

With regard to feelings of sampled tutors of colleges of education about retirement; 12 (22%) tutors felt happy about retirement. However, 32 (60%) tutors felt unhappy, anxious and worried about retirement, while 10 (18%) of them were indifferent.

It could be concluded from the result that a small number (10) which represents 22% of the tutors expressed positive feelings about retirement, whereas 32 (59%) of them had negative feelings towards it. Those who expressed positive attitude and interest about retirement probably did so because of a positive perception that retirement is a period of rest after a long service, a time to invest their energies in areas that will bring more income, and a period to have free time for themselves and families. It is also likely that those who expressed negative sentiments about retirement did so because of negative perceptions and fear about retirement, plight of retiree teachers living in poverty and squalor, unpreparedness or inadequate preparation towards retirement, quest to raise more funds and acquire a lot for retirement, the need for more time to manage resources for sustainable development of family, and uncertainty about the future. A small number (10) which represents 18% of the tutors looked indifferent, that is neither happy nor sad about retirement. It seems some tutors were indifferent about retirement because of the perceived notion that retirement preparation and planning is for old people not for young people. It is also likely that they were indifferent about it because they have more years ahead before retirement, and they were not sure of the returns of retirement.

Another indicator used as a measure for psychological preparation and planning is the thought about retirement. A small number (21) which represents 38% of the tutors thought that they were psychologically prepared for retirement. However, 34 (62%) of them held divergent views. This result suggests psychologically unpreparedness for retirement by the majority of the tutors.

Concerning information seeking behaviour of tutors about retirement, the majority (31) which represents 57% of the tutors admitted that they usually sought information on retirement through reading of books, publications and from the media (both electronic and the internet) as well as sharing information with their spouses and workmates about retirement. Also, others sought information on their pension contributions. This result suggests that most of the tutors had a relatively good knowledge of retirement. This signifies a positive state of cognitive or mental

and psychological readiness for it. Notwithstanding, 23 (43%) of them gave a negative response which means they were not psychologically ready for retirement.

Another indicator used for measuring the construct of psychological planning was seeking for advice or counselling on retirement. The finding reveals that 21 (39%) tutors ever talked to or consulted someone for advice or counselling on retirement. In contrast, 33 (61%) tutors never consulted people for advice or retirement counselling. This result implies that most of the tutors had a relatively poor attitude to seeking for information and counselling about retirement.

Twenty-three (43%) tutors were satisfied with their psychological preparedness towards retirement. However, 18 (33%) of them gave a negative response while 13 (24%) were not sure. This result suggests that the majority (57%) of the tutors were dissatisfied with their psychological preparations and plans towards retirement.

Table 3. A comparison of mean differences between male and female tutors in psychological planning and preparation for retirement (n = 54)

Gender		**PP**
Male	Mean	1.88
	N	41
	Std. Deviation	.331
Female	Mean	1.46
	N	13
	Std. Deviation	.519
Total	**Mean**	**1.78**
	N	**54**
	Std. Dev.	**.420**

Key: **PP** – Psychological planning

Table 3 shows the mean differences between male and female tutors vis-a-vis psychological preparation and planning towards retirement. It could be noticed from Table 11 that psychological preparation and planning towards retirement was higher among male tutors (M = 1.88; N = 41; SD = .331) as compared with their female counterparts (M = 1.46; N = 13; SD = .519).

Table 4. Independent samples test on gender differences in psychological planning towards retirement

Gender	Sample (N)	Mean	Std. Dev	t	df	p-value
Male	41	1.88	.331	-3.542	52	.000
Female	13	1.46	.519			
Total	54	1.78	.420			

*Test variables - Dependent variable (*psychological planning towards retirement*) and independent variable (*gender*).

** df (52) - degrees of freedom

*** t-test is significant at the .05 level (2-tailed).

The result in Table 4 shows that there are significant gender differences in psychological planning towards retirement by the tutors. A comparison of the mean differences indicates that male tutors (M= 1.88, N= 41, SD= .331) were more likely to plan psychologically towards their retirement as compared with their female counterparts (M= 1.46, N= 13, SD= .519). The t-test output indicates that the observed difference in the means is significant; [t (52) = -3.542, p = .000, 2-tailed] at a confidence interval (C.I) of 95%.

In response to the interview question which sought to find out the psychological planning and preparedness towards retirement by the tutors, some of the respondents had these to say:

I am happy about retirement because I can manage my life without any stress. It is inevitable! In the world of work, only lucky and blessed ones get to enjoy it. Hence, I will be happy to retire. (Female tutor A)

I feel happy about retirement because I have made enough preparation towards it. I feel happy about retirement because I want to retire and then do something better for myself than government business. (Female tutor B)

It is a necessary evil and there is no need developing a feeling towards it. I am yet to think about retirement. I don't even think of anything called retirement due to financial difficulties, let alone have any feeling about it. (Female tutor C)

I have not thought of that. No preparation has

been done or made so far. I am not close to retirement. Yet, to think about retirement. I am still thinking about it. I have discussed with my family and some personal friends. I have also been reading about it online. (Male tutor A)

I am anxious about retirement because I have planned very well for it. It is inevitable and in the world of work. Only lucky and blessed ones get to enjoy it. Hence, I will be happy to retire. I feel happy about retirement because I have enough preparation towards it. I am happy about retirement because I can manage my life without any stress. I feel happy about retirement because I want to retire and then do something better for myself than government business. (Male tutor B)

I failed to commence retirement preparation early. Hence, I have a short time to prepare for retirement. I don't think I can do better. Nothing has been accumulated. I am worried because I am just going home empty. (Male tutor C)

Discussions

The study unfolds that majority (62%) of the tutors were psychologically not prepared for retirement. The findings of the current study indicate that the majority (59%) of the tutors had negative feelings about retirement. It also emerged from the findings of this study that the majority (57%) of the tutors were dissatisfied with their preparations and plans towards retirement. These findings of this study indicate that the majority were anxious about retirement, whilst a small number were worried. This finding confirms the assertion by other researchers that the level of worry among pre-retirees is greater than post-retirees [25]. However, those who were closer to retirement (that is those between 50-59 years) and lacked preparation towards retirement or thought that their preparation is inadequate were more anxious and worried about retirement. The reasons advanced by most of pre-retirees for their worry include family affairs, finances and world matters [25]. As emphasised by the transtheoretical model, individuals change their readiness to engage in retirement planning via a series of cognitive processes that occur in stages which is influenced by knowledge about the costs and benefits associated with the retirement planning [26]. Thus, the feeling, thought, reading, seeking professional advice and discussing one's impending retirement with spouse and children influence an individual's attitude towards retirement and the pre-retirement planning process. It was not surprising to find that the negative attitude expressed towards retirement was underpinned by the feeling and thought the tutors had about retirement and the satisfaction with the retirement preparation made.

Information seeking and sharing behaviour about retirement by the tutors was found to be partly good. The findings of this study unfold that 57% of the tutors sought information on their pension contributions. This signifies a poor information seeking behaviour or attitude about retirement. It is likely that those who have been checking for information on their pension contributions have positive attitudes towards retirement; this action might help to reduce the worries and anxieties about the future [13]. There is the need for the respondents (tutors) to have information on their pension contribution in order to know how to calculate their pension entitlements. This knowledge will give them an objective picture of the inadequacy of the pension so that they could save and invest aggressively towards retirement wealth, and to deal with the loss of income associated with retirement [27]. It is also necessary for the respondents (tutors) to know how much pension they will receive and work out ways to generate post retirement income. Knowledge about how much pension they are likely to receive could affect their attitude towards retirement since there is a correlation between attitude towards retirement and the degree of expected financial security as mentioned [28]. The majority (57%) of the tutors mostly shared information with their spouses and workmates about retirement, but 61% of them did not solicit or seek information on retirement planning from a professional counselor. This signifies a poor information seeking behavior about retirement. Seeking information from a professional counselor might help the pre-retiree tutors to develop anticipatory and proactive coping mechanisms that will assist them in adjusting to the transition from work to retirement [29].

It could be said that married tutors who had discussed their retirement with spouse and children have created some level of awareness in them. This could inform them to limit their financial expectations and demands, thereby laying the foundation for them to adjust to the loss of the job role, the reduced income and material resources associated with retirement [30, 31, 32]. Those who did not discussed their

retirement with their spouse and children are more likely to experience retirement as a stressful stage in life since spouse and children will still have the same pre-retirement financial expectations and demands in the post-retirement period of the retiree. They may not have discussed their impending retirement with their children and spouse because they may not find it important to do so or are not near to retirement hence have not found the need to do so.

The study reveals gender differences in psychological planning towards retirement even though Okai's study failed to reveal the differences related to retirement planning among sexes [6]. The finding that male tutors were more likely to plan psychologically towards retirement validates the views of a number of researchers [7, 13, 20, 24] who observed gender differences in psychological planning towards retirement. It has been found that men are more likely to have specific concrete retirement goals, whereas women have general and abstract goals (for example, be happy) [20]. A number of researchers have found that men think more about their future life in retirement [24]. Also, it has been found that men are more likely to discuss retirement with friends, relatives, and co-workers [13].

Conclusions

The evidence gathered from this study signifies that the majority (62%) of the tutors were not psychologically prepared for retirement and they were dissatisfied with their plans and preparation towards it. As many as 59% of the tutors had negative feelings about retirement. The study found evidence of significant gender differences in psychological planning and preparation towards retirement among tutors in Ghanaian Colleges of Education ($p = .000$). In view of the above findings, the study makes the following recommendations:

1. There is the need for teacher unions, employers and other stakeholders in Ghana to engage the services of retirement counsellors, professional financial services advisors and investment institutions to roll out financial investment schemes for tutors besides public pension schemes for a better secured post-retirement life.
2. Since the study provided a snapshot of gender perspectives on psychological planning towards retirement among tutors of the two colleges of education, a longitudinal study will be needed to investigate psychological planning and preparation towards retirement among tutors in other colleges of education in Ghana.

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Impacts of Human Resource Practices on Performance of Small and Medium Scale Enterprises in Kwara State

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Abstract

Small and Medium Scale Enterprises are pivotal instrument of economic growth and development, thus occupies a place of pride in any economy. Despite the recognition of HRM as a critical factor in the success of both small and large businesses, most of the researches in existing literature have concentrated mainly on large businesses. This study examined the impact of HRM practices on the performance of in SMEs in Kwara State. Primary data was collected using a structured questionnaire which was administered to 195 SMEs registered with National Association of Small and Medium Enterprises (NASMEs) in Kwara Central Senatorial District. Hypotheses were tested using Multiple Regression analysis and Pearson Product Moment Correlation Coefficients. Findings revealed that overall; HRM practices have significant impact on the performance of SMEs in Kwara State. This was indicated by the result of the multiple regression analysis which showed an overall p-value of 0.000 and R^2 of 0.615. Reward was found to have positive significant relationship (β=0.46; t = 11.01; $p< 0.05$). Similarly, owner/manager communication style has a positive relationship (β=0.30; t = 7.05; $p< 0.05$). Recruitment and selection (β= 0.32; t = 7.44; $p< 0.05$) as well as training and development (β= 0.47; t = 4.66; $p< 0.05$) was significant but very low. The study concluded that SMEs in Kwara State, Nigeria adopt HRM practices to a large extent. It was recommended that SMEs should pay more attention to the HRM practices identified in this study with a view to improving their implementation.

Keywords: *Human Resource, Management, Organisation, Performance, SMEs.*

Introduction

Effective and efficient production of goods and services has continued to be one of the most viable and reliable options for development, growth and survival of any economy and small and medium scale enterprise have been recognized as a driver, engine and panacea of economic growth and development and in fact a major factor by extension in promoting the realization of placing Nigeria as one of the top 20 economies by the year. In every economy, SMEs has been seen as a pivotal instrument of economic growth and development either in developed or developing economies (Rabiu, 2016). This is why SMEs occupy place of pride in virtually every country or state. SMEs are seen to represent an engine of growth and catalyst of socio-economic transformation in any country as they represent a veritable vehicle for the achievement of national economic objectives of employment generation and poverty reduction at low investment cost as well as the development of entrepreneurial capabilities including indigenous technology (Brimah, Olanipekun & Brimah, 2018). SMEs play significant roles in economic development as they have the ability to stimulate entrepreneurship and create employment for the teeming masses. They also have the flexibility to respond quickly to fluctuating demands of the market due to their size and innovativeness. Aremu (2010) posit that Small-Scale Enterprises provide income, savings, and employment generation. They are seen as veritable engines for the development of entrepreneurial

capabilities and indigenous technology which will generate employment in the country. SMEs promote industrial development through the utilization of local resources, production of intermediate goods, and contribute immensely to the gross domestic products (GDPs) of many countries (Udechukwu, 2003; Asaolu, Oladoyin, and Oladele, 2012). Thus, such enterprises as SMEs require HRM to gain competitive advantage in today's rapidly changing competitive business environment.

Olesin (2014) opined that the Kwara State government after realizing the pivotal role that SMEs plays in the economy have made several efforts to accelerate them to become major players in the economy. One of such efforts is the flagging off of a N250million micro credit intervention scheme for Small and Medium Scale Enterprises (SMEs) designed to strengthen the capacity of cooperative societies to contribute to boost economic activity in the state. The intervention scheme was part of government's effort to create shared prosperity through the economic empowerment of small business owners and artisan in the state. The ₦250 million was the first tranche of a N500 million fund designed to boost entrepreneurship and enhance the economic well-being of people of the state. Furthermore, the government has created an agency for the management of the SMEs sub sector known as Kwara State Agency for Micro, Small and Medium scale enterprises. The new agency was saddled with the responsibility of managing the N2billion loan the state plan to access from the Central Bank as well as the existing N750m loan scheme for SMEs in the state. Similarly, the office of the technical adviser to the executive governor has also been created to assist in advising the government.

The present business environment is changing rapidly due to phenomena such as globalization, rapid environmental change, changing customer and investor demands, and competition to provide innovative products and services. To compete successfully in the environment, firms need to constantly improve their competiveness by reducing costs, enhancing quality, and differentiating their products and services. The key to sustaining enviable competitiveness is the productivity of the workers. People are the most valuable resource of firms. Apart from the people, all the assets of an organization are passive resources which require human application to generate value (Fitz-enz, 2000).

Thus, having the right human resources (personnel) at the right place and at the right time is of utmost importance to the survival and success of any firm. Pfeiffer (1994) argued that human capital has long been held to be a critical resource in most firms. Companies are now trying to add value with their human resources and human resource (HR) department has been set up in order to manage their human capital, whereas organization in last decade, managed their human capital through personnel department which is only a small division of the company.

Statements of the problem

Overcoming the deficiencies associated with SMEs failure has required firm to embrace and develop the value of their human resources practices in order to be more competitive. This question has been achieved in the developed and emerging economy, such as American, Japan, and Taiwan, where SMEs are well-known in engaging the services of strategic human resource management regularly (Huang, 1999), to achieve various performance measures. Besides, in SMEs which is the key driver of economic growth and development, there is dearth in literature as to how HRM influences their performance. Ojokuku (2012) also opine that despite the recognition of HRM as a critical factor in the success of both small and large businesses, most of the research in existing literature have concentrated mainly on large businesses. Research on HRM and SMEs is still evolving and very much fragmented leaving a wide gap to be filled in terms of empirical research on the interface between HRM practices and small businesses. Against the backdrop of the increasing realization of thevital contribution of HRM practices to business success, this study attempts to fill this gap examining the impact of HRM practices on smallscale business performance in Kwara State, Nigeria.

Objectives of the study

i. to examine the relationship between adoption of HRM practices and performance of SMEs in Kwara State**;**

ii. to evaluate the effect of selected HRM practices on SMEs performance in Kwara State

Research hypotheses

H_{o1}: There is no significant relationship between adoption of HRM practices and performance of SMEs in Kwara State

H_{o2}: HRM practices do not have a significant effect on the performance of SMEs in Kwara State.

Literature review

a. Conceptual Clarifications

Definitions of Small and Medium Scale Enterprise (SMEs)

The definition of SMES is amorphous as it varies from country to country and even within the same country, it may vary from sector to sector depending on the purpose for which the definition is sort (Onyeiwu 2012). Ayaggari (2003) contends that the definition of SMEs varies according to context, author and countries. The conceptualization of the concept of SMEs depends to a large extent on a country's level of development (Nnana 2002) and this makes it difficult to have a universal definition of what an SMEs is. It is however quick to note that there are some common indexes of the definition such as number of employees, value of assets and turnover. Kozak (2007) argues that the best way to describes explain SMEs is that they are companies with metric usually number of employees or annual turnover that falls below certain threshold. It is these indicators, numbers of employees and /or rate of turnover that tends to define the context within which different countries and economies situate their understanding of small and medium scale enterprises. This is to say that even though SMEs is definable with much or less the same indicator (numbers of employees, rate of turnover etc) the indicators are not the same in all countries all the time. In other words, the number of employee and total amount of turnover for defining SMEs in different countries are certainly not the same.

For example, Dalberg (2009) opined that Egypt consider SMEs as having more than five and fewer than fifty employees, Vietnam considers SMEs to have between 10 and 300 employees. World Bank considers SMEs for those businesses with maximum employees of 300, $15million in annual revenue and $15 million in assets. Furthermore, in Britain, it is defined as that industry with an annual turnover of 2 million pounds or less with fewer than 200 paid employees. This shows that there is no generally acceptable definition of small business because the classification of business into large scale, medium scale or small scale is a subjective and qualitative judgment. On this note, it becomes imperative for us to examine some of these definitions of SMEs.

Central Bank of Nigeria (2001) defined it as those enterprises whose total cost including working capital is between N10million and N100million and/or a workforce between eleven and seventy full time and/or with a turnover of not more than N10million in a fiscal year. Kanyanula and Quartey (2000) quoted United Nations Industrial Development Organisation (UNIDO) definition as follows ''Small firms with less than 99 workers, and medium firms with 100-499 workers''. For developing countries, the organization defines it as small firms with 519 workers, and a medium firm with 520-599 workers. The above shows clearly that there is no clear-cut definition of SMEs as the various definitions are centered on one or a combination of criteria such as the number of employees, sales turnover, capital outlay, asset base etc. One would quite agree that indeed definitions of SMES varies from country to country and even in the same country, it varies from sector to sector as different institutions may adopt different definitions depending on the policy focus. It is also quick to note that these definitions change overtime.

Human resource management practices

Human Resource Management (HRM) can also be defined as a process of procuring, developing, maintaining competent human resource in the organization so that goals of an organization are achieved in an effective and efficient manner. In short, it is an art of managing people at work in such a manner that the give their best to the organization for achieving its set goals (Khanka, 2003).

The question of how HRM impacts on organisational performance has ignited three perspectives. The universalistic perspective (Boxall and Purcell, 2008) projects a bundle of high performance "best practices" that should be

adopted by organisations to yield organisational performance. This implies that business strategies and HRM policies are mutually independent in determining organisational performance (Katou and Budwar, 2007). The contingency perspective proposes that in order to be effective, an organization's HR policies must be consistent with other aspects of the organisation. Rather than adopting best practices, a fit must exist between HRM and business strategy (Dany, Guedri, & Hatt, 2008) and this is also described as "vertical fit". Boxall and Purcell (2008) argue that both perspectives; best practice and best fit might be right in each in their own way. However, the actual design of HR practice depends to some extent on the unique organisational context. The third which takes the contingency perspective a step further is the configurational perspective (Ulrich and Brockbank, 2005). This has a holistic approach that emphasises the importance of the pattern of HR practices and is concerned with how this pattern of independent variables is related to the dependent variable of organizational performance. Configuration has been defined by Huselid, Jackson and Schuler (1997) as the structures, processes, relationships and boundaries through which an organisation operates. All perspectives are relevant in exploring the linkage between HRM and performance. In this research, emphasis was placed on only four human resource practices namely Recruitment and Selection, Training and Development, Reward and Compensation, Owner/ Manager Communication Style because of the pivotal relationship they have with small and medium scale enterprises.

Recruitment and selection

Recruitment is the process of creating a large pool of applicants that are willing and able to work for the organization while selection is a process by which potential employees recruited from various sources are examined and separated into classes- those to be employed and those not to be accepted. Essentially, it consists of a procedure for identifying and eliminating those who are unsuitable candidates for the available jobs (ISMN, 2014). the Recruitment which is the process of generating a pool of capable people to apply for employment to an organisation and selection which is the process by which managers and others use specific instruments to choose from a pool of applicants a person or persons more likely to succeed in the job(s) given management goals and legal requirements (Bratton & Gold, 2007). Recruitment and selection can play a pivotal role in shaping an organisation's effectiveness and performance, if organisations are able to acquire workers who already possess relevant knowledge, skills and aptitudes and are also able to make an accurate prediction regarding their future abilities. Performance improvement is not only a result of well-functioning system but also depends on effective human resource strategies that succeed in recruiting and maintaining a committed and motivated workforce (Al-Ahmadi, 2009).

Training and development

Training has been defined as the planned and systematic modification of behaviour through learning events, programmes and instruction which enable individuals to achieve the level of knowledge, skills and competence to carry out their work effectively while development can be defined as the growth or realization of a person's ability and potential through the provision of learning and educational experiences. Training generally focuses on providing immediate knowledge, skills and attitudes required by the individual to carry out his/her job. Development focuses on the future – assisting the individual to grow on the job and prepare him/her for a career and increased responsibility (Armstrong, 2010).

According Cole (2002), in his book personnel and human resources management, training is a learning activity directed towards the acquisition of specific knowledge and skills for the purpose of an occupation or task. The focus of training is the job or task for example, the need to have efficiency and safety in the operation of particular machines or equipment, or the need for an effective sales force to mention but a few.

Nwachukwu (2007) described training as consisting of planned programs designed to improve performance at individual, group and or organizational levels. Therefore, improved performance on the part of employee is a function of improvement in knowledge, skill, and attitude and of social behaviour. Iboma (2008) says the objective of training is to achieve a change in the behaviour of those trained. It plays a large part in determining efficiency of the establishment. It is one of the

most vital contributions to the future and long-term growth development and survival of such enterprise.

Communication

There are a lot of definition of communication from different people and different culture. According to Kotler (2006), communication is the means by which firms attempt to inform, persuade and remind consumers – directly or indirectly – about the products and brands that they sell. Gronroos (2004) explain communication as "the process of creating, transmitting and interpreting ideas, facts, opinions and feelings. Communication is the transmission of meaning from one person to another, either verbally or non-verbally (Barrett, 2006). Ojomo (2004) defined communication as the process of sharing ideas, feelings, thoughts and messages with others. Rothwell (2001) sees communication as a transactional process of sharing meaning with others.

Whether an organisation is large, small or virtual sharing information among its parts and with the outside world is the glue that binds the organisation together. In organizations, people communicate with each other in different ways. Messages may move downward and upward between hierarchical levels or horizontally among employees at equivalent level (Dwyer, 2005) Effective workplace communication is based on interpersonal, professional relationships that are developed through a keen awareness of courtesy, attentive listening; active participation and situation appropriate body language" (Richason, 2012). According to Alyssa (2006), the ability to communicate, and communicate well is one of the biggest factors in business success.

Compensation and rewards

Compensation processes are based on compensation philosophies and strategies contained in the form of policies, guiding principles, structures and procedures which are devised and managed to provide and maintain appropriate types and levels of pay, benefits and other forms of compensation. This constitutes measuring job values, designing and maintaining pay structure, paying for performance, competence and skill and providing employee benefit. However, compensation management is not just about money, it is also concerned with that non-financial compensation which provides intrinsic or extrinsic motivation (Bob, 2011). Compensation has a motivational effect and therefore implies that having a compensation structure in which the employees who perform better are paid more than the average performing employees is vital to enhancing organisational performance (Hewitt, 2009). The growing recognition and consensus that compensation promotes productivity is consistent with the early work of Peter Drucker (1956) that states "happy workers are productive workers."

Establishing and implementing a reward system needs careful analysis of the company policies and procedures. Deciding how to recognize employee's efforts and what to provide them requires thorough analysis of responsibilities and risks involved in a particular job. Reward system of an organization should also be in alignment with its goals, mission and vision. Reward management is one of the central pillars of human resource management. Reward refers to all forms of financial returns and tangible services and benefits employees receive as part of an employment relationship. Bratton (1999). The three principal objectives of reward management are to attract and retain suitable employees, maintain or improve levels of employee performance and comply with employment legislation and regulations.

SMEs performance

Researchers have different opinions of what performance is. SMEs performance just like Organizational performance continues to be a contentious issue in the management research circles. Javier (2002) equates performance to the famous 3Es; economy, efficiency and effectiveness of a certain programme of activity. According to Richard (2009) organizational performance encompasses three specific areas of firm outcomes; financial performance, profits, return on assets, return on investment, etc), product market performance (sales, market share, etc), and shareholder return (total shareholder return, economic value added, etc.). Organizational performance is the organization's ability to attain its goals by using resources in an effective and efficient manner Daft (2000). We can put organizational performance as the actual output or results of an organization as measured against its intended outputs, that is; goals and objectives.

Organizational performance is concerned with the overall productivity in an organization in terms of stock turnover, customers, profitability and market share. The concept of organizational performance is core to businesses because the major objective of businesses is to make profits. Iravo, Ongori and Munene (2013) state that one of the important questions in business has been why some organizations succeed and why others fail and this has influenced a study on the drivers of organizational performance. Fwaya (2006) views performance as a formula for the assessment of the functioning of an organization under certain parameters such as productivity, employee' morale and effectiveness. Nzuve and Nyaega (2012) opined that Performance management and improvement is at the heart of strategic management because a lot of strategic thinking is geared towards defining and measuring performance.

b. Theoretical Review - Resource Based View Theory

The fundamentals of the Resource-Based View (RBV) of the firm can be found in the work of Penrose (1959) on the *"Theory of the Growth of the Firm"*, which conceived the firm as an administrative organization and a collection of productive resources, both physical and human. Both material resources and human resources can provide the firm a variety of usefulness. Thus, the resource-based theory of the firm combines concepts from organizational economics and strategic management (Barney, 1991). It addresses the resources and capabilities of the firm as critical determinants for organizational performance. Johnson, Scholes and Whittington, (2008) opined that the competitive advantage and superior performance of an organization is explained by the distinctiveness of its capabilities. Thus, the competitive advantage of a firm lies primarily in the application of a bundle of valuable tangible or intangible resources at the firm's disposal (Wernerfelt, 1984; Rumelt, 1984; Penrose, 1959; Wernerfelt, 1995).

RBV is generally accepted as a background for understanding the relationship between strategic Human resource management and organizational performance (Lado & Wilson, 1994; Wright & Mc Mahan & Mcwilliams, 2004). Three types of resources associated with organization (Jackson and Schuler, 2005) are (a) physical resources (plant; technology and equipment) (b) human resources (employees experience and knowledge), and (c) organizational resources (structures, system for planning, monitoring, and controlling activities; social relations within and between organization and external contingencies). Kanoche (2006) refers human resources as the accumulated stock of knowledge, skills, and abilities that individual possess, which the firm has built up overtime into an identifiable expertise. Wright, Dunford, and Snell (2001), discussed at length the impact of the resource-based theory on SHRM theory and practice. A fundamental assumption of this view is that organizations can be successful if they gain and maintain competitive advantage (Porter, 2005). The resource-based theory of the firm is based on the notion that a firms HRM system can constitute one source of competitive advantage (Lado and Wilson, 2004; Pfeiffer, 2004; Barney 1991). A resource can be considered to be a source of sustained competitive advantage if it meets the criteria of value, rarity, non-substitutability, and inimitability (Barney, 1991, 1995; Wright and McMahan. 2002)**.**

c. Empirical review

The empirical review is based on observed and measured phenomenon and derives knowledge from actual experience rather than from theory or belief. Thus, the empirical framework of this study is based on the outcome of other researchers.

More recent empirical study on HRM practices (Lee & Lee, 2007) uncovered six underlying HRM practices on business performance, namely training and development, teamwork, compensation/incentives, HR planning, performance appraisal, and employee security help improve firms' business performance including employee's productivity, product quality and firm's flexibility. This study reveals that three items of HRM practices influence business performance: training and development, compensation/incentives, and HR planning. Delery and Doty (1996) examined the effect of SHRM on firm financial performance using universalistic, contingency, and configurational performance perspectives in 1,050 banks. The results showed that each of the perspectives was viable and led to different

assumptions about the relationships among HR practices, strategy, and organizational performance. Also, the findings revealed that in each perspective there was a strong relationship between SHR practices and measures of financial performance.

Similarly, on the relationship between SHRM and firm performance within the context of a developing country, Tessember and Soeters (2006) conducted a research in Eritrea, Africa's youngest and poorest country. The study revealed that successful implementation of HR practices could enhance performance of individual and civil service organization of Eritrea, but the economic and political environment within which HR practices operate are not conducive. Oladipo and Abdulkadir (2011) investigated the extent to which SHRM impact on organizational performance in the Nigerian manufacturing sector. Correlation and regression analysis were performed and the results showed that SHRM was moderately practiced by the companies operating in the Nigerian manufacturing sector. Results also indicated that SHRM practices had positive and significant effect on organizational performance in the Nigerian manufacturing sector.

Muogbo (2013) investigated the impact of SHRM on manufacturing SMEs in Anambra State Nigeria using 17 paint manufacturing firms. Employing correlation analysis, the results indicated that there was a strong positive correlation between SHRM and performance level of competition in SMEs. However, the study showed that majority of the SMEs in Anambra state Nigeria does not adopt SHRM. Using data from 197 Taiwanese high-tech firms Chang and Chen (2002) conducted a comprehensive study to evaluate the links between HRM practices and firm performance. This study reveals that HRM practices including training and development, teamwork, benefits, human resource planning, and performance appraisal have significant effect on employee productivity. This study also found benefits and human resource planning have negative relationship with employee turnover.

Abdulkadir (2011) investigated the extent to which SHRM impact on organizational performance in the Nigerian manufacturing sector. Correlation and regression analysis were performed and the results showed that SHRM was moderately practiced by the companies operating in the Nigerian manufacturing sector. Results also indicated that SHRM practices had positive and significant effect on organizational performance in the Nigerian manufacturing sector. Mustafa, Ronald, Fusun and Jacob (2011) studied Human resource management practices in small and medium sized enterprises in Turkey. They identified that use of the HRM practices are moderate and rated their effectiveness as only moderate as well and respondents indicating greater use of these HRM practices rated the effectiveness of their SME generally higher than their competitors and higher in the current year than last year. According to them demographic characteristics of the respondent, and characteristics of the SME are inconsistently related to use of the HRM practices. Their Findings indicate that use of particular HRM practices is associated with perceptions of better SME performance.

Methodology

This study adopted the survey strategy in which it is descriptive and was inductive in approach. Additionally, this study has a population of 200 SMEs whose businesses are situated in Kwara Central Senatorial District and who are registered with the National Association of Small and Medium Enterprises (NASMEs). Primary data with the aid of a structured questionnaire was employed. The close ended questionnaire was designed using Rensis Likert scale format and administered to owners of selected SMEs. Data collected from the questionnaire were analyzed, summarized, and interpreted accordingly with the aid of descriptive statistical techniques such as total score and simple percentage. Multiple regression analysis was adopted to show the degree of impact of HRM practices on SMEs performance while Pearson Product Moment Correlation Coefficient (PPMCC) was used to show the relationship. The hypotheses were tested at 5% level of significance with the aid of STATA 11.0 Computer statistical software.

Results and discussion of findings

Test of Hypothesis I

H_{O1}: There is no significant relationship between HRM practices and performance of SMEs in Kwara State**.**

Table 1. Correlation Matrix showing relationship among Training, Reward, Recruitment and selection, and SMEs performance

	SMEs performance	Training & Development	Reward & Compensation	Recruitment & Selection	Owner/ Manager Comm. Style
SME performance	1.0000				
Training & Development	0.6895	1.0000			
Reward & Compensation	0.8955	0.8393	1.0000		
Recruitment & Selection	0.5499	0.7632	0.8083	1.0000	
Owner/ Manager Comm. Style	0.8709	0.8208	0.7789	0.8400	1.0000

Source: Researcher's Analysis, 2019 Using STATA 11.0

The table shows the correlation matrix which is an indication of how the individual variables are related. It shows that HRM practices such as Training and Development (69%), Compensation and Reward (90%), Recruitment and Selection (55%), and Owner/Manager Communication Style (87%) is significantly correlated to the performance of SMEs. This implies that adoption of HRM practices is contributing positively to the performance of SMEs. The association between them is positive and significant. The null hypothesis is rejected and the alternative hypothesis is accepted which states that there is significant relationship between adoption of HRM practices and performance of SMEs in Kwara State**.** This is in line with previous studies of Muogbo (2013), Oladipo and AbdulKadir (2011) and AbdulKadir (2012) whose studies also discovered a significant relationship between adoption of HRM practices and SMEs performance.

Test of Hypothesis 2

H_{O2}: HRM practices do not have a significant impact on the performance of SMEs in Kwara State.

Table 2. Multiple Regression Analysis showing the Impact of Human Resource Management Practices on SMEs performance

Model	R-Squared	Adjusted R Squared		Root MSE	
1	0.6955	0.6888		.1410	
Source	Sum of Square	Df	Mean Square	F	Probability
Model	794.785	4	198.696	99.8977	0.0000
Residual	348.077	175	1.989		
Total	1142.861	179	200.685		
Variable	Coef.	Std. Error	T Sig	Beta	
Training and Development	1.259	0.114	4.66 0.039	0 .470	
Reward and Compensation	1.054	0.094	11.013 0.000	0.461	
Recruitment and Selection	0.574	0.078	7.442 0.047	0.316	
Owner/ Manager Comm. Style	0.936	0.132	7.052 0.000	0.302	
Cons	22.294	4.853	4.594 0.078		

Source: Researcher's Analysis, 2019 Using STATA 11.0 (Statistically significant at 5%)

The regression analysis results obtained in evaluating the impact of HRM practices on SMEs performance shows that the R^2 Coefficient (0.6955) which is the coefficient of

determination indicates that the explanatory variables account for 70% of the variation of HRM practices that influences SMEs performance. Given the adjusted R^2 of 69% with 0.0000 at 5% level of significant. This is an indication that the independent variables in the model jointly and significantly explain the HRM practices that influences SMEs performance.

Reward and Compensation (β=0.46; t = 11.01; $p < 0.05$) was significant. This implies that the availability of funds constitutes the most factor that influences the adoption of HRM practices by SMEs in Kwara State. Owner/ Manager Style of communication was also significant with (β=0.30; t = 7.05; $p < 0.05$). This implies that the adoption of HRM practices also depend on the size of SMEs. Although, Training and Development (β= 0.47; t = 4.66; $p < 0.05$) and Recruitment and Selection (β= 0.32; t = 7.44; $p < 0.05$) were significant but low. The null hypothesis is rejected and the alternative hypothesis is accepted which states that HRM practices do not have a significant impact on the performance of SMEs in Kwara State. This is also in line with the findings of Obasan (2012), Fanny (2009) and Ojokuku (2012) who opine that HRM practices significantly influences the performance of SMEs.

Conclusion and Recommendations

This study concludes that the HRM can increase the ability of small companies to select, develop and motivate a labour force capable to produce superior results. While designing and implementing such practices, one important thing is to be kept in mind that the HRM practices should be analyzed from time to time and it should be updated accordingly**.** Based on the findings of this study, it can be concluded that HRM practices have significant impact on the performance of SMEs in Kwara State. SMEs in Kwara state adopt HRM practices to a large extent, although it was discovered that most of the HRM practices were informal which might be why recruitment and selection and training are significant but low. This study recommended that SMEs should pay more attention to the HRM practices identified in this study with a view to improving their implementation. This will foster employee commitment to work which will consequently enhances productivity and profitability.

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A Review of the Materiality of Classical and Modern Approaches to Public Administration in Africa

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Abstract

Public Administration's long history as a concept is as old as the very notion of government itself. Its foundations as a discipline can be traced back to the 20th century writings of Max Weber, Woodrow Wilson and Frederick Taylor. Their ideas found overt expression in the administrations of European and American societies which had organised forms of governments. Most pre-colonial African societies were organised according to traditional structures governed by chiefs, councils of elders and kings. However, with the political decolonisation of most African states, post World-War II, the United Nations advised that there should be public administration and public service which should, in every real sense, belong to the society they serve. Public bureaucracies came to be viewed as the vehicles through which the struggle toward development and nation building could be achieved. This paper seeks to give an overview of how the classical approaches have been applied in post-colonial African states. It will also review how the new public management approaches were (un)successfully implemented in these very states. Using qualitative research and descriptive and exploratory methods, this paper will explore the nexus between African bureaucracy and public administration approaches.

Keywords: *Public Administration; Classical Theories; Modern Theories; African Public Administration.*

Introduction

Statement of the problem

Governance is perceived as a critical factor in accelerated and sustainable economic growth and development. Most African countries, since the 1990s, were deemed to be operating under critical circumstances including doubtful political legitimacy and flawed economic management. Many African countries continued to rely on centralized and highly personalized forms of government and some had also fallen into an unacceptable pattern of corruption, ethnically based decision-making and human rights abuses. (Olaniyan: 2008). It is clear that there is need for more progress in the majority of countries to provide an environment in which individuals were protected, civil society was able to flourish, and Governments executed their responsibilities efficiently and transparently, through adequate institutional mechanisms that would ascertain accountability. (Olaniyan: 2008). It is from this background that there is need to review the approaches that are often imposed on African states disguised as good governance packages and evaluate how relevant they are to the African context.

Existing solutions

According to Basheka (2015), if one was to pause and question whether African societies had administrative systems worthy of the name, before the colonial epoch, attracts two opposing views. First, is the negative view that construes Africa to have been a mere dark continent without any sense of organization. The second confirms how African societies, at the time, had systems to manage public affairs that constituted an administrative system.

From these two views, arose scholars, on one hand, who advocate for a public administration approach that is purely African in origin, a system that takes only from the traditional African administrative systems that existed before colonialism. On the other hand, there are those whose take is that Africa needed a complete transformation in which they were supposed to adopt the Western Classical and Modern

approaches to governance in order for them to run efficient governmental systems.

Which solution is the best?

The debate between these Afro-optimists who are usually Euro-critics – who advocate for a pure indigenous administrative approach- and the Afro-pessimists who in most cases are Eurocentric scholars -as they advocate for the Western approaches, is as old as the theories of public administration. It is significant from the outset to note that this paper will principally focus on the theories of public administration as championed by eminent scholars in this field, from the likes of Weber, Wilson and Taylor, who founded the traditional approaches to public administration, to the later writers such as Homburg, Pollitt, Bouckert and Guys, and others, who were exponents of new managerialism as a form of modern governance. It is therefore my take that a middle of the road approach to these approaches, in which aspects of each approach is taken and infused with the other. That way an approach that is contextual can be found.

Limitations

This article is based on secondary data sources as it seeks to evaluate the African context of public administration against the conventional approaches that are modern. The first hurdle that one meets is that, there is very limited literature that exists on any systematic approach to administration in Africa. Authoritative literature on Africa exists largely on the colonial and post-colonial era and to a larger extent portrays a negative picture of the African Administrative systems. This point is corroborated by Basheka (2015) when he posited that,

"The tendency of the architects of the colonial enterprise is to believe Africa had no administration needs to be countered with compelling facts and examples to solidly illustrate the robustness of the pre-colonial governance apparatus, especially given the time perspective"

The revisionist scholars who have tried to retrieve the positive aspects of the African administrative systems have also often had to confront the lack of reliable sources of that information.

Methods

This article employed qualitative research design and descriptive methods to get an understanding of the landscape and relationship of African bureaucracy and public administration. exploratory techniques were used in the effort to explore the connection between African bureaucracy and public administration. Then, pertinent sources of this research were equally and examined and verified against the obtainable literature for the research purpose. Critical reading and writing down of ideas were done academic sources were reviewed during a desktop study.

Results

Modern approaches to public administration in their existing form are clearly inapplicable to the African context and this is due to Africa's troubled past of colonialism, the nature of African leadership which has largely been pre-occupied by the need to keep power for its sake, the lack of constitutionalism and many other ills. It is from this background that there is a need to navigate African past governance systems and infuse them with modern approaches to administration in order to cure the public administration conundrum in Africa.

Discussion

Due to the colonial linkages, most post-colonial states adopted these western models in the organisation of their governments. Then doing this does not suggest that Africa's indigenous administrative systems were troubled, chaotic and biased (Basheka: 2015) as portrayed in some literature, especially where western ideas are portrayed as superior to indigenous systems.

Public administration theory has gone through various stages as a framework for running states. The traditional approach to public administration was introduced in the 20th century – The Bureaucratic Approach. This was meant to run a state in a stable and predictable way in a relatively static environment, and therefore, public administration was not prepared to meet new challenges and was resistant to change. (Katsamunska: 2012). The traditional model of public administration has been regarded as the most successful theory of public sector

management, although it does not have a single, coherent intellectual foundation. (Katsamunska; 2012).

This approach was added to by Woodrow Wilson who introduced the politics-administration dichotomy. Whereas the former espoused personal relationships, based on the loyalty to a particular individual such as a king, a leader, a minister or a party, (instead of being impersonal, based on legality and the loyalty to the organization and the state) (Katsamunska: 2012), the Wilsonian doctrine emphasised the "detailed and systematic execution of public law" and he believed there should be a strict separation of politics from administration because administration lies outside the proper sphere of politics, and administrative questions are not political questions. (Katsamunska: 2012). This thinking was then further consolidated by Fr. Frederick Taylor through his publication in 1911 of the 'Principles and Methods of Scientific Management'.

These classical thoughts were challenged in the 1960's and 70's by a new movement, 'The New Public Administration' which fundamentally criticized the "old" public administration for its lack of an explicit ideological framework. The basic principles of the New Public Administration were participation, decentralization and representative bureaucracy.

A new managerial approach in the public sector emerged in the 1980s and early 1990s and it was named New Public Management. This new approach gave prominence to the economy, efficiency and effectiveness of government organizations, instruments and programs, and higher quality service delivery. This new model of public sector management emerged in the most advanced countries, as well as in many developing ones, and is regarded by many authors as "not a reform of the traditional public administration, but a transformation of the public sector and its relationship with government and society". (Hoos et al: 2003).

Background to Public Administration in Africa

As far back as African history extends, human beings have always grouped themselves together into communities; each having a person or a collective to govern it (Kay & Thomas: 1965). In Swaziland, the ruler is the King and in Matabeleland and Mashonaland, enclaves of pre-colonial Zimbabwe, there were Chiefs or a King's Councils at first, whose authority extended only over a couple of villages and over large communities. This was essential to aid the community to protect itself and guarantee that customary law and order were sustained and disputes settled without fighting. All across Africa, this forms the basics of traditional administrative systems that existed before the emergence of public administration in Africa.

The impact of theory and practice of public administration in Africa is very difficult to characterise. Olaopa (2009) aptly puts it when he points out that, the history of modern public administration in Nigeria and by extension other African countries is relatively short and is full of events, shaped by different actors, and characterized by multifarious problems.

African Context and the Classical Approaches to Public Administration

The study of public administration and public management is a field of scholarship that requires to be firmly embedded in the society it serves. (Itika et al: 2011). The classical theories of public administration such as those put across by Weber, Taylor and Wilson are, on the other hand, foreign, so to speak. They are an imposition either by default or design on the indigenous governance systems that existed in these societies prior to the influence of imperialist forces. Public administration in developing countries is, therefore, administration in transformation. In many countries in Africa, managing the public sector implies a continuing quest for good governance: for organisations, institutions and policies that best fit the needs of modernizing societies. (Itika et al: 2011).

Scholars and practitioners of public administration in Africa borrow ideas, concepts and institutional designs from all over the world, but mostly from the highly developed countries in Western Europe and America. This background is informed by Africa's past which has largely been interfered with by these very nations. According to Basheka (2015), the African Continent has suffered a rather tormented history, following different historical epochs with shadows of colonialism, conquest, neo-colonialism, and global capitalism foisting upon them the western organizational management/leadership practices. This reality

impresses upon the public administration scholars the significant question of whether the classical theories are useful in this context or otherwise.

In order to understand the changes and reforms in the system of public administration, particularly in the African context, we need to understand the traditional model of governance, because any attempt at reform is viewed and evaluated against it. (Katsamunska: 2012). Basheka (2015) makes a very important observation that some Public Administration scholars may not even imagine the existence of an indigenous governance apparatus worth historicizing during the teaching of public administration. In such circumstances, the warning of Sharma et al (2009) against ignoring indigenous knowledge, suffices. Dia (1996) suggested that many of Africa's problems, of modern times, stem from a structural and functional separation between informal, indigenous institutions as rooted in Africa's history and culture and formal institutions that are mostly transplanted from outside.

The Classical model of public administration was thought to be the best way for organizing the public sector work and undoubtedly worked well for a long time in the developed countries. However there hasn't been a deliberate study of how it worked in the developing countries of Africa. The traditional model of public administration has been regarded as the most successful theory of public sector management. (Katsamunska: 2012). Its theoretical basis is derived from W. Wilson and Fr. Taylor in the United States, the Northcote -Trevelyan Report in the United Kingdom and M. Weber in Germany. In general, it is characterized as:

"an administration under the formal control of the political leadership, based on a strictly hierarchical model of bureaucracy, staffed by permanent, neutral and anonymous officials, motivated only by the public interest, serving and governing party equally, and not contributing to policy but merely administering those policies decided by the politicians". (Hughes: 2003).

According to Hoos (2003), the key feature of this model is that in the modern governmental systems professional bureaucrats execute the tasks of public administration while separated from the political mechanisms as well as from the private sphere. Katsamunska (2012) posits that the European and the American public administration have passed through different historical development, but the Weberian approach became common for them and both stressed the necessity of impersonal, formally regulated and hierarchical mechanisms.

Weber's critics argue that his principal focus was not administration, but that his main distinctive contribution to the field of public administration was related to the analysis of the social and historical context of administration, and more particularly, bureaucracy - and that he identified it as the dominant form in a legal-rational society and specified the features of the most rational form of bureaucracy. (Katsamunska: 2012). According to Fry (1989), Max Weber not only gave the characteristics and criteria for modern bureaucracy, but also outlined the terms of its employment in the bureaucratic organization. They are as follows:

1. Officials are personally free and are appointed on the basis of a contract.
2. Officials are appointed, not elected. Weber argues that election modifies the strictness of hierarchical subordination.
3. Officials are appointed on the basis of professional qualifications.
4. Officials have a fixed money salary and pension rights.
5. The official's post is his sole or major occupation.
6. A career structure exists with promotion based on merit (though pressure to recognize seniority may also exist.)
7. The official is subject to a unified control and disciplinary system in which the means of compulsion and its exercise are clearly defined.

In light of the above hypothesis of the bureaucratic system, it is clear that most African jurisdictions have adopted a fusion of this system with elements of the traditional indigenous governance systems in which hierarchy was important. The appointment of officials to public office has always been and remains attached to loyalty to the king, president or the party in power. There are many reasons for this disposition. Firstly, the need to consolidate power by the incumbents meant that they had to appoint those officials who, despite their qualifications, or lack thereof, would pledge allegiance to the incumbent. Tied to this is the second reason that being in power continues to be a license to the state purse and therefore there was a need to keep

a hierarchical structure that would allow those at the top to plunder national resources without any dissent from appointed officials. Thirdly, the nature of family ties in most African states meant that officials were appointment based on a patronage system in which those who were related to the rulers had unfettered access to power.

Woodrow Wilson introduced a new dimension to this classical approach in which he proposed the politico-administration dichotomy. In Wilson's words, public administration is 'the detailed and systematic execution of public law' and he believed there should be a strict separation of politics from administration because administration lies outside the proper sphere of politics and administrative questions are not political questions. (Katsamunska: 2012). This view of public administration fails to account for the existing conditions that exist in many African countries; that of political party-government conflation. This has always been a sure source of weak public institutions. In Africa, the winner-takes-all mentality which is embedded in their constitutions means that the political party that wins political power has the power to control government and its institutions with no accountability. Therefore, Wilson's ideas that the that the dichotomy between politics and administration could eliminate the arbitrariness and corruption in the administration could never be a reality in the African context as in reality there has not been complete and clear separation between politics and administration.

Furthermore, Africa has the experience of having good constitutions but without constitutionalism and therefore to imagine that Wilson's ideas of a detailed and systematic execution of public law would work in Africa would be a fantasy. Africa is awash with examples of "rule-by-law" in most countries such as in Zimbabwe as opposed to the rule of law. Constitutions are not respected as the fundamental document upon which the nation is founded and therefore supposed to shape the way public administrators conduct themselves. On the contrary, constitutions are amended arbitrarily to suit the current interests of the individuals in power. In that regard, the politico-administration dichotomy is clouded and the doctrine of the separation of powers in the African context is an uphill ask.

The 1911 Frederick W. Taylor published his fundamental work "Principles and Methods of Scientific Management" which was thought to be the best way to introduce efficiency into administration. According to Katsamunska (2012) At that time there was a search for general administrative techniques in the private sector that could possibly be used to enhance the efficiency in the operation of the American government, and the scientific management attracted the support of governmental officials who believed that its techniques directly concerned with the question of efficiency, could be applied to the public sector. However, for the African government the challenges to rationality in administration has always existed as a pipe dream. According to Mutenheri (2009), as its name implies, this theory applies rational decision-making to planning. The four typical elements of RCP are: goal setting, the identification of policy alternatives, evaluation of means against ends, and implementation of decisions with feedback loops and repetition of steps. Using this method requires meticulous information gathering and analysis. It stresses objectivity, the public interest, information, and analysis, which allow planners to identify the best possible course of action.

Mutenheri (2009) contends that, "the rational comprehensive position, abstracting from the messy "real world", assumes that decisionmakers have a well-defined problem, a full array of alternatives to consider, full baseline information, complete information about the consequences of each alternative, full information about the values and preferences of citizens, and adequate time, skill, and resources." Mutenheri's argument concerning Zimbabwe here summarises what has prevailed in most African states: that the Scientific Management approach could never have worked considering what has prevailed in Zimbabwean policy planning: where political expediency supplants common good. The method strives to be objective, technical, and exclude subjective and emotional discussion sparked by divergent perception of problems. It attempts to separate planning from politics by ignoring the political considerations of public interest.

Essentially, the classical approaches or what has basically been called the orthodoxy cannot be applicable in the African context because they are foreign theories imposed on governance systems that were based on indigenous systems of

governance. (This is not to say the existing governance systems in Africa were not viable or historically irrelevant). That is a thesis for another research. The crux of the matter is that these theories remain approaches whose fundamental bases do not relate to a common past which most African countries have been subjected to: that of colonial conquest, plunder of resources by Europeans, neo-colonialism, globalisation and its negative effects on these nascent states.

Modern Managerial Approaches to Public Administration and the African Setting

During the 1980's and 1990's there was a large-scale rethinking of governance, which was followed by attempts to move administration far away from its roots. Only a few governments have remained untouched by the wave of reforms. (Katsamunska: 2012). Before the term "new public management" was coined, the new model of public sector management had several names. Different names such as *managerialism, new public management, market-based public administration, post-bureaucratic paradigm* and *entrepreneurial government* were used to describe the same phenomenon. Katsamunska: 2012). Katsamunska further notes that the new approach to public management is oriented to results, focusing on clients, outputs and outcomes. It focuses on management by objectives and performance management, the use of market and market-type mechanisms in the place of centralized command and control style of regulation, competition and choice, and devolution with a better matching of authority, responsibility and accountability.

Africa has been plagued over the past half century with the tag of bad governance, corruption and underdevelopment. Over this period, Africa has been the largest recipient of aid to avert mostly man-made disasters – famine, civil wars, disease outbreak (Malaria, HIV/AIDS and others) and coup d'états – this notwithstanding that Africa has the resources, skill and climate to eradicate these problems. All these could have been avoided had the governance infrastructure of the African continent been attended to. It is therefore clear that there is a poverty of leadership in Africa – a leadership which is ready to take the lead in shaping individual countries and the continent in the direction of good governance.

There has always been a debate in Africa as to which comes first- democracy or development. This debate was meant by Afro-optimists/ Euro-critics to scuttle any argument which sought to believe that African states should democratise first or should be expected to run their economies transparently, following good governance measures as espoused by the New Public Management approaches. They argued that all the developed nations of the world which now had the luxury to impose this managerial ethos to administration had themselves undergone a period of strife, of slaughtering each other even, before they could democratise. These critics of modern approaches to administration question why America and the civilised world have not been questioned on their role in the slave trade, a four centuries-long barbaric practice which deprived Africa of an opportunity to grow as its most able bodied and economically active human resources were shipped across the oceans to work for slave masters. The other major argument that the Afro-optimists/Euro-critics put forward is that in the last quarter of the 19th Century European imperialists had partitioned Africa and dispossessed Africans of their livelihoods by taking their land. It is therefore the case that in most African states the clamour for land repossession without compensation has found traction. The euro critics argue that there has to be restitution of past injustices before we can talk of good governance, of new public management, of civil rights and of all other aspects of managerialism as a form of public administration. Further they argue that under colonialism Europeans had plundered mineral resources from Africa for the benefit of Europe.

The managerialism reform was mainly aimed at a massive privatization of public enterprises and cutting other parts of the public sector, while the civil service moved from an administered to a managed bureaucracy. These policies in Africa were implemented in the form of Structural Adjustment Programmes (SAPS) in the 80's and 90's with devastating effects on the poor people of the African countries. To date, privatisation is loathed in Africa because it seeks to move the state from being welfarist and affirmative in its action to the poor. It implies that where the government is supposed to give services to the poor for free or in a subsidised manner, the poor people are left with the burden to do it themselves. Privatised organisations often leave

the market to determine prices of services and this has always been known to be calamitous to the poor.

The modern approaches including, New Public Administration, New Public Governance and other forms of the reform era emphasised the need to focus on efficiency in providing services and needs to citizens. They expect the government of the day to be driven by servitude to the citizenry as opposed to bureaucratic hierarchical systems which benefit the politician more than the citizens. In Africa this has been difficult to achieve. Most African states find themselves still saddled in yesteryear politics in which the government of the day accuses the colonialists of the economic, social and political problems that they find themselves in. The liberation struggles that they fought to liberate their nations are often used as a boon for entitlement and impunity. The liberation generation of statesman in Africa, at least the majority, seem to think that they have a birth right to rule their countries and they do this with no accountability to the citizenry. Instead of being administrators, they are patriarchs for their people. The examples that come to mind are Mobutu Sese Seko of Zaire, Robert Mugabe of Zimbabwe, Hosni Mubarak of Egypt, Idi Amin of Uganda, Kamuzu Banda of Malawi.

What is the future of Public Administration in Africa?

The question remains – does Africa need its own theories of Public Administration? If so, how will that be possible in this age of globalisation? Would Amilcar Cabral and Franz Fanon's anti-colonialist ideas and De-linking work for Africa? Does Africa need a home-grown approach to administration and if so, how possible is it? According to Basheka (2015):

To pause and question whether African societies had administrative systems worthy of the name, before the colonial epoch, attracts two opposing views. First, is the negative view that construes Africa to have been a mere dark continent without any sense of organization. The second confirms how African societies, at the time, had systems to manage public affairs that constituted an administrative system. (Basheka: 2015).

This view makes it clear that there is a need for theory that draws from the African past and is infused with the modern approaches to government. This is not to portray Africa as one homogenous landscape which had a similar experience in governance and even in colonial experience. There is therefore a need for scholars to be contextual and pursue an interdisciplinary approach that should establish approaches or a theory that should provide African solutions to African Public Administration problems. Basheka's argument about indigenous administrative systems is strong that, they have a wealth of knowledge scattered across many disciplines, and it is a challenge to African Public Administration scholars to document a common administrative theory.

Conclusion

Modern approaches to public administration in their existing form are clearly inapplicable to the African context and as mentioned above, this is due to Africa's troubled past of colonialism, the nature of African leadership which has largely been pre-occupied by the need to keep power for its sake, the lack of constitutionalism and many other ills. The classical approaches, in particular the bureaucratic approach seem to have found much acceptance; though as they were reformed in the global North, it was never applicable to the African context. Once again it is because these approaches were knitted in neo-liberal and western political culture which is totally antithetical to the African context. It is from this background that there is a need to navigate African past governance systems and infuse them with modern approaches to administration in order to cure the public administration conundrum in Africa.

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An Empirical Study on the Challenges of GIS Application to Emergency Management in South Sudan

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Abstract

South Sudan gained independence from Sudan in 2011. Since 2013 the country then plunged into a civil war that has displaced thousands both internally and externally across borders to neighboring countries. This has created a large-scale humanitarian crisis that still continues to ravage the new nation. The United Nations and other Humanitarian organizations continue to play a leading role in responding to this humanitarian crisis with the goal of alleviating the suffering of the afflicted civilian population and bring an end to the conflict. Through the United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA), the United Nations (UN) has established several response mechanisms to ensure a comprehensive response. Information Technology is playing a crucial role through the extensive use of Geographic Information Systems (GIS) for information management, mapping and cartography and data modelling. The purpose of this study is to explore the challenges limiting the application and utilization of GIS for planning, decision support and response in the context of post-independence South Sudan.

The study applies qualitative methods to a purposively selected sample population of individuals working in the humanitarian, Relief and Rehabilitation areas in South Sudan from both the Governmental and Non-Governmental sectors. The findings of this study highlight the major challenges faced by GIS application and practice categorized into: Feature dataset issues, Training and Capacity issues, Technology and infrastructure, Political and Security, and Advocacy challenges.

Keywords*: Geographic Information Systems (GIS), Disaster Management, Emergency Management, South Sudan.*

Introduction

"*The use of geographic information in decision-making tends to go unnoticed, but it is actually present in many of our daily activities.*" -Pucha-Cofrep et al, 2018. Today, vehicles are equipped with Global Positioning System (GPS) applications to guide drivers about which routes to use either based on distance or traffic intensity etc. Modern taxi companies also have GPS applications that clients download and use to hail taxis. These applications enable both the client to input their locations and destinations while on the other hand enabling the taxi drivers to know the location of the clients and where they are destined and therefore make decisions on whether to take the trip or not. This process involves acquiring geographic data, storing the data, analyzing the data and subsequently making decision based on the analysis -When computers do this type of analysis or decision making, it is usually done through what is known as GIS"

Definition

Like the field of geography, the term Geographic Information System (GIS) is hard to define. It represents the integration of many subject areas. Accordingly, there is no absolutely agreed upon definition of a GIS (deMers, 1997). Below are some of the more widely acceptable definitions.

Environmental Systems Research Institute (ESRI) has previously defined GIS as *"A geographic information system (GIS) is a*

framework for gathering, managing, and analyzing data. Rooted in the science of geography, GIS integrates many types of data. It analyzes spatial location and organizes layers of information into visualizations using maps and 3D scenes. With this unique capability, GIS reveals deeper insights into data, such as patterns, relationships, and situations helping users make smarter decisions."

The National Centre for Geographic Information and Analysis (NCGIA) defined GIS as *"a system of hardware, software and procedures to facilitate the management, manipulation, analysis, modelling, representation and display of georeferenced data to solve complex problems regarding planning and management of resources."*

Components

From the definitions above, it can be understood that a GIS comprises of several components that collectively form the system. This therefore implies that the absence of any of this functional component would either render the system dysfunctional or deprives it of the ability to be called a GIS. Figure 1. illustrates the key components and functionalities of a GIS.

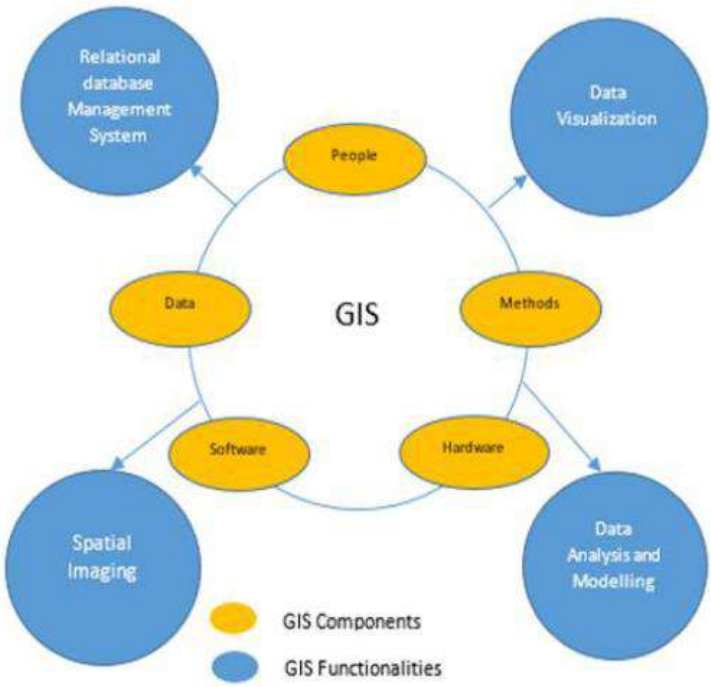

Figure 1. Key components and functionalities of a GIS

The key components of GIS are therefore:

- Hardware: This is the computers and connection devices on which the GIS software runs. These are usually in the form of laptops, desktops, mainframe & mainframe computers, and a variety of network devices.
- Software: This is the coded programs that provide the system the ability to store, manage, analyze, model and visualize the geospatial data. Software includes Relational Database Management system (RDBMS), Data Analysis procedures, Data Modelling procedures, and Data Visualization procedures.
- Data: GIS mainly handles and manipulates spatial or georeferenced data. However, it also has the capacity to integrate other forms of data from the RDBMS for purposes of presentation full information relevant for decision making.
- People: This is the human component of GIS. They represent the expertise required to

operate, maintain the system as well as those who use the system outputs in the dispensation of their work. This component encompasses IT technical experts, geographers, database experts, information specialists, graphics specialists, data analyst and various decision who ultimately use the GIS output information to make life saving decisions and interventions.

- Methods: These represent the procedures and rules that govern the way and purpose for which the GIS is used. GIS has plenty of applications in various spheres of human activity. Some of these applications include but are not limited to weather forecast, environmental monitoring, disaster and emergency management and business marketing.

Emergency management

Definition

The term "Emergency Management" is also often times used interchangeably with "Disaster Management". For purposes of this article the two terms will be used interchangeably to mean the same thing. The US Federal Emergency Management Agency (FEMA) defines Emergency Management as *"the managerial function charged with creating the framework within which communities reduce vulnerability to hazards and cope with disasters."*

Disaster is a source of danger whose evaluation encompasses three elements: risk of personal harm, risk of property and risk of environmental damage, and the acceptability of the level and grade of risk (Kovach 1995; Smith 1996). Hazard is the probability or chance of that hazard posed actually happening. Hazard is the potential (Smith, 1996) and disaster is the actual event (Drabek, 1997).

Risk is combination of likelihood and impact i.e. the probability of a hazard actuating and the impact it would have on the community and the environment. Consequently, risk can be reduced by preparing a suitable risk management strategy. Risk Management is a process consisting of well-defined steps, which when taken in sequence, support better decision making by providing greater insight into risks and their impact (Sai Global 2003). Risk management is important in protecting the community and environment, providing better information to support decisions, enabling better asset management and monitoring, and improving the perception of the community about risks (Abdalla & Esmail 2019).

Emergencies usually stem from disasters and turn into crises. Crises if not well managed usually have a high potential of resulting into other crises. While the most common disasters result from natural causes like earthquakes, fires, tornadoes, floods etc., many disasters and therefore emergencies are man-made. All disasters irrespective of their nature most often result in the loss of human lives, livelihood, animals, property and sometimes extensive damage to the environment. Disasters can be predictable or unpredictable, and their impact can be small scale or large scale, short term or long term. The goal of "Emergency Management" therefore is to determine the risk and to reduce its impact to the minimum possible.

The emergency management cycle

Figure2 depicts a four-stage emergency management cycle developed by the Federal Emergency Management Agency (FEMA). This model has been widely accepted and used in emergency management worldwide. The FEMA emergency cycle comprises of four stages: Mitigation, Preparedness, Response, Recovery.

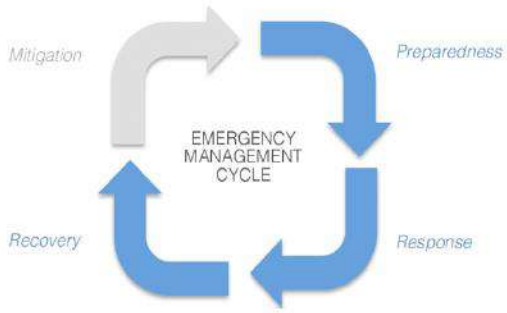

Figure.2. Emergency management cycle (Adopted from FEMA)

Emergency mitigation

This stage involves all actions and activities taken to either prevent the occurrence of a disaster or reduce the impact and consequences in the event of the disaster. Examples might include building dikes or flood barriers in case of floods, building bunkers in case of ballistic attacks, insurance policies to protect against losses etc.

Emergency preparedness

Beyond mitigation, the community must be prepared for the worst. This stage therefore involves all activities that would prepare the community to accept and deal with the disaster when it happens. This usually involves, creating business continuity plans, performing drills and exercises, prepositioning necessary supplies e.g. food, medicines etc., identifying emergency access and exit routes, educating the community on what to do or where to go or how to reach out for help etc.

Emergency response

Response occurs in the immediate aftermath of a disaster. During this stage community life and business are disrupted and all activities are mainly emergency and lifesaving. The length and effectiveness of the response is largely dependent on how well the preparedness stage was done. Activities involved in this stage are mainly activation of the business continuity plans, search and rescue missions, ensuring public and personal safety, and ensuring essential supplies like food and medicines are accessible to the community.

Emergency recovery

Recovery usually follows the response stage. There is, however, no clear-cut timeline between the two stage. Oftentimes the two stages happen concurrently once the initial response is completed. This stage often involves clearing of debris, reconstruction of damaged structures and infrastructure, provision of psycho-socio support to the afflicted communities, economic support to help businesses rebuild etc.

Frameworks for disaster management

The Sendai framework for disaster management was setup by the UN in March 2015, and is a non-binding agreement for UN member states. It is meant to provide guidelines at local, national, regional and international levels for understanding and reducing risk. The overarching goal being a “a substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural, and environmental assets of persons, businesses, communities, and countries” - UNISDR, 2016.

The United Nations Platform for Space-based Information for Disaster Management and Emergency Response (UN-SPIDER) is the primary UN organization designated for promoting space-based information for disaster management. The organization is directly bound to the Sendai Framework and is responsible for providing support to countries based on the priorities expressed in the Framework.

Literature review

GIS continues to gain recognition from Disaster Management practitioners and academic researchers in the field of Disaster Management (Tomaszewski, B. et al., 2015). Plenty of literature has been written on the use of GIS disaster and emergency management. GIS technology has encompassed almost all aspects of disaster management in all its four stages. In terms of where and what GIS technology can solve, Chris Ferner, a Disaster Response Technology Specialist from ESRI, thinks, *"Just about anything that has a 'where' can be collected and information can be shared. It can be used for everything from mapping locations of endangered frog species, to understanding the migration of languages spoken across the world. For natural disasters, it can help us see where the people who need food and water are to where our resources and first responders are being sent. Where isn't mapping technology applicable?"* – adopted from ESRI.

Map-based representations of disaster situations created via GIS are becoming crucial for supporting spatial thinking and maintaining situation awareness and common operating picture (Tomaszewski B. et al., 2015). Therefore, GIS applications in disaster management are progressively turning into a necessary component of disaster management in many parts of the world. Many studies have also highlighted the criticality of timely and accurate information in a disaster management operation. The spatial dimension of geospatial data makes it exceptionally critical for decision makers in the different phases of emergency management operations (Abdalla & Esmail, 2019).

The temporal nature of disasters does not allow policy makers and planners to have the right information at the ideal time to enable them respond and act appropriately and in a timely manner. Therefore, modelled disaster scenarios are used to derive preparedness as well as response measures (Becerra-Fernandez et al, 2008). According to Montoya-Morales (2002), most current tools used for disaster management focus on the temporal component of the four phases of disaster management, leaving an obvious gap in dealing with the spatial element (Abdalla & Esmail, 2019).

Several writers have also dueled on the topic of remote sensing techniques, GIS and GNSS as frequently used tools in disaster management applications for pre- and post-disaster activities. Pre-disaster applications are associated with mitigation and preparedness activities. Mitigation refers to the activities that reduce the vulnerability of a society to the impact of a disaster while Preparedness refers to activities that facilitate preparation for response to a disaster in case it occurs (Mansourian, 2005). According to Abdallah & Esmail (2019), GIS techniques are commonly used to analyze remote sensed data, enabling situation awareness, process comprehension and the identification of relationships between variables. The integration of GIS, Remote sensing and GNSS data may facilitate the comprehension of climate related disasters, the identification of slope instabilities (regional scale), understanding of geological and geomorphologic controlling factors of seismicity and the effects of earthquakes on ground structure and infrastructure. All this information facilitates the compilation of databases on natural disasters and supports humanitarian relief and disaster management activities (Abdalla & Esmail, 2019).

Methodology

In this study primary data was collected from a purposively selected population sample of 11 respondents of varying expertise and experience in the fields of GIS, humanitarian response and Information management. Data was collected through questionnaires sent out to a population of 38 purposively selected respondents out of which 11 responses were received. Since the study concerns itself with identifying the challenges of GIS application to Emergency Management in South Sudan, the research universe was limited to Non-Governmental Organizations (NGOs), the United Nations (UN), Universities and pertinent government departments working in the two fields of Humanitarian action and Disaster Management in South Sudan.

The study used the narrative data analysis method to analyze the data collected. This

analysis involved the following steps (Manu Bhatia, 2018):

- Getting familiar with the data: The researcher read through the data to decipher basic observations and patterns.
- Revisiting research objectives: the researcher revisited the research questions to see if they can be answered through the collected data.
- Developing a framework: This step involved coding or indexing, where by the researcher identified broad ideas and concepts and coding them. Coding is helpful in structuring and labeling the data.
- Identifying patterns and connections: Once the data was coded, the researcher identified themes, looking for the most common responses to questions, identifying data or patterns that can answer research questions, and finding areas that can be explored further.

Results

Table 1. illustrates the challenges analysis

The study results were summarized into five broad categories as follows:

C1: Dataset issues

- Cost of acquisition.
- Data accuracy issues in the South Sudan context.

C2: Technical capacity and training

- Lack local technical expertise in the field of GIS.
- No GIS Training centers or facilities in the country.
- Need for strengthened and enhanced training and capacity building sectors.

C3: Technological infrastructure

- Under developed national IT infrastructure.
- High cost of the internet bandwidth
- High cost of GIS software licenses
- high performance computer hardware that can adequately handle GIS processing.

C4: Political, governance and security

- Ongoing political unrest vast areas of the country are inaccessible.
- This inaccessibility impedes the accurate enumeration of the population necessary to accurately feed into national datasets for proper analyses and estimations.
- Disagreement on the number of provincial states. This has complicated the determination of substantive level 2 (state) and level 3 (county) political and geographical boundaries.
- GIS governance: challenge of lack of a governing body to promote and provide guiding policies for GIS usage and application as well as lobby for government support in this crucial area.

C5: Awareness and publicity

- Very few people and decision makers are actually aware of the usefulness and benefits of GIS let alone GIS itself.

Discussion

The challenges identified in this study were summarized into 5 broad categories with each category having a unique set of categories as pointed out by the respondents.

1. Feature dataset issues

"*A feature dataset is a collection of related classes that share a common coordinate system. Their primary purpose is for organizing related feature classes into a common dataset for building a topology, a network dataset, a terrain dataset or a geometric network.*" – desktop.arcgis.com

In this category 45.5% of the respondents felt that South Sudan still grapples with huge spatial data gaps. South Sudan, has been largely inaccessible for a long time given the long history of civil war and political unrest. Respondents, therefore, felt that this poses a major challenge on the availability of accurate datasets about South Sudan, to ensure accurate outputs. Another respondent pointed out that the current shape files are from Administrative level 0 to 2 (i.e. Country – State – County). There are no level 3 (payam level) Administrative shapes, where in fact, most of the humanitarian activities are conducted. This poses a challenge to how accurate humanitarian planning and therefore response can be. Some respondents cited the lack of clear administrative boundaries.

Lastly, respondents also pointed out the challenge of the exorbitant license fees to access reliable data sources with up to date data from the various satellite data vendors worldwide.

Overall, this category contributed 16.1% to the challenges based on the responses.

2. Capacity and training issues

72.7% of the respondents in pointed to the dire lack of capacity and training in the field of GIS in South Sudan. This deficiency is majorly attributed to a combination of factors, listed below:

a. Insufficient internal capacity in terms of technical know-how to advance the GIS discipline.
b. Lack of certified training centers offering Professional GIS certifications.
c. GIS as a discipline is not offered in any of the five national Universities in South Sudan to qualify a generation of professionals in this field.
d. Inadequate availability of GIS laboratories in the country to enhance GIS application and GIS practice.
e. Lack of nationwide capacity building in the field of GIS.
f. Limited capacity among the government staff.

Overall, this category contributed 25.8% to the challenges based on the responses.

3. Technological infrastructure issues

Technologically, South Sudan still faces huge Information Technology challenges. The nation largely depends on terrestrial internet for access to the world wide web. However, efforts are underway to extend the fiber optic cable from the neighboring country of Uganda to the capital city Juba. Accordingly, 63.6% of the respondents indicated challenges in this category. Among the challenges identified in this category are:

g. Underdeveloped internet infrastructure to support GIS activities. GIS is largely dependent on good and fast internet connectivity to support datasets download / upload and analysis.
h. Lack of access to licensed GIS Software. The high cost of GIS licenses poses a big hindrance to the practice of GIS especially at individual level.
i. Limited access to computer hardware with the appropriate capacity to handle GIS datasets, images, and software to run the complex analyses. This hardware is expensive and therefore is not affordable by a large segment of the South Sudan GIS community.

Overall, this category contributed 22.6% to the challenges based on the responses.

4. Political, governance and security issues

In this category, 45.5% of the respondents indicated that the political and security landscape of the country imposed another set of challenges to the proliferation of GIS in South Sudan. In addition to the inexistence or so of the appropriate government regulatory mechanism for GIS, there is a prolonged political dissent among the political actors in the government and nationwide insecurity. These factors have adversely affected the growth and use of GIS and impacted its accurate application in the humanitarian sector specifically. Additional factors cited include:

j. The nationwide insecurity which hinders humanitarian actors' access to the field locations and therefore affects the data collection and validation operations. This therefore means that to obtain data, remote sensing techniques have to be deployed.
k. Inexistence of a government sanctioned GIS regulatory authority to guide the use and growth of GIS in the country.
l. By default, emanating from point b. above, there is a lack of policies that promote the use of GIS.
m. At independence in 2011, South Sudan was administratively divided into ten (10) states. However, after the political fallout of 2013 which led to a protracted civil war, the country was further subdivided into 32 states. The recent political negotiations to end the civil war and political unrest have experienced arguments on the appropriate number of administrative states, with the opposition advocating for a return to the former 10 states administrative structure. Therefore, the changes in the administrative boundaries (from 10 states to 32 states) still causes confusion among GIS users.

Overall, this category contributed 16.1% to the challenges based on the responses.

5. Advocacy issues

The last category of challenges raised by the respondents in this study is the issue of awareness about GIS. Here 54.5% of the respondents indicated that there's little or no awareness at all about the uses and potential benefits of GIS in South Sudan within the Government sector, private sector and the Non-Governmental sector. Respondents acknowledged the importance of GIS as a Decision Support System but felt that it is absent in the various decision-making mechanisms due to acute lack of awareness and publicity, in South Sudan.

Overall, this category contributed 19.4% to the challenges based on the responses.

Conclusion

The goal of this study was to identify and highlight the challenges faced in application and use of GIS for Emergency and Disaster management in the context of South Sudan. A population sample of 11 respondents was purposively selected and the responses narratively analyzed. The findings were grouped into five categories: Feature datasets, capacity and training, technological infrastructure, political, governance and security and finally Advocacy issues. Respondents were assured of non-disclosure and asked not to include their identities on the questionnaires to ensure confidentiality and encourage openness and candidness in the responses.

Although the study highlighted the major challenges, there were a couple of limitations. Firstly, no responses were received from the NGO respondents despite the fact that they are major actors in the humanitarian response structure in South Sudan. Secondly, out of a targeted population of 38 respondents, only 11 responded to the study questionnaire. Although, this does not significantly affect the findings of the study, it would add weight to the conclusiveness of the study.

In conclusion, plenty of literature has been written about the use of GIS for Emergency and Disaster management, however, there has been none with specific focus on the South Sudan context. The findings of this study therefore a modest addition to this vital area of Emergency and Disaster Management.

Figures and tables

Table 1. Challenges Analysis Table

	Respondents												
Challenge	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	Overall Respondents %age proportion	Overall challenge %age proportion
C1:	1	1						1	1	1		45.5%	16.1%
C2:			1	1	1	1		1	1	1	1	72.7%	25.8%
C3:			1		1	1	1	1		1	1	63.6%	22.6%
C4:	1	1					1		1	1		45.5%	16.1%
C5:			1		1	1	1	1		1		54.5%	19.4%

C1: Feature Datasets issue
C2: Capacity and Training issue
C3: Technological Infrastructure issue
C4: Political, Governance & Security issues
C5: Awareness and Publicity issues

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Epidemiology Distribution of 48 Diagnosed COVID-19 Cases in Bangladesh: A Descriptive Study

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Abstract

In 8 March, 2020 COVID-19 was first confirmed in Bangladesh. We aimed to clarify the epidemiological distribution of first forty-eight confirmed COVID-19 cases in Bangladesh till 28 March, 2020. It was a retrospective descriptive study in Bangladesh from 8 March, 2020 to 28 March, 2020 on the basis of official press briefing of IEDCR on behalf of Ministry of Health in Bangladesh, different newspapers and online news portals. Among forty-eight cases, majorities (60%) were male and about 17% cases were unidentified. About 46 % cases were within 21-40 years of age. About 4% cases were from below 10 years of age and about 15% were from more than 60 years of age. About 12% cases age was unidentified. Mortality rate were also high in old age group. Total 11% cases were died from this COVID-19 and among them 40% were 70 years old. About 31% had travelling history from abroad. In case of 7% cases, their travelling countries were unidentified. Most of them (35%) were from Dhaka city. About 24% cases residence were not identified. About 33% of these 48 cases, they were exposed by their family members or community transmission. Only 10% cases were from health service and among them 60% were doctors/physicians and 40% were nurses. Majority of them (58%) were still remain in hospital or treatment purpose. About 11% were died and most of them were more than 65 years of age. COVID-19 is more dangerous in elderly male cases and mortality is also high in this group. Community gathering places like capital city of Bangladesh had high rate of COVID-19 occurrences. Direct transmission rate was higher rather than community/family transmission till to date.

Keywords: *Epidemiology, COVID-19, Diagnosed case.*

Introduction

The corona virus belongs to large family of enveloped RNA virus and causes an infectious disease named coronavirus disease or COVID-19. The COVID-19 virus spreads primarily through droplets of saliva or discharge from the nose when an infected person coughs or sneezes. It may cause various symptoms like high rise of temperature, difficulty in respiration including lung infection and pneumonia like symptoms. On 29 December, 2019 The World Health Organizations (WHO) addressed lower respiratory tract affecting coronavirus as 2019 novel coronavirus which was taken place in Wuhan, China. Later, it named as severe acute respiratory syndrome coronavirus-2 or simply SARS-Cov-2. It is thought that initially the virus had been transmitted from animal to humans. Subsequently the virus had travelled around the globe, and ultimately human-to-human transmission continues to be reported from different parts of the world.[1-3] Outbreaks in different countries prompted the Ministry of Health and Family Welfare (MoHFW) Bangladesh to equip its PCR lab at IEDCR (Institute of Epidemiology, Disease Control and Research) for testing samples from suspected COVID-19 cases for 2019-nCov. Till 28 March, 2020, 176 countries including Bangladesh, have reported total 597,335 confirmed cases of

COVID-19, leading 27,365 deaths over the world. In Bangladesh, first case of COVID-19 was declared on 8 March, 2020 after testing through RT-PCR on 7 March, 2020. Since then till 28 March total forty-eight confirmed case including fifteen recovery and five deaths.[4]

Materials and Methods

Study Design

It was a retrospective descriptive study of forty-eight confirmed COVID-19 cases in Bangladesh from 8 March, 2020 to 28 March, 2020 on the basis of official press briefing of IEDCR on behalf of Ministry of Health in Bangladesh, different newspapers and online news portals.

Study population

First forty-eight confirmed COVID-19 cases in Bangladesh till 28 March, 2020.

Study period

From 8 March, 2020 to 28 March, 2020.

Selection criteria

Study population was selected after confirming positive result of COVID-19 by Real-Time PCR (RT-PCR) and this was done in single test center in Bangladesh, named IEDCR (Institute of Epidemiology Disease Control and Research).

Data collection technique

We gathered epidemiological, demographical and outcome data of those forty-eight confirmed COVID-19 cases from official press briefing of IEDCR on behalf of Ministry of Health in Bangladesh. News and information related to COVID-19 in Bangladesh from various newspapers and online news portals were also reviewed.

Analysis procedure

We extracted all the data from the case reporting system, and removed the personally identifiable information of all cases during the analysis to protect personal privacy. If a patient was engaged in any form of work in a medical institution, the occupational variables are classified as health-care provider (that is, this category includes not only doctors and nurses).

If the patient had recently lived in abroad, or had traveled. If people have close contact, they are classified as having travelling history. This data analysis relates to information collected from 8 March, 2020 to 28 March, 2020 in relation to outbreak handling of COVID-19 epidemic situation in Bangladesh.

Results

Total forty-eight confirmed cases of COVID-19 were obtained for this study. Diagnosis was confirmed by RT PCR. Among forty-eight cases, majorities (60%) were male and (23%) were female. About 17% cases were unidentified (Figure 4). About 46 % cases were within 21-40 years of age. Extreme age variation was also present. About 4% cases were from below 10 years of age and about 15% were from more than 60 years of age. About 12% cases age was unidentified. Mortality rate were also high in old age group. Total 11% cases were died from this COVID-19 and among them 40% were 70 years old and 20% were 73 years, 69 years and 65 years old (Figure 2). About 31% had travelling history from abroad and among them 39% came from Italy and 13% came from the USA and other European countries. About 7% came from India, Kuwait, Bahrain and Saudi Arabia. In case of 7% cases, their travelling countries were unidentified (Figure 8). According to the distribution of their residence, most of them (35%) were from Dhaka city. About 21% from Madaripur and 6% from Narayanganj. About 24% cases residence were not identified (Figure 5). About 33% of these 48 cases, they were exposed by their family members or community transmission (Figure 10). Most of the cases (90%) didn't belong to health care services. Only 10% cases were from health service and among them 60% were doctors/physicians and 40% were nurses (Figure 9). Majority of them (58%) were still remain in hospital or treatment purpose, 31% were discharged after recovery and findings 2 consecutive negative sets of result of nasopharyngeal and throat swabs collected $\geq$ 24 hours apart from a patient with COVID-19. About 11% were died from this disease and most of them were more than 65 years of age (Figure 7).

Discussion

COVID-19 is more dangerous in elderly male cases and mortality is also high in this group as most of them were already sufferer from different type of comorbidity which decreased their immunity level and smoking habit was much common in male group which already diminished their normal lung functions and stimulated COVID-19 to affect the respiratory system easily.

Community gathering places like capital city of Bangladesh had high rate of COVID-19 occurrences. Direct transmission rate was higher rather than community/family transmission till to date and majority of them also didn't have any travelling history at all, so chance of direct transmission of COVID-19 was much higher than community transmission. In Wuhan, China COVID-19 was predominant in elderly male group also. Recovery rate from COVID-19 was almost equal in between Bangladesh and China.[3]

Figure 3 showed the gradual increase of confirmed case over time and also death due to disease. The time duration between confirmation of disease and death was near about twelve days in Bangladesh though those two cases were not same but it gave a clear idea about incubation period of COVID-19 which was about fourteen days and this time limit is very much important for quarantine process. Figure 01 showed about the total number of home quarantine and also the total number of completed home quarantine. Number of quarantines was much higher around Dhaka city as most of earning youth group with their family live in Dhaka for their job purpose. It leads to aggravate the community transmission.

Conclusion and Recommendations

COVID-19 is more dangerous in elderly male cases and mortality is also high in this group. Community gathering places like capital city of Bangladesh had high rate of COVID-19 occurrences. Direct transmission rate was higher rather than community/family transmission till to date. Quarantine does not work if the population is insensitive. Safety of healthcare workers is of prime importance now. All doctors should be armed with all out personal protective equipment (PPE) immediately. Quarantine enforcement should be the responsibility of public administration and law enforcers. Ministry of health should hand over this responsibility to relevant people. COVID-19 outbreak is a public health emergency of international concern. Detecting infection is the key to preventing spread. Priorities for the combat against the COVID-19 Pandemic includes: protecting health workers, engaging communities to protect those at highest risk of severe disease (e.g., older adults and those with medical comorbidities), and supporting vulnerable communities in containing infection.

Screening for international travelers especially those from areas with ongoing transmission of COVID-19 virus to identify individuals with fever, cough, or potential high-risk exposure. Quarantine is a must for such individual's institution quarantine for those with fever and supervised strict home quarantine for those without fever. Everyone returning from abroad should be convinced that even if they were apparently healthy, they could be carrying the COVID-19 virus which they could spread to their dear ones unless they were cautious. Any one postponing quarantine or ignoring quarantine request may be considered as enemy of the society and dealt with accordingly. Recently Government gave permission for performing RT-PCR for detecting COVID-19 in some institutions followed by IEDCR (Table 1). This could help us in detecting COVID-19 as early as possible and thus would help combatting this pandemic disease.

Figures and tables

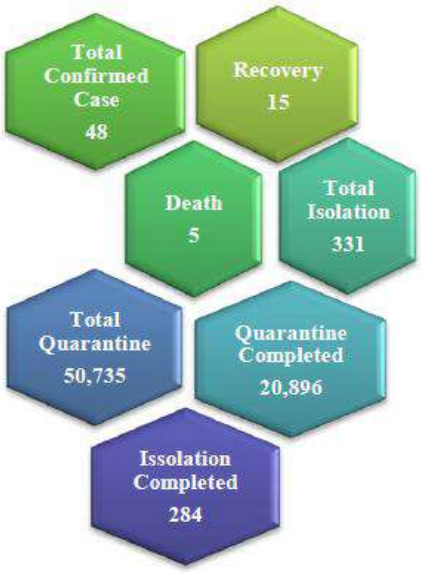

Figure 1. Overall scenario of COVID-19 in Bangladesh up-to 28 March, 2020 [5]

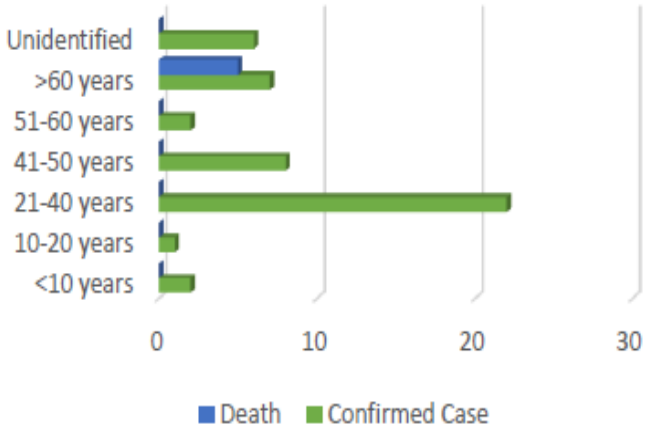

Figure 2. COVID-19 Cases and Deaths by Age[1-14]

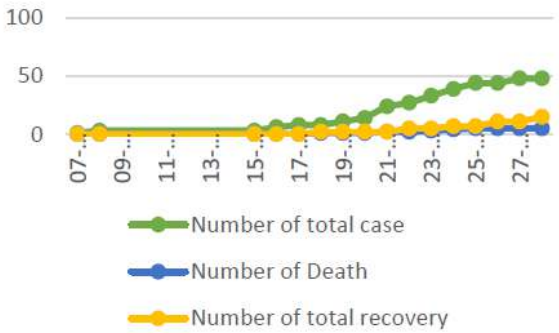

Figure 3. Number of total cases, total recovery and total death over time[1-14]



Figure 4. COVID-19 confirmed cases and death by gender1-14

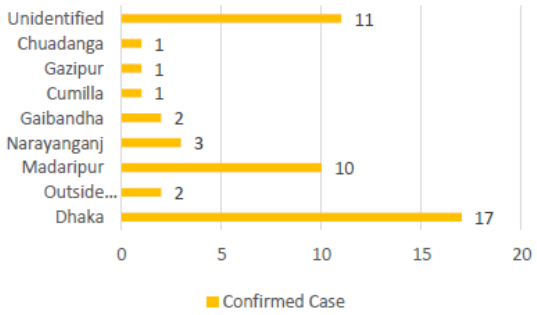

Figure 5. District wise Distribution of Confirmed Case1-14

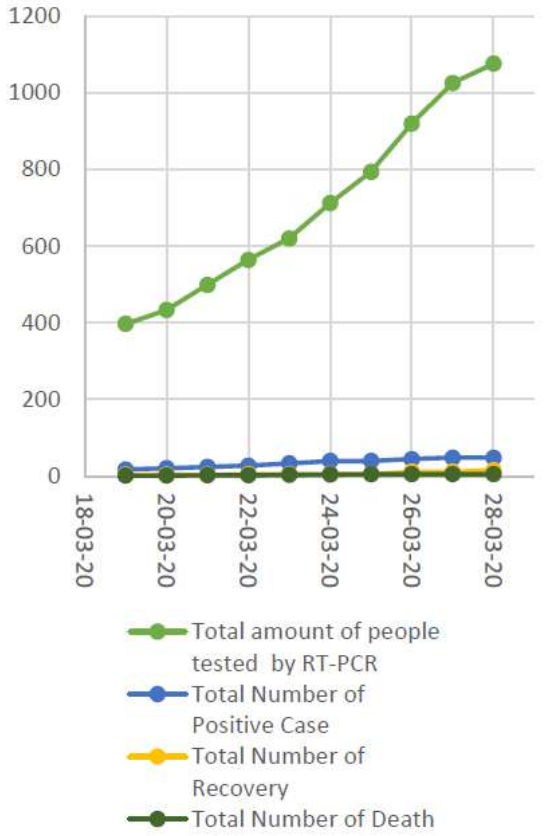

Figure 6. Confirmation and Outcome of COVID-191-14

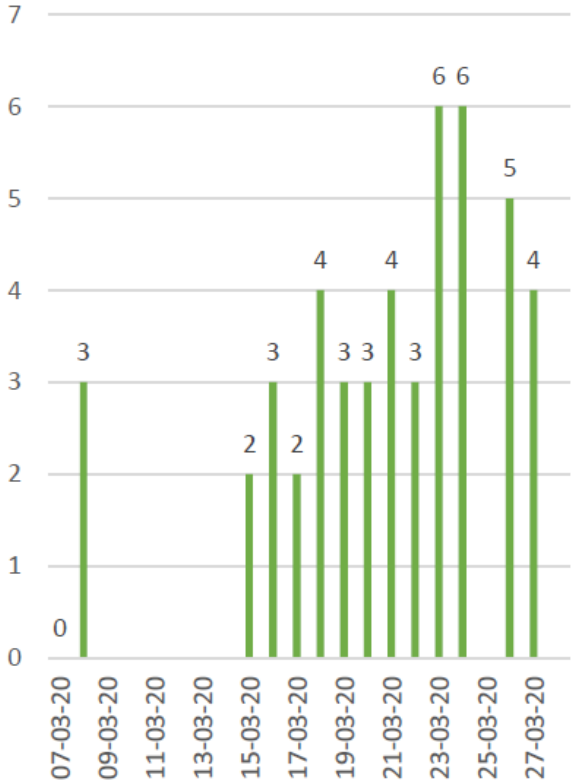

Figure 7. Frequency Distribution of Confirmed Case1-14

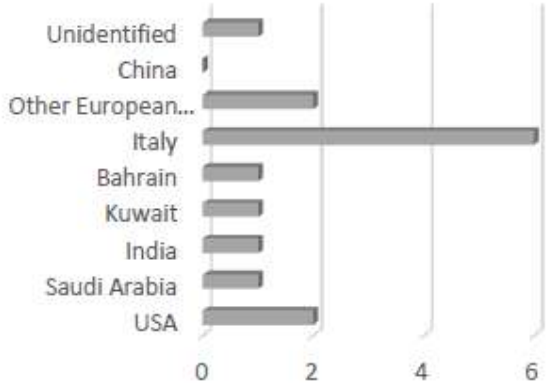

Figure 8. Confirmed cases by Travelling Countries[1-14]

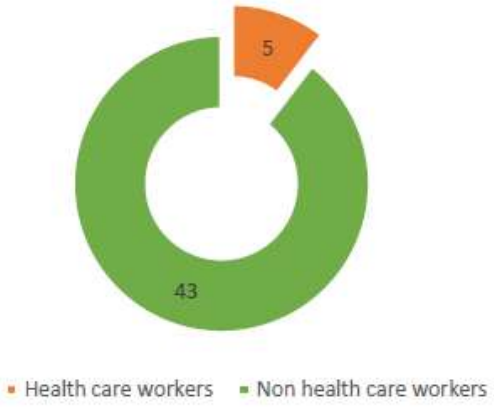

Figure 9. Confirmed Case by profession (Health related)[1-14]

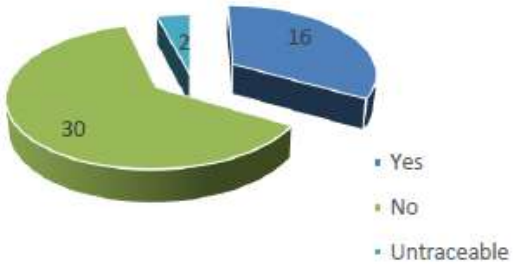

Figure 10. Confirmed cases according to family/community relation to expossure[1-14]

Table 1: Permitted Institution for performing RT-PCR in Bangladesh since 28 March, 2020

Inside Dhaka	**Outside Dhaka**
IEDCR	Mymensingh Medical College and Hospital
Dhaka Shishu (Children) Hospital	Rajshahi Medical College and Hospital
Dhaka Medical College and Hospital	Khulna Medical College and Hospital
Institute of Public Health (IPH)	Rangpur Medical College and Hospital
Sir Salimullah Medical College and Hospital	Bangladesh Institute of Tropical and Infectious Diseases
ICDDR, B	

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Study of Marketing and Processing of Mushroom Production with a View to Increase Income among Local Mushroom Producers in Zambia

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Abstract

This research is about the adoption of mushroom farming as a source of income generation by smallholder farmers in Zambia. Mushroom farming business specialize in growing mushrooms. These mushrooms are used by customers for either medicinal or culinary purposes, depending on the type of mushroom grown. Additionally, they may be sold wholesale to clients or at retail prices. A mushroom farm business' ideal customer is a restaurant that focuses on using locally sourced ingredients. Restaurants and Hotels will have regular orders that provide stable income. Through the literature review and the study, it was found that the mushroom production is profitable because it has a huge market within Zambia and also that it is climate independent and it doesn't require a large land for production. To accomplish the objective of the research the following research questions were formulated: What is the farmers' knowledge on mushroom farming? What is the willingness of farmers to do mushroom farming? To answer these questions three focus groups and three interviews were undertaken. The focus groups consisted of producers, traders and established company doing mushroom production. Based on these results the research concluded that there are knowledge gaps among the Mushroom farmers especially on Marketing and Processing skills. It was also evident that there are very few established companies in Mushroom production and have monopolized the production of mushroom. There is a lot of potential yet for mushroom farming locally since there's such a large amount of organic waste products to contend with.

Keywords: *Mushroom farming, Market strategy, Income generation.*

Introduction

A mushroom is the fleshy, spore-bearing fruiting body of a fungus, typically produced above the ground on soil or on its food source, mostly in forests *(Hafiz F, et al, 2003).* It is perhaps the most well-known and documented edible forest product. Although not yet as popular as crop farming or fish farming, mushroom farming does hold its own unique prospects in Zambia. Despite Zambia having a climate that is favorable to the natural growth of mushroom, mushroom production in Zambia is still in its infancy.

Mushrooms are fungi. They belong in a kingdom of their own called fungus, separate from plant and animals. Fungi differ from plant and animals in the way they obtain their nutrients. The word "mushroom" means different things for different people in different countries. They do not have green chlorophyll and so do not manufacture their own foods. It possesses microscopic spores, which serves as a means of reproduction *(Chang & Mshigeni, 1997).*

Mushrooms are of different kinds. The edible mushrooms have medicinal importance while the others are non-edible *(Sergeeva, 2000*). There are two main types of mushrooms: *mycelial* and *mycorrhizzal*. Essentially all the cultivated types are mycelial and can grow wherever there is an appropriate growing medium.

The demand for mushrooms is booming in Zambia these days because of increase of hotels, restaurants and other exotic places in the country. Despite the clear benefits of mushroom production for smallholders, the potential of mushroom production remains unexplored. This may be linked to the common belief among farmers that there is no market for mushrooms. However, there are indications that suggest that there is, in fact, there's significant unmet demand for mushrooms in Zambia especially in the dry season *(Chang & Mshigeni, 1997).*

Purpose of study

The demand for mushrooms is on the increase, and is bound to even increase more. Stores, hotels, hospitals, restaurants and individuals will continue to demand for it, and for the farmer who is ready to put in the effort, the reward will be reaped in due time. The following are the main objectives of the study:

i) To analyze the profitability of Mushroom production and problems in Mushroom marketing

ii) To examine the role of producers and traders in Mushroom value chain process

iii) To offer suggestions on the measures to improve the marketing efficiency of producers and processors

Problem statement

There is little knowledge about Mushroom cultivation amongst the small-scale farmers in Zambia hence there are missed opportunities to make income from the small-scale farmers in Zambia, though most farmers have a negative approach towards Mushroom production. Zambia's climate favors natural growth of mushroom but this is on a seasonal basis. Cultivating of Mushroom when it's not in seasonal would result in income generation especially that the demand for Mushroom is on the increase, and is bound to even increase more. Stores, hotels, hospitals, restaurants and individuals will continue to demand for it, and for the farmer who is ready to put in the effort, the reward will be reaped in due time.

Existing solutions

- Make awareness of the benefits of cultivating Mushrooms.
- Since most farmers don't know how to cultivate Mushroom, workshops on how to be cultivate, market and produce mushroom are essential.

Best one

There is a huge market for Mushroom in Zambia. The value addition which comes with the scarcity of mushroom during its off season need to be explored in Zambia. The urban population has changed their options on mushroom because some time back, people were skeptical when it comes to consuming mushroom because little was known on mushroom and people were scared to end up consuming poisoners Mushroom. The best solution is to spread awareness on the edible mushroom and how to grow it.

Limitations

Seasonality of the natural growing of mushroom production leads to low prices at the time of mass production is at the base of mushroom value chain limitations. In addition, transport costs may be incurred in the process of following the urban markets and this can render distortion of prices. Lack of investment programs in establishment of processors has led to limiting the marketing avenues available for mushroom production.

Achievements

As a country there is still a lot of struggle to harness from mushroom production in Zambia. However, there is one mushroom producer well known in Zambia namely JIHAI Investment Zambia. JIHAI investment Zambia has since been cultivating, marketing and producing mushrooms at a higher scale throughout the year.

Some of the small-scale farmers have started producing cultivated mushroom.

Methods

This study undertook a survey in the eastern region of Zambia. Qualitative and quantitative data was collected based on informal interview of key respondents, and structured interviews of mushroom producers and traders. In this case, the Producers are defined as those who grow or gather mushroom from the wild and do not engage in trading of the product. Traders are those who engage in bulk buying and take to large markets mostly in urban areas.

Primary data collection

Primary data was collected using interview and well-structured questionnaires from 60 Mushroom producers and 20 traders. The study only managed to interview only one processor namely JIHAI Investment Zambia who are found in the Lusaka, the capital city of Zambia.

Purposive Random sampling was done and the study settled for a sample size of 60 Mushroom producers that were grouped in five (5) focus group discussions to establish the avenues of sell, and the profitability of mushroom production. In the same vein, individual interviews were conducted to the seven (19) mushroom traders.

Only one processor was available to be interviewed for the study to establish the profitability of the mango processing industry.

The groups were chosen strategically in that the group near the town was expected to have slightly different income generating activities than the ones further away from the town. Their access to market for the market was also assumed to differ and also land access.

Secondary data collection

Secondary data was collected from the internet, journals of previous papers on mushroom production value chains, offices of government departments such as Ministry of Agriculture, Ministry of Commerce and Trade. Central Statistics Office and local libraries were some of the places where secondary data was collected.

Quantitative analysis

Quantitative analysis was done through collecting data through a survey from the producers, traders and processors in Eastern Region of Zambia. This was done in order to give an indication producing and trading benefits and problems encountered in the Mushroom value chain.

The researcher prepared the trading, profit and loss accounts in order to establish the profitability of both producing and selling mushroom. This is shown in table on page 14 in this paper.

Results

The results found from the interviews was that that each group of participants had particular results:

- Focus group discussion for the producers, there is so much loss at in terms of profit. Since when there is mass production, the prices of mushroom become low. And sometimes the mushroom goes to waste since there is no meaningful storage to prevent rotting.
- The production practices are not up to standard to get maximum yields and hence get maximum profits
- The producer always relies on the trader to purchase the commodity. They do not pursue the urban markets
- The cost of producing and gathering of mushroom is low.
- There are no organized markets where the producer is able to take their produce for sale.
- If the mushroom isn't cultivated, then the producers only have access to the mushroom once a year from November to February.

i) Individual Trader interview findings

- They struggle with proper storage of Mushroom when there is mass production of mushrooms especially in the rain season when abundant of it is naturally grown.
- They have to incur storage cost to redeem some of the Mushroom they buy/sale
- The transportation cost is very high
- They get mushroom from far remote areas.
- There is no organized market for the traders
- They incur utility bills such as electricity
- They have difficulties in setting prices
- There are so many on the market during the production season

ii) Mushroom Production Company

- The company has monopoly of producing and selling of mushroom at a competitive price
- Incur high utility bills such as electricity and water
- The production costs are very low but the returns are very high.
- It needs technical knowhow to produce mushroom to the required standards
- Competition in mushroom production is very low.
- They sell their mushroom produce to hotels, restaurants and supermarkets.

Discussion

A mushroom is the fleshy, spore-bearing fruiting body of a fungus, typically produced above the ground on soil or on its food source, mostly in forests *(Hafiz F, et al, 2003).* It is perhaps the most well-known and documented edible forest product. Mushrooms are fungi. They belong in a kingdom of their own called fungus, separate from plant and animals. Fungi differ from plant and animals in the way they obtain their nutrients. The word "mushroom" means different things for different people in different countries. They do not have green chlorophyll and so do not manufacture their own foods. It possesses microscopic spores, which serves as a means of reproduction *(Chang & Mshigeni, 1997).*

Mushroom farming business specialize in growing mushrooms. These mushrooms are used

by customers for either medicinal or culinary purposes, depending on the type of mushroom grown *(Noble, 2005)*. Additionally, they may be sold wholesale to clients or at retail prices. A mushroom farm business' ideal customer is a restaurant that focuses on using locally sourced ingredients. A restaurant will have regular orders that provide stable income. A restaurant that focuses on serving locally sourced foods will be less likely to purchase their mushrooms from a large supplier that's in another state *(Noble, 2005)*. There is a lot of potential yet for mushroom farming locally since there's such a large amount of organic waste products to contend with. What would be considered as waste for the organic farmer is a substrate for the mushroom farmer *(Mshigeni & Chang, 2000)*.

The impacts of the mushroom business on livelihoods and poverty reduction are significant and wide-spread. Mushroom cultivation does not require a lot of land and is a viable and attractive activity for both rural farmers and urban dwellers. Mushroom growing does not require significant capital investment and the scale of cultivation can be large or small based on the capital and labor availability. It can be cultivated on a part-time basis with little maintenance.

The understanding of the benefits by the participants was varied as shown in the following points:

- Source of income for households producing them. Sale of mushroom can earn the household's extra income above their normal farming activities. This was alluded to by all the participants, this shows extensive understanding pertaining to income from mushroom.
- Maximum utilization of space. This was very attractive for the farmers who have small land or landless since mushroom production needs a small space which can even be in the main house. Mushroom farming may have provided a very convenient way of farming from limited space.
- Season independent. Since the mushrooms are grown in a controlled environment they can be grown at any time of the year. This makes them able to spread their labor throughout the year as other farming activities were dependent on the rainfall.
- Consumption of mushroom. This means that even if they are not sold to get income they can be consumed as food and above food they had medicinal value. This means that the more you consumed mushroom the more your immunity grew strong.
- It's a diversification option for households. This means that the household will have more farming activities hence distributing the risks associated with farming especially in drought prone areas.

The Zambian economy is further shrinking with the falling international Copper prices of its main foreign exchange earner on the global market. Climate change is also negatively affecting the Agriculture sector its number two foreign exchange earner. While the copper mineral could be exhausted agriculture development requires rethinking with a holistic approach to give it the expected economic benefits under the current change scenarios. This aspect is currently not well considered and planned for. While there could be so many possible interventions at the national level including for the agriculture sector, studying the agribusiness potential with a view of promoting an informed decision making for diversifying from the mono crop maize to growing mushroom able to fair well under changing climate is the right beginning.

The demand for mushrooms is booming in Zambia these days because of increase of hotels, restaurants and other exotic places in the country. Despite the clear benefits of mushroom production for smallholders, the potential of mushroom production remains unexplored. This may be linked to the common belief among farmers that there is no market for mushrooms. However, there are indications that suggest that there is, in fact, there's significant unmet demand for mushrooms in Zambia especially in the dry season *(Chang & Mshigeni, 1997)*.

Most of the mushrooms supplied to the Zambian market are picked from forests during the rainy season, which is between November and March. One reason why potential investors or farmers should consider mushroom business is that during the dry season, mushroom becomes increasingly scarce and the market is starved of constant supply until the next wet season. This makes the supply of mushrooms very seasonal, not just in Zambia, but in many parts of the world where they serve as food. As a result, mushrooms can fetch much higher prices during the dry season, which is May to October when the supply often does not keep up with the demand. This is

why farmers should consider cultivating mushroom for profit making all year round.

Mushroom production has been described as the most versatile and prolific agriculture and forestry venture all over the world. The Food and Agriculture Organization (FAO) has been actively promoting mushroom cultivation for rural development and food security in developing countries like Zambia *(FAO, 2011)*.

Mushroom production creates a zero emission, that is adjusting and maintaining a dynamic balance within the ecosystem by turning waste into something useful in a sustainable manner. Mushroom production provides gainful employment to youth and rural women. It can earn foreign exchange from exports as well as reducing food scarcity in the society. As funding to promote the production and consumption of mushrooms is limited, local governments and NGOs can play vital role to develop mushroom agriculture to arise at industrial level which can create ample employment opportunities both in semi-urban and rural areas.

Mushroom is a high value niche product with great potential to contribute to enterprise diversification and poverty alleviation by utilizing agricultural wastes, thus providing an environmentally friendly disposal system *(Matila et al, 2002)*. Mushroom cultivation can help reduce vulnerability to poverty and strengthens livelihoods through the generation of a fast yielding and nutritious source of food and a reliable source of income *(Marshall and Nair, 2009)*. Mushroom cultivation activities can play an important role in supporting the local economy by contributing to subsistence food security, nutrition, and medicine; generating additional employment and income through local, regional and national trade; and offering opportunities for processing enterprises *(Matila et al, 2002)*.

Mushrooms can be successfully grown without access to land, and can provide a regular income throughout the year. Growing mushrooms also helps avoid some of the challenges facing collectors of wild fungi, including species identification, obtaining access and permits for collecting, and practicing sustainable harvest *(FAO, 2011)*. Cultivation is also independent of weather, and can recycle agricultural by-products as composted substrate which, in turn, can be used as organic mulch in growing other horticultural crops, including vegetables *(Marshall and Nair, 2009)*.

Successful marketing strategies differ according to region, transport infrastructure, market accessibility and consumer preferences *(Beetz & Kustudia, 2004)*. They are different for fresh and dried mushrooms, and are influenced by the species. For example, locally-grown mushrooms have an advantage over imported ones because of their very limited shelf-life and their fragility, making it difficult to ship them easily. Similarly, mushrooms for fresh use tend to be grown near urban consumers, while farmers situated some distance away from their consumer base, market their product after processing *(Mshigeni, & Chang. 2000)*. Establishing a good relationship with a buyer by delivering a reliable quality and quantity of product is fundamental. It is important to start modestly and secure a buyer or small network of buyers to whom one can deliver a reliable supply *(Beetz & Kustudia, 2004)*.

The marketing strategies will include and not limited to the following tools that will help the firm thrive and be able to sell more of the mushroom. These are called the 7 Ps of marketing namely Product, price, promotion, people, physical evidence, place and processes. For the mushroom business to survive in their marketing strategy and ultimately in the strategic planning and the set-out goals that encompasses profitability, the marketer should make sure that the market mix of the 7Ps is taken care of. For example, promotion of the product would be in many ways such as branding the product and advertise in a way that the customers are able to find the product. The mushroom business must be able to communicate to the customers what they are selling and the benefits that are derived from the product. For the mushroom business we have already seen how beneficial the mushroom is and those benefits must be communicated to the customers and producers of the products. Promotion is also embedded in the digital marketing where for example the media is used to communicate to customers the potential and goodness of the mushroom. The computer age has made it easier to sell on internet and to all places. The place now is wherever someone is able to communicate on internet they are able to access a product. This works to reach out almost all people who is able to access social media.

JIHAI Investment Zambia have branded their mushroom products and according to proprietor. And branding has helped them to sell and

penetrate the market that was already has little or no competition.

Conclusion

Mushroom cultivation should be considered a preferred activity for development programs targeting income generation among smallholder farmers in Zambia because it is suitable for the smallholder farmer's life style. The product is highly nutritive and a good food for their children and old parents, and because of its high economic value they can also earn some income from the production. Though the small-scale farmers who participated in this research do not fully understand the benefits associated with mushroom farming. There is a need to emphasize in detail the benefits of mushroom farming during workshops, trainings or any other means of awareness so that the farmers can fully understand the benefits of mushroom farming.

Popularity of mushrooms is ever increasing throughout every part of the world because of its exotic flavor and their culinary properties whether eaten alone or in combination with other foods. But until now, it is not well known that mushrooms are full of nutrients and can therefore make a very important contribution to human nutrition. Thus, mushroom cultivation may reduce poverty and improve the life style of many poor farmers in Zambia.

Figures and tables

Table 1. Respondents background information

	Producers groups	Traders group	JIHAI Investment Zambia
AVERAGE LAND SIZE	**0.30- 1.5 Acres**	**0.25- 1.5 Acres**	**2 Hectares**
HOUSEHOLD SIZE	4-7 Members	2-6 Members	N/A
ACTIVITIES	Farming Maize, goat and cattle rearing.	Farming Maize, goat and cattle rearing, gardening.	-mushroom cultivation -branding, Selling -Marketing.

Table 2: Claims and Benefits according to respondents.

	Producers groups	Traders groups	JIHAI Investment Zambia
Benefits	-Income, -A source of food -maximum utilization of small land -Season independent	-Income. -Medicinal value. -Food. -Constant supply	-Income Diversification opportunity. -Constant production hence spreads labour -maximum utilization of small land (high returns per unit area) -Not climate dependent. - providing employment
Claims	-mushroom has short life span -Lack of market. -High initial investment. -High labor requirement- -To get seeds is a problem	-High capital demand. -Lack of market-sold at local market -marketing the product is too involving.	-High capital investment. -High initial labour requirement. -Lower prices than expected -Low yields in periods of water shortage. -Diseases common. -High water usage. -Fluctuation of prices.

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Socio-Demographic Characteristics and Mental Stress of Female Sex Workers

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Abstract

Sex work is a major public health problem worldwide. Although prostitution or sex work is a global and deeply rooted social phenomenon, substantial disparity exists in its perception, depending on different social and cultural factors. Women engaging in sex work may be exposed to serious health risks and exposure to highly stressful life events which may have long term implications on their mental health. This cross-sectional study was done in drop-in center 'Swajan-33' in Sylhet district within a period of one year among 105 respondents aged of 14 to 38 years of age to assess the association between their socio-demographic characteristics and mental stress. Data were collected by face to face interview through a pretested structured questionnaire. Perceived Stress Scale was used to assess the level of mental stress. Data collected from purposively selected respondents. The analysis of data reveals that, more than half 53.3% of the respondents were in age group between 14 to 23 years and their mean age was 23.98 years with SD±6.099 years, Muslim 65%, illiterate 49.5%, majority 59% had daily income of 600-1000 taka. The finding of this study showed that 85.7% were suffering from high perceived stress and 14.3% were suffering from moderate stress. Age, level of education, income was not associated with level of mental stress (p>0.05). Literacy rate among the female sex workers are still low and invariably they are suffering from high perceived mental stress. Policies for their financial independency such as technical education, allocation of isolated educational institution, increasing social support may help them to lead a prosperous life.

Keywords: *Female Sex Worker, Socio-demographic, Mental Stress*

Introduction

The sex market is flourishing at an unprecedented rate and affecting each strata of the society. To encounter the ever spreading and miscellaneous sex demand of sex market in the recent years, more and more children and adult women have inducted in this booming trade. Commercial sex takes place in many kinds of fashion and includes many divergent types of people, many of them those are in no way stereotypical. People from different backgrounds and classes sell sex and they do so for an extensive range of reasons. In fact, between the educated, ingenious and resourceful woman who chooses commercial sex from a broad range of possibilities and the poor, illiterate woman who is physically forced to do it, there is an integral continuum of situations.[1]

The Sustainable Development Goals (SDGs) are a collection of 17 global goals set by the United Nations. The broad goals are interrelated though each has its own targets to achieve. The total number of targets is 169. The SDGs cover a broad range of social and economic development issues. These include poverty, hunger, health, education, climate change, gender equality, water, sanitation, energy, environment and social justice in sustainable development goals we have a goal to reduce inequalities. Being disadvantaged group of population, they often suffer from health problems, coercion and stigmatization. Sex workers have more mental health problems than the general population. Some believe that it is their mental health problems that got them into sex work in the first place, while others think it is the nature of their job from social stigma, to legal and health risks, to exposure to violence and abuse that

causes their mental health to suffer. So, this group of population has public health importance. This group of marginalized women has major mental health needs that are currently unidentified and unmet. From a public health perspective most, research has focused on sexually transmitted disease, reproductive health behaviors, social support and condom use but less on mental stress with psychological factors. So, evaluations are required that focus on this populations to understand the precise context of their mental stress.

Materials and Methods

This cross-sectional study was done in drop-in center 'Swajan-33' in Sylhet district within a period of one year among 105 respondents aged of 14 to 38 years of age to assess the association between their socio-demographic characteristics and mental stress.

Selection criteria

Female sex workers were selected purposively by using the following inclusion criteria:

Inclusion criteria

1. Female sex worker available at drop-in center during data collection.
2. Willing to participate the study.

Exclusion criteria

1. Severely ill or mentally unstable.
2. Who are not willing to participate.

Sampling technique

As the target population was female sex workers so sex workers who willingly participated was included as a respondent, so the study demanded purposive sampling.

Research instruments

All the information was collected by face to face interview through a semi-structured questionnaire to assess socio-demographic status and perceived stress scale was used to assess level of mental stress.

Perceived stress scale score

PSS scores are obtained by reversing responses (e.g., 0 = 4, 1 = 3, 2 = 2, 3 = 1 & 4 = 0) to the four positively stated items (items 4, 5, 7, & 8) and then summing across all scale items. A short 4 item scale can be made from questions 2, 4, 5 and 10 of the PSS 10 item scales.

Interpretation of Mental stress based on PSS scale:

1. 0-13 = Low stress.
2. 14-26 = Moderate stress.
3. 27-40 = High perceived stress.

Results

About half 53.3% of the respondents were under the age group between 14-23 years. Other age groups 24-28 years 21%, 29-33 years 16.2%, 34-38 years 9.5% respectively (Figure 1). Majority of the respondents 65% were Muslim, 32% were Hindu and only 3% respondents were Christian (Figure 2). Near about half of the respondents 49.5% were illiterate, less than half 43.8% reported that they had completed their primary education and only 6.7% respondent had completed their secondary education (Figure 3). Among the respondent's majority 61% were involved in this occupation for a duration of 1–5years. About one third 30.5% respondents engaged in sex work for a duration of 6 –10years and 8.6% for a duration of 11- 15 years. The mean duration of sex work among all the study participants was 5.16 years. Out of 105 respondents about 39% were housewives followed by 37.1%-day laborer, 1% service holder and 22.9% do some other work like maid servant, selling cosmetics along with sex work **(Figure 4).** Maximum income was 1500 taka per day and minimum income of the respondents was 200 takas. Mean income of the respondents was 682.86 taka, with SD±293.669. More than half 59% people had an income range of 600-1000 taka per day, about 33.4% of the respondent's daily income were in range of 200-500 taka and 7.6% people had a daily income range between 1100-1500 taka. Half of the respondents 41% were found married, 39% were unmarried, 10.5% were divorced, 2.9% were widow and 6.7% were living separately from their husband **(Figure 5).** Out of 105 respondents most of them 85.7% were suffering from high perceived mental stress and 14.3% were suffering from moderate stress **(Figure 6).** Age, level of education, income, marital status was not associated with level of mental stress ($p>0.05$).

Discussions

In present we found among 105 respondents; 22.9 % respondents were from the age group 14-18 year. About half of the respondents 51.5 % between 19-28 years. 16.2 % respondents were aged between 29-33 years and minimum number

of respondents 9.5 % were between 34-38 years. Their mean age was 23.98 years (SD± 6.099) with the minimum 14 and maximum age of 38 years. A study was conducted in KwaZulu-Natal, South Africa among female sex workers reported that majority 60.6 % belong to the age group between 18 to 30 years.2 Majority of the respondents 64.8 % were Muslim, about 32.4 % were Hindu and only 2.8 % respondents were Christian. Regarding education level of the respondents nearly half 49.5 % were illiterate, about 43.8 % respondents had completed their primary education while about 6.7 % respondents had completed their study up to class 8. A study conducted in Nepal among same population, reported that majority 59.1 % of the respondents were illiterate and 25 %completed above primary education.[3] The mean length of involvement in the sex industry was 5.16 years and SD ± 3.352. Majority of the women 61 % reported involvement in this profession for 1 to 5 years, 30 % reported 6 to 10 years and only 8.6 % engaged in this profession for 11 to 15 years. In a study of Bangladesh, it revealed that nearly 33 per cent of the sex workers had been operating this profession from 5 to 9 years. Some 18 percent had been running this profession from 10 to 14 years.[1] Among the respondents they have some different occupation beside this profession. 39 % of the respondents were also housewives, 37.1 %-day labourer, only 1 % service holder and 22.9 % engaged in other profession like house maid, selling cosmetics or clothes. So, it shows they had alternate income sources in addition to the existing trade. It was estimated that out of 105 respondents, majority 59 % had a daily income range between 600 to 1000 taka. On the other hand, one third 33.3 % people had an income range of 200 to 500 taka, while only 7.6 % people had an income range between 1100 to 1500 taka. Another study in Dhaka showed that half 52.7 % sex workers had monthly income more than 10,000 and 47.3 % less than 10,000 per month.[4] In this study, 41 % respondents were married, 39 % were single, 10.5 % were divorced, and 2.9 % widow and living separately from their husband is only 6.7 %. Among 64 respondent's majority 70.3 % reported that it was her first marriage and 29.7 % reported it was not their first marriage. In a study in Bangladesh revealed that irrespective of the groups, unmarried girls operate prostitution were the highest 45 % followed by married ones 28 %. The high demand for the unmarried and young girls in the sex market draws them more as compared to married and older women with kids.[1] In this study there was no significant relation in mental stress and age (p=0.870), level of education (p=0.080), duration of sex work (p=0.624), marital status(p=0.514) and daily income (p=0.936).

Conclusion

In conclusion, this study explores that the literacy rate among the female sex workers are still low and invariably they are suffering from high perceived mental stress. Majority of the female sex workers are exposed to this profession within their age of twenty years, in which poverty is claimed to be the principle contributor.

Figures

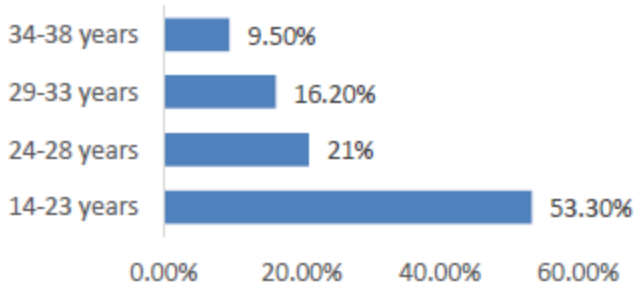

Figure 1. Age distribution of female sex worker

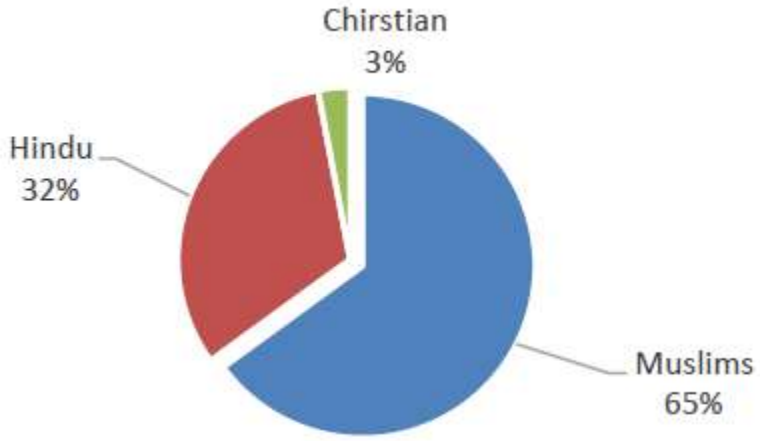

Figure 2. Religion distribution of female sex worker

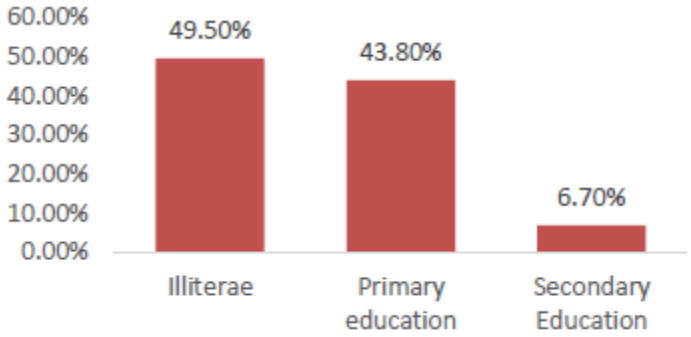

Figure 3. Level of education of female sex worker

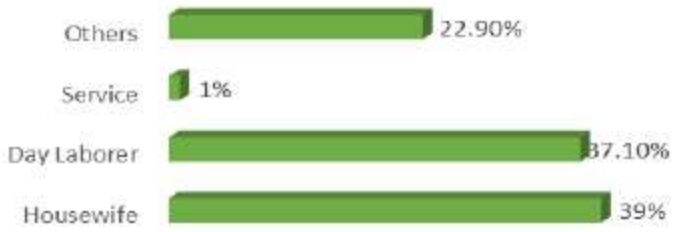

Figure 4. Types of occupation rather than sex work

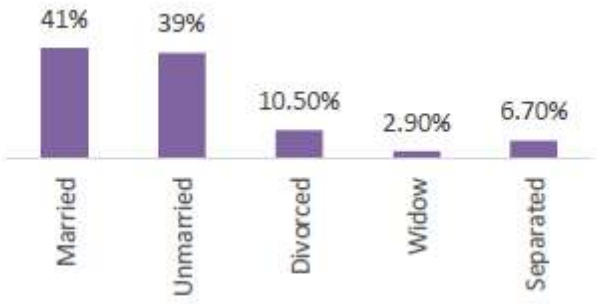

Figure 5. Marital status of female sex worker

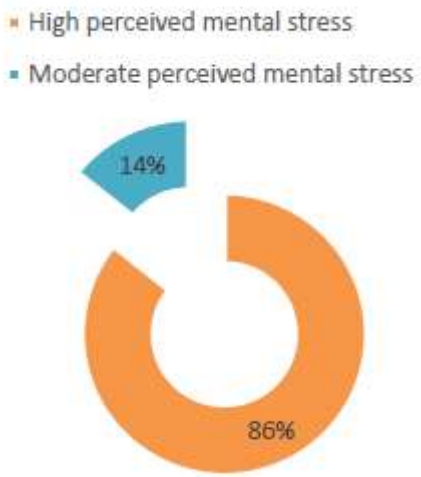

Figure 6. Level of stress

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The COVID-19 Pandemic and Mental Health: A Systemic Review

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Abstract

This review study aims at discussing about the mental health condition during COVID-19 occurrence among health-care professionals, patients and mass population. The COVID-19 pandemic has been rapidly spread in China, USA, Italy, France, Spain and other Asian and European counterparts. This COVID-19 pandemic has aroused increasing attention nationwide. Patients, health-care professionals, and the mass population are under unmeasurable mental pressure which may lead to different types of mental health problems, such as anxiety, fear, depression, and insomnia. According to the World Health Organization (WHO), mental health includes "subjective well-being, perceived self-efficacy, autonomy, competence, inter-generational dependence, and self-actualization of one's intellectual and emotional potential, among others". The WHO further states that the well-being of an individual is encompassed in the realization of their abilities, coping with normal stresses of life, productive work, and contribution to their community. It was a systemic review study regarding mental health problems due to COVID-19. We gather total 29 articles related to COVID-19 and mental health using different search portal like PubMed, Google Scholar, Nature, Lancet. After proper literature review only 8 literatures which were related to this study were taken for this systemic review purpose. Public health and mental health specialist have reached a decision about the severe mental illness during the COVID-19 outbreak among health-care professionals, patients and mass population. But, the rapid spread of the COVID-19 has emerged a serious challenge to the mental health service in COVID-19 affected countries.

Keywords: *COVID-19, Pandemic, Mental Health.*

Introduction

The COVID-19 pandemic has been rapidly spread in China, USA, Italy, France, Spain and other Asian and European counterparts. This COVID-19 pandemic has aroused increasing attention nationwide. Patients, health-care professionals, and the mass population are under unmeasurable mental pressure which may lead to different types of mental health problems, such as anxiety, fear, depression, and insomnia. The COVID-19 outbreak has been rapidly spread in last week of January 2020. The novel coronavirus disease or simply COVID-19 is formerly known as the '2019 Novel Coronavirus (2019-nCoV) Pneumonia', which was originated from a wet market in Wuhan, Hubei province, China in early December 2019.[1]

The corona virus belongs to large family of enveloped RNA virus and causes an infectious disease named coronavirus disease or COVID-19. The COVID-19 virus spreads primarily through droplets of saliva or discharge from the nose when an infected person coughs or sneezes. It may cause various symptoms like high rise of temperature, difficulty in respiration including lung infection and pneumonia like symptoms. On 29 December, 2019 The World Health Organizations (WHO) addressed lower respiratory tract affecting coronavirus as 2019 novel coronavirus which was taken place in Wuhan, China. Later, it named as severe acute respiratory syndrome coronavirus-2 or simply SARS-Cov-2.[2-3]

The containment measures during pandemic are:

- Quarantine
- Social distancing and
- Self-isolation

These can have a detrimental impact on mental health, like loneliness and reduced social

interactions are well-known risk factors for several mental disorders, including schizophrenia and major depression. Public health and mental health specialist have reached a decision about the severe mental illness during the COVID-19 outbreak among health-care professionals, patients and mass population. But, the rapid spread of the COVID-19 has emerged a serious challenge to the mental health service in COVID-19 affected countries.

Materials and Methods

It was a systemic review study regarding mental health problems due to COVID-19. We gather total 29 articles related to COVID-19 and mental health using different search portal like PubMed, Google Scholar, Nature, Lancet. After proper literature review only 8 literatures which were related to this study were taken for this systemic review purpose.

Discussion

The mental health and psychosocial consequences of the COVID-19 pandemic may be particularly serious for at least four groups of people:

a) Those who have been directly or indirectly in contact with the virus.
b) Those who are already vulnerable to biological or psychosocial stressors (including people affected by mental health problems).
c) Health professionals (because of higher level of exposure).
d) Even in people who are following the news through numerous media channels.

Mental health issues during the COVID-19 outbreak

Suspected patients as well as confirmed patients of COVID-19 suffer from various types of psychological pressure and other health related problems. Health-care provider and health professionals are also suffering both physiological and psychological pressure when they take care the infected patients. Not only that, most of the time they come to close contacts with patient's family member or relatives and even facing the public enquiry.

COVID-19 patients both suspected and confirmed cases face many types of mental oriented experience, like

- Fear of severe disease consequences and the contagion.
- Loneliness
- Denial
- Anxiety due to uncertainty about their health status
- Depression
- Insomnia
- Obsessive-compulsive symptoms
- Despair, and
- Suicide.

The poor knowledge regarding COVID-19 and the overwhelming news causes anxiety and fear in the public. Health professionals as well as health-care providers treating COVID-19 patients suffer from,

- Physical exhaustion
- Fear
- Emotion disturbance, and
- Sleep problems.

In a study among 1,563 health professionals showed depressive symptoms, anxiety, and sleep disturbance (Figure 1)[1].

Mental health disorder Patients in the COVID-19 pandemic

In China, 173 million people are living with mental health disorders. During the time of epidemic, people who have mental health disorders chances to involve more with infection due to,

- Mental health disorders can increase the risk of infections, including pneumonia.
- There is a mark discrimination associated with mental ill health in health care settings, which act as a barrier in accessing timely health service for the mental health disorder patients who are suffering from severe acute respiratory distress due to COVID-19.
- COVID-19 also creates fear, anxiety and depression which stimulates the already worsen mental health condition of mental disorder patients than the normal mass population.[4]

Mental health and psychosocial responses to COVID-19

It is very natural for any individuals to feel stressed and worried during any pandemic condition. Direct and indirect responses of people affected might include:

- Fear of falling ill and dying
- Avoiding approaching health facilities due to fear of becoming infected while in care

- Fear of losing livelihoods, not being able to work during isolation, and of being dismissed from work
- Fear of being socially excluded/placed in quarantine because of being associated with the disease (e.g. racism against persons who are from, or perceived to be from, affected areas)
- Feeling powerless in protecting loved ones and fear of losing loved ones because of the virus
- Fear of being separated from loved ones and caregivers due to quarantine regime
- Refusal to care for unaccompanied or separated minors, people with disabilities or the elderly due to fear of infection, because parents or caregivers have been taken into quarantine
- Feelings of helplessness, boredom, loneliness and depression due to being isolated
- Fear of reliving the experience of a previous epidemic
- Health-care providers like nurses, doctors, ambulance drivers, case identifiers, and others are also experience additional stressors during the COVID-19 outbreak, like:
- Stigmatization towards those working with COVID-19 patients and their remains
- Higher demands in the work setting, including long work hours, increased patient numbers and keeping up-to-date with best practices as information about COVID-19 develops
- Reduced capacity to use social support due to intense work schedules and stigma within the community towards frontline workers
- Insufficient personal or capacity to implement basic self-care, especially among people living with a disability
- Insufficient information about the long-term exposure to individuals infected by COVID-19
- Fear that health-care providers will pass COVID-19 onto their friends and family as a result of their work.5

Strategy of dealing with mental disorder patients during pandemic

1. Believing only in reliable source of news like the World Health Organization, the Centers for Disease Control and Prevention, local or regional Public Health Departments.
2. Regular monitor the mental disorder groups as they are not able to visit their health-care providers in regular basis during pandemic time.
3. Take necessary steps to fulfil their basic needs.
4. Teach them to use the social media during the time of pandemic which may reduce the loneliness condition.
5. Advise them to do actively work like walking, exercising, cleaning and organizing household things.[6]

Interventions for healthcare workers with COVID-19 for reducing mental disorders

1. Treating infection with COVID-19 as a work-related injury.
2. Managing rotating shift of duty.
3. Teaching the measures for declining infections.
4. Comfortable accommodations for staff who must remain in hospitals
5. Provide adequate amount of PPE
6. Ensure adequate sleep.
7. Access to mental health providers and consultation when required.
8. Learning relaxation techniques and physical exercise
9. Ensure social support.[7]

Strategy of dealing with mental health of children

1. Help children to cope up with fear by doing extra curriculum activities like drawing.
2. Try to keep children with their parents.
3. Try to maintain familiar routine.[8]

Strategy of dealing with mental health of people in isolation

1. Maintaining social network through telephone, e-mail, social media and video conference.
2. Try to maintain familiar routine
3. Avoid to ignore the rumors and believing only in reliable source of news.[8]

Conclusion

The COVID-19 pandemic has caused different types of psychological problems in different group of populations. The COVID-19 pandemic has become an extra socio-economic burden on existing mental health service in world. Finally, there is a need for particular focus on health-care providers. Prevention measures should be taken for reducing secondary traumatic stress reactions,

including increased awareness of symptoms, taking breaks from work, engaging in self-care, taking breaks from media coverage and asking for help. This will help for managing further need of mental health disorders during various conditions in world.

Figures

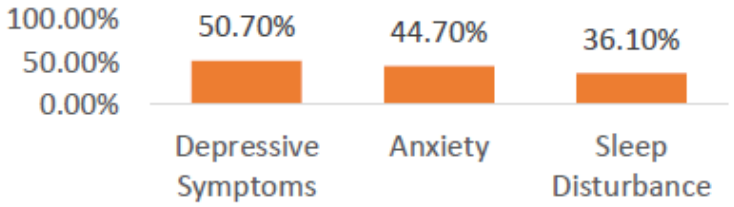

Figure 1. Mental Health Problems

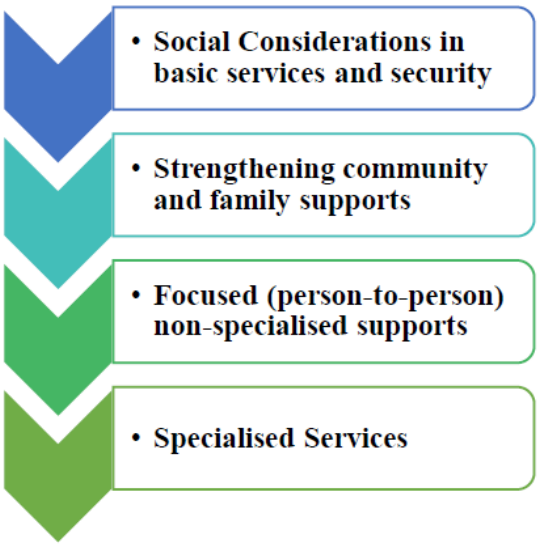

Figure 2. Intervention flowchart for mental health and psychosocial support5

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Globalization or De-linking? Gauging the Efficacy of Global Administration to Global Pandemics in the Face of the Novel Corona Virus between December 2019 and the First Quarter of 2020

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Abstract

In the last month of 2019, the world was confronted by an outbreak of a novel Corona virus originating from Wuhan, China – COVID-19. The virus resulted in the deaths of more than three thousand people worldwide by the end of January 2020. By the end of March, the virus had spread to all the continents, threatening to shut down the world economy as we know it today. There was no vaccine or medication to regulate its contagion except that people were mandated to act in a precautionary way to curb its spread. There is no doubt that the corona virus pandemic presented the single most, modern challenge to the global village and globalisation. The outbreak was declared a Public Health Emergency of International Concern and subsequently, a pandemic. However, despite the decrees, there was no concerted world effort to decisively deal with the plague. Over a period of two months the virus had done extreme damage through the interaction of peoples around the world. Two strategies had become buzzwords for curbing the virus – Social distancing and Lockdown. This paper interrogates the effectiveness of Global administration to this contagion. The paper questions the ability of the global system of administration to deal with global catastrophes of this nature. Concepts of globalisation versus delinking are revisited to assess their applicability today. The paper cross-examines the role of the virus in the incessant trade and biological wars between the West and the East. Qualitative research methods, descriptive and exploratory techniques were used.

Keywords: *Globalisation; Delinking; Pandemic; Global Administration; Global Governance; Coronavirus; COVID-19.*

Introduction

COVID-19 is caused by the severe acute respiratory syndrome coronavirus 2 (SARS-COV-2) and is part of a large family of corona viruses (CoV). Coronaviruses are transmitted from animals to people, with this particular strain of coronavirus thought to have originated from a seafood market in the city of Wuhan in China in late December of 2019. (Elflein: 2020). Symptoms of COVID-19 bear a resemblance to those of the common cold, with those affected repeatedly suffering fever, coughing, and shortness of breath. Still, infection can lead to pneumonia, multi-organ failure, severe acute respiratory syndrome, and even death, in more severe cases. The elderly and those with pre-existing chronic health conditions have accounted for the majority of deaths from COVID-19. (Elfein: 2020). At the time of writing this paper, China had the highest figures of recorded infections (81 054), followed by Italy with 53 578, and the USA with 26 892. (Statista 2020). As of March 22, 2020, the outbreak of the coronavirus disease (COVID-19) had been confirmed in around 188 countries or territories. The virus had infected 308,592 people worldwide, and the number of deaths had totalled 13,069. The most severely affected countries outside of China included Italy, the USA, Spain, and Germany. (Elfein: 2020).

Although the origin of the virus was China, at the time of writing, the epicentre of the virus had shifted to Europe and America. Meanwhile, as infection numbers surged globally, there was a downward trend in China which the Communist Party hailed as major victory. (https://www.aljazeera.com/news). In Africa, few cases, largely of Caucasian origin were reported to have tested positive to the virus.

These were cases of people whose travel history proved that they had travelled to the affected areas. This has fuelled the stigma and prejudice of the origins of the virus – China- and the pseudo-scientific melanin explanations of how Africans are possibly immune to the virus. Be that as it may, the disease proved to be spread through travelling and contact with infected people and areas.

The nature of a global world has not precluded Africa from contracting the disease as it is arguably the epicentre of globalisation. Africa is historically the producer of raw materials which have fuelled and continue to fuel the industrial flame of the developed world and China since the 19th Century. The unavoidable interaction is undoubtedly fuelling the spread of the COVID-19 yet the world does not have a planned strategy to deal with the consequences of negative outcomes. Therefore, there is a need to question the process of global administration itself.

Conceptual framework

Global governance brings together assorted actors to manage collective action at the level of the planet. The goal of global governance, roughly defined, is to provide global public goods, particularly peace and security, justice and mediation systems for conflict, functioning markets and unified standards for trade and industry. (Global Challenges Foundation: 2020). Scholars have used the term "governance" to denote the regulation of interdependent relations in the absence of overarching political authority, such as in the international system. It encompasses the institutions, policies, norms, procedures and initiatives through which states and their citizens try to bring more predictability, stability, and order to their responses to transnational challenges.

While the importance of global governance has been acknowledged, we are witnessing the increasing need to manage global problems more effectively in the face of increased interdependence. One crucial global public good is catastrophic risk management – putting appropriate mechanisms in place to maximally reduce the likelihood and impact of any event that could cause the death of 1 billion people across the planet, or damage of equivalent magnitude. (https://globalchallenges.org/)

The leading institution in charge of global governance today is the United Nations, which was founded in 1945 in the wake of the Second World War as a way to prevent future conflicts on that scale. The United Nations does not directly bring together the people of the world, but sovereign nation states, and currently counts 193 members who make recommendations through the UN General Assembly. ((https://globalchallenges.org/). Beyond the UN, other institutions with a global mandate play an important role in global governance. Of primary importance are the so-called Bretton Woods institutions: The World Bank and the IMF, whose function is to regulate the global economy and credit markets.

Global governance is more generally affected through a range of organisations acting as intermediary bodies. Those include bodies in charge of regional coordination, such as the EU or ASEAN, which coordinate the policies of their members in a certain geographical zone. Those also include strategic or economic initiatives under the leadership of one country – NATO for the US or China's Belt and Road Initiative for instance – or more generally coordinating defense or economic integration, such as APEC or ANZUS. Finally, global governance relies on looser norm-setting forums, such as the G20, the G7 and the World Economic Forum: those do not set up treaties, but offer spaces for gathering, discussing ideas, aligning policy and setting norms. This last category could be extended to multi-stakeholder institutions that aim to align global standards, for instance the Internet Engineering Taskforce (IETF) and the World Wide Web Consortium (W3C).

Methods

Qualitative research design and descriptive methods were used in this article. At the time of researching the coronavirus the situation was still fluid and figures and situations were changing, and so media articles and authoritative scholars were used to analyse this dynamic topic. Main authorities were studied which deal with the topic of Global Governance and the two concepts under review. exploratory techniques were used in the effort to explore the connection between China and American relations. There was a lot of reading and study of newspapers, reports, and listening to news articles concerning the outbreak and a lot of critical analysis put into it.

Results

Globalisation in its form has failed to provide safety to all humanity in the face of global catastrophes. The corona virus has led to the main strategy by individual countries to lockdown. This strategy is antithetical to the very process of globalisation, which is the interconnectedness of the world. But should the world turn to delinking as a strategy to deal with future similar pandemics? The answer is not definitive. The current shutdown has disrupted the world economy as we know it, with industries shutting down, people losing jobs, small scale industrialists losing their livelihoods and above all the financial system collapsing. There is no doubt that as the world comes out of this crisis, a new world order has to come up. What that new world order is will be determined by the way in which the world survives a pandemic such as this one.

Discussion

Is globalisation still relevant?

Globalization is the word used to describe the growing interdependence of the world's economies, cultures, and populations, brought about by cross-border trade in goods and services, technology, and flows of investment, people, and information. (PIIE: 2020). The Levin Institute (2017) describes it as a process of interaction and integration among the people, companies, and governments of different nations, a process driven by international trade and investment and aided by information technology. What is common among these definitions is that this process has effects on the environment, culture, political systems, economic development and prosperity, and on human physical well-being in societies around the world.

Effective global governance cannot be achieved without effective international cooperation. Besides being a manifestation of international solidarity, international cooperation is a means to promote common interests and shared values and to reduce the vulnerabilities generated by increased interdependence. It is also a legal obligation. (United Nations: 2014). Already in 1945, Member States of the United Nations recognized the centrality of "international cooperation in solving international problems of an economic, social, cultural, or humanitarian character. (United Nations, 1945, Article III).

From an African perspective, globalisation was an imposed system in which the colonialists did not completely disconnect with the colonised territories during the decolonisation process which began in the 1960s. During the colonisation period, a core-periphery relationship existed in which the colonial power, the core, was the recipient of resources from the periphery, the colonised state. The former colonies were only given political independence yet there was no economic emancipation from the shackles of the colonisers. Neo-colonialism has persisted in which the remnants of the coloniser continue to force the colonised states to pay allegiance to the coloniser. This happens through globalisation.

Through this system, there was and still is a deliberate political, economic, cultural and social subjugation, not physical, but based on power relations. Information technology, communication, trade and migration have deliberately been used to aid this process and have become indispensable vehicles through which the coloniser has maintained a grip on the former colonies.

This paper does not seek to explain the already known cons of globalisation, but to test its veracity in dealing with the current world pandemic of the Corona virus. The World Health Organisation (WHO), established in 1948 as a specialised agency of the United Nations, is currently the global body in charge of governing the risk of pandemics. It does this mainly through a governance mechanism called the International Health Regulations (IHR), the goal of which is to stop public health events that have the potential to spread internationally with minimal interference of travel and trade. (Global Challenges Foundation: 2020). The IHR first came into force in 1969, with an initial focus on four infectious diseases – Cholera, Plague, Yellow Fever and Smallpox.

Revised in 2005, the IHR now acknowledge that many more diseases than the four originally covered may spread internationally, and that many cannot be stopped at international borders, as was demonstrated by the spread of HIV in the 1980s and SARS in 2003. Emphasis is therefore placed now on the requirement that countries rapidly detect and respond to outbreaks and other public health events which have the potential to

spread internationally. (Global Challenges Foundation: 2020).

De-linking

Delinking is a concept based on the dependency theory of development which was developed after World War Two, by thinkers such as Samir Amin, Walter Rodney, Emmanuel Wallerstein and Andre Gunder Frank. As a concept delinking had two aspects: on one hand, the economic aspect which entailed the refusal to submit to the demands of the worldwide law of value, or the supposed 'rationality' of the system of world prices that embody the demands of reproduction of world capital. On the other hand, delinking had the political aspect: that is a national and popular project of the liberation of the poor nations. The concept according to Amin (1987) arose because the crisis of development, in keeping with the general pattern of the crisis of the world-system, has led to questioning again the development strategies of "opening to the outside" based upon a thorough participation in the international division of labour. Delinking in this paper is used as an extension of what the development theorist Samir Amin intended it. We therefore agree with Amin when he noted that, "…the word delinking has passed into common language, and its use is being extended every day...and that this extension is accompanied, as is often the case, with a progressive shading-off of its meaning."(Amin:1987)

In keeping with this observation in the context of this paper the definition of delinking will go beyond the one given by Amin when he pointed this out, that "the development of countries at the periphery of the world-capitalist system, consequently, passes through a necessary break from this world capitalist system- a delinking- that is to say, the refusal to submit national-development strategy to the imperatives of globalisation". But the meaning that we give to the sense of delinking here is not only limited to the economic meaning of economic independency, but to a total lockdown or shutdown or sealing off of borders of nations from one another and thereafter organising a system in which a country can survive on its own with minimal contact with the rest of the world expect when in need of essential goods and services, for, particularly, the movement of people (international migration) across borders to other nations especially in the face of catastrophic disasters such as COVID-19. The Corona virus has exposed how a globalised world, particularly through migration, can easily be annihilated by a natural disaster of a contagious nature like this one. The objectives of this article are as follows:

1. To elaborate on the meaning of delinking as it pertains to international migration of people from one country to another.
2. To show how other aspects of globalisation can be kept, such as the sharing of technology, especially the information communication technology to keep the link with other nations in order to avoid a repetition of the spread of world pandemics such as COVID-19 which has the capacity to wipe out humanity as we know it.
3. To highlight how the Corona Virus pandemic has irreversibly reconfigured the world economy, world relations and people's behaviours worldwide as we knew them by analysing the only common solution to this pandemic in the absence of its vaccine.

Lockdown/Shutdown – The Global System of Dealing with COVID-19

In the wake of the outbreak of the pandemic, the world had to follow some guidelines as advised by health providers. Some of these were:

1. Frequently and meticulously cleaning one's hands with an alcohol-based hand rub or soap and water.
2. Avoiding touching the eyes, nose and mouth, because hands touch many surfaces and can pick up viruses.
3. Practicing respiratory hygiene
4. Wearing masks
5. If one had fever, cough and difficulty breathing, they should seek medical care early.
6. Isolation of people suspected to have been in contact with infected people. (WHO: 2020)
7. Maintaining social distancing.
8. Self-isolating once one suspected that they were symptomatic of the disease.

The above were mostly local remedies to contain the spread of the virus. On a wide scale move, China locked down 13 of its cities — and their 38 million residents — in an effort to contain the deadly coronavirus outbreak. (Chadwick: 2020). According to Wang and Wee (2020), the Chinese province of Hubei, where the coronavirus pandemic began, allowed most of its 60 million residents to leave, ending nearly two

months of lockdown and sending a strong signal of the government's confidence that its tough measures have worked to control the outbreak. The easing of the lockdown was the latest sign that China appeared to have successfully tamed the epidemic by placing sweeping restrictions on hundreds of millions of people, while governments elsewhere floundered. (Wang& Wee: 2020).

The World Health Organization, which has officially declared the outbreak a pandemic, has called on "all countries to continue efforts that have been effective in limiting the number of cases and slowing the spread of the virus, and more than a third of the planet's population is under some form of restriction." (Kaplan, Frias & McFall-Jensen: 2020). Various terms have been used to describe these restrictions, such as shutdown, lockdown and extreme social distancing. While "lockdown" is not a technical term used by public-health officials, it refers to anything from mandatory geographic quarantines to non-mandatory recommendations to stay at home, closures of certain types of businesses, or bans on events and gatherings. At international level, it meant banning flights, banning foreign people entering a country and restricting the flow of goods. For some period, the global world witnessed semi-delinking which became a possible solution to a catastrophic world pandemic. This brings up the question of the effectiveness of permanent de-linking or semi-delinking as a strategy to permanently deal with probable planetary catastrophes. At the time of writing this article, the authors were under a lockdown in Botswana and the results of lockdowns across the world are yet to be evaluated.

It is our argument that globalisation, which is the interconnectedness of the countries of the world can itself pose a colossal danger to the survival of humanity. As in the case with the Corona virus pandemic, the world was confronted with a reality of a possible annihilation of humanity because a virus which originated in Wuhan China went on to claim its epicentre in Europe and America within a short period of three months and this, aided by the migration of people. This adds to the already existing criticisms of globalisation, such as the promotion of neo-colonialism, the erosion of cultures of smaller communities (cultural imperialism), the exploitation of resources by the Global North of the Global South and the dumping and political domination of weaker countries by more powerful ones.

The safety that lockdowns (delinking) gave to those areas which were affected most by COVID-19 was palpable. In Europe, calls for lockdowns became a rallying point to save the deteriorating situation. The biggest lockdown was enforced in India (currently happening at the time the article was being written), where 1.3 billion people have been ordered to stay inside for 21 days. This lockdown exceeded the size of those that happened in China even at the height of the epidemic there. (Buchholz: 2020). Other big lockdowns are happening in the U.S., where the majority of states and several cities have said that they would be enforcing strict stay-at-home orders, and in Europe, where there are nationwide lockdowns in France, Spain, the UK, Italy and elsewhere (totalling more than 300 million people). Almost all Russian regions have adopted lockdown measures first imposed in the nation's capital, Moscow - affecting around 142 million Russians in total. (https://www.statista.com/chart/21240).

What is most significant for this analysis is the effect of this attempt at containment on the functioning of the world economy as we know it. It became business unusual with many people stopping work, companies closing, industries coming to a halt and the world financial system collapsing at a rate never before seen in the history of mankind. On the downside, it should also be stated that this form of delinking threatened the general livelihood of the poor and posed a real danger of mass starvation, particularly in countries that already had their fair share of economic crisis, such as Zimbabwe. For farm workers in Mumbai, India, being able to survive is contingent on two factors such as in a case with one widow who survived on getting a daily wage of 100 Indian rupees ($1.3) a day, and two, receiving a widow's monthly pension of 1,000 rupees ($13.1) from the government. Since the onset of the COVID-19 outbreak at the beginning of March, both sources of income have dried up. (https://www.aljazeera.com/news/2020/04)

Analysing the global response to the corona virus pandemic

The inadequacies of the global response to the coronavirus pandemic brings to the fore the

question on the materiality of the global administration system and the need for a new global order. Its limitations reside in the belief that international cooperation and international organizations can solve every global issue. In fact, executive powers capable of lending binding force to common decisions are lacking at international level. (Levi: 2016). The fact that in the globalization process tendencies toward world unification coexist with decentralization and localization led to the idea of glocalization. It is a concept that echoes the federalist viewpoint of a reorganization of political power on several levels of government from the local community to the UN. This perspective is an aspect of the larger idea that, if globalization is to be regulated, international relations must be constitutionalized according to the example of the European Union, which is the laboratory of a new form of large-scale political organization. This idea includes institutions like a World Parliament and a World Government.

It is the above weakness upon which the global response to the COVID-19 can be analysed. While the World Health Organisation was declaring the pandemic as a Health Emergency, the underlying assumption was that the world will unite to fight and defeat the virus. However, the most significant aspect of the expectations from the WHO concerns the sphere of politics, and consists in the contradiction between a transnational organisation that has a global dimension, and a system of states that are national. The doctrine of sovereignty will apply in which an individual state will take measures that are of interest to itself and its survival. This explains today why, despite the WHO proclamation of a Global emergency, some countries have locked down and others have largely ignored the calls, while others have taken a wait-and-see approach, to the detriment of their societies.

The lack of a known concerted effort to develop a vaccine of the coronavirus by the leading global powers (USA, China and the G20) is a cause to argue that global governance will always remain a myth as long as there is no unified response to global threats. According to the New York Times (2, April 2020), "The leader of the United Nations has called the coronavirus pandemic the most challenging crisis since the organization's founding after World War II. But the Security Council, its most powerful arm, has been conspicuously silent." And our argument is that if there can be no binding global administration to events that pose danger to the survival of humanity as we have known it, there is a need to imagine the advantages of delinking.

It is important to note that in the face of this global pandemic, most countries turned to inward-looking strategies and "sealing-off" in an effort to contain the virus. The United Nations failed to fulfil its outsize role as the pandemic rages on across the globe. Even the financial response by the prime intergovernmental organisation has been too slow to assist the affected nations. The issue concerning most researchers in this field is how the global new order should be organised if it is to deal with world catastrophes.

Is its global biological warfare? – the suspicions

Man has used poisons and toxins for assassination purposes ever since the dawn of civilization, not only against individual enemies but also occasionally against armies. (Frischknecht: 2023). The foundation of microbiology by Louis Pasteur and Robert Koch offered new prospects for those interested in biological weapons because it allowed agents to be chosen and designed on a rational basis. According to Frischknecht (2003), these dangers were soon recognized, and resulted in two international declarations—in 1874 in Brussels and in 1899 in The Hague—that prohibited the use of biological weapons. However, although these, as well as later treaties, were all made in good faith, they contained no means of control, and so failed to prevent interested parties from developing and using biological weapons. The table below gives a summary of how biological weapons have been used in the world over time.

Table 1

Year	Event
1155	Emperor Barbarossa poisons water wells with human bodies, Tortona, Italy
1346	Mongols catapult bodies of plague victims over the city walls of Caffa, Crimean Peninsula
1495	Spanish mix wine with blood of leprosy patients to sell to their French foes, Naples, Italy
1650	Polish fire saliva from rabid dogs towards their enemies
1675	First deal between German and French forces not to use 'poison bullets'
1763	British distribute blankets from smallpox patients to native Americans
1797	Napoleon floods the plains around Mantua, Italy, to enhance the spread of malaria
1863	Confederates sell clothing from yellow fever and smallpox patients to Union troops, USA

Source: [Friedrich Frischknecht: 2003.

It is not clear whether any of these attacks caused the spread of disease. In Caffa, the plague might have spread naturally because of the unhygienic conditions in the beleaguered city. Similarly, the smallpox epidemic among Indians could have been caused by contact with settlers. In addition, yellow fever is spread only by infected mosquitoes. During their conquest of South America, the Spanish might also have used smallpox as a weapon. Nevertheless, the unintentional spread of diseases among native Americans killed about 90% of the pre-columbian population.

Table 2

Disease	Pathogen	Abused[1]
Category A (major public health hazards)		
Anthrax	Bacillus antracis (B)	First World War
		Second World War
		Soviet Union, 1979
		Japan, 1995
		USA, 2001
Botulism	Clostridium botulinum (T)	–
Haemorrhagic fever	Marburg virus (V)	Soviet bioweapons programme
	Ebola virus (V)	–
	Arenaviruses (V)	–
Plague	Yersinia pestis (B)	Fourteenth-century Europe
		Second World War
Smallpox	Variola major (V)	Eighteenth-century N. America
Tularemia	Francisella tularensis (B)	Second World War
Category B (public health hazards)		
Brucellosis	Brucella (B)	–
Cholera	Vibrio cholerae (B)	Second World War
Encephalitis	Alphaviruses (V)	Second World War
Food poisoning	Salmonella, Shigella (B)	Second World War
		USA, 1990s

Glanders	Burkholderia mallei (B)	First World War
		Second World War
Psittacosis	Chlamydia psittaci (B)	–
Q fever	Coxiella burnetti (B)	–
Typhus	Rickettsia prowazekii (B)	Second World War
Various toxic syndromes	Various bacteria	Second World War

Source: [Friedrich Frischknecht: 2003]

Category C includes emerging pathogens and pathogens that are made more pathogenic by genetic engineering, including hantavirus, Nipah virus, tick-borne encephalitis and haemorrhagic fever viruses, yellow fever virus and multidrug-resistant bacteria.

1Does not include time and place of production, but only indicates where agents were applied and probably resulted in casualties, in war, in research or as a terror agent. B, bacterium; P, parasite; T, toxin; V, virus.

From the onset of the Corona Virus outbreak, there existed suspicion all around the world as to the origins of the virus itself. Was it a laboratory exercise gone wrong that led to the escape of this virus from the Wuhan Institute of Virology or did it indeed originate from a sea-food market in Wuhan as was reported? According to Business Today (2, April, 2020), A $20 trillion lawsuit has been filed against Chinese authorities in the US over coronavirus outbreak. The lawsuit alleges that the virus had been released from the Wuhan Virology Institute and that it was designed by China to kill mass populations. The report also pointed to the evidence that linked China. According to multi media reports, there was only one microbiology lab in China that handled advanced viruses like the novel coronavirus, and it was in Wuhan. (Business Today, 2, April 2020). It is not lost on the same world, that China concealed the outbreak of the virus for a month before it announced its existence. The battle between American giant Google and Chinese multinational telecommunications giant, Huawei in the last quarter of 2019, in which the American Government banned Huawei from using Google services, heightened the suspicions of a retaliatory action by China.

Until recently, conventional warfare involved declarations, bullets, bombs and the mobilisation of troops. Today's warfare, as Bill Gates points out, is a highly infectious virus. (https://www.youtube.com/watch?v=6Af6b_wyiwI) and the victor is the one who finds the vaccine first. African countries were dragged into the First and Second World Wars because they belonged to a colonial block. In this pandemic war, again they faced a danger even though they were dragged into it by virtue of which foreign nationals frequented that country.

Is it a War for Economic Dominance by Global Economic Superpowers?

One virus, the Wuhan virus, as the American President, Donald Trump called it, created an unprecedented crisis in the whole world. By the time the world swung into action, the virus had already crossed most borders and the world had to play catch-up. However, there is one country which had an edge during the virus – the home country of the virus – China. There is no doubt that China was hit for weeks and that the Chinese people suffered, but by the time of writing this article, China had announced that it had contained the threat. According to Wionews (2020), in line with that, China closed its borders but businesses and factories were up and running again. Recovery will take time again but they have made a start. Companies are being asked to make coronavirus supplies and they are making equipment other countries might need to fight the outbreak, such as gloves, masks, personal protection equipment and even ventilators.

Our argument is that, having put its competitors into a metaphorical intensive care unit, China is now selling them ventilators. But is China making a profit out of this? Two Chinese Army Generals, Qiao Liang and Wang Xiangsui, explored the strategies that militarily and politically disadvantaged nations might take in order to successfully attack a geopolitical super-power like the United States. American military doctrine is typically led by technology; a new class of weapon or vehicle is developed, which allows or encourages an adjustment in strategy. (Liang & Xiangsui: 1999). They argue that this dynamic is a crucial weakness in the American military, and that this blind spot with regard to alternative forms of warfare could be effectively

exploited by enemies. The traditional mentality that offensive action is limited to military action is no longer adequate given the range of contemporary threats and the rising costs - both in dollars and lives lost - of traditional warfare. Instead, Liang and Xiangsui suggest the significance of alternatives to direct military confrontation, including international policy, economic warfare, attacks on digital infrastructure and networks, and terrorism. Even a relatively insignificant state can incapacitate a far more powerful enemy by applying pressure to their economic and political systems. Some issues below are worth mentioning.

As the ongoing crises of the worldwide pandemic increased, some people in the business sector felt the need to do some damage control. An article by 'TIME' reported that Senators in the United States sold millions worth of shares before the pandemic heightened in severity. (https://time.com/). Although some regarded this as a questionable decision, others pointed out that it was the perfect time to purchase stocks due to the plummeting of the market. The question that remains is "Why did those Senators sell their shares?" From another point of view, one would think that the shares sold were to be affected by the pandemic and it was best for them to sell the majority of their shares in order to avoid any implications.

Globally, the business of selling sanitizers has risen. Companies such as Purell are making triple their normal sales due to CoV. An article by 'WUSA9' reported that Purell has made a yearly increase of 225% with their hand sanitizers. (https://www.wusa9.com/). Other individuals have taken the entrepreneurial route and made their own sanitizers to sell to the public. Sanitizers have always been in existence but many saw them as a luxury. With this pandemic, they have now become an essential to all. Supermarket shelves have been emptied of sanitizers by people trying to maintain good hygiene as they go about their daily lives. Some have even resorted to making their own sanitizers to sell to others but the worry arises where most of these people have little knowledge on making sanitizer formulas that will work.

The face mask business has also sky-rocketed in terms of sales. Many businesses have diversified their production and have added face masks to their production line. "Automobili Lamborghini is reconverting some departments of its production plant in Sant'Agata Bolognese in order to produce surgical masks and protective medical shields for the Sant'Orsola-Malpighi Hospital in Bologna, which is involved in the fight against the Covid-19 pandemic, in collaboration with the University of Bologna. The Department of Medical and Surgical Sciences will oversee validation testing of the medical devices made by Lamborghini, prior to their delivery to the hospital." (https://www.lamborghini.com/). The pandemic has hit many businesses hard and they are now seeking new ways of coping with the sudden decrease in sales.

The pharmaceutical industry has always benefited from other day to day sicknesses but since the pandemic there has been an increase in the need for medication. The public is spending more money on immune boosters and vitamins to help them during these difficult times. At the same time this has become a race between pharmaceuticals to find a cure for the virus.

Concluding remarks

The global world is faced by an unprecedented catastrophe in its history. All countries are rallying towards one focal strategy – lockdown - in order to contain the threat that the outbreak poses. It would seem that a new order in which the global world would act the as one has arrived. The paradox though, is that, countries have sealed off their borders, literally implementing a phase of delinking in which the connection through migration has been cut. Yet through technology, the world is in touch and countries are learning from the experiences of others. There is consensus that the global governance system has had to play second fiddle to the virus in terms of its reaction to it. America, the biggest power, is fast becoming the epicentre of the pandemic whereas China, from where the virus originated, is playing the supplier of the equipment needed to fight the outbreak. The questions that this paper has raised demand an answer. Is this the highest stage of globalisation and from here does it experience "the Law of Diminishing Returns?". Is the Global Administration system through the United Nations effective? Is the world a pawn to the biological and economic warfare between China and the United States of America? All these are questions that researchers are confronted with.

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