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Healthcare Professionals Satisfaction to Multichannel Market in Tanzania: A Case Study of Webinar in Dar es salaam

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Abstract *This study aimed to understand the satisfaction of Healthcare Professionals (HCPs) with a multichannel market (webinar) in Dar es Salaam, Tanzania. The study population consisted of healthcare professionals who regularly attend webinars. A sample of 250 HCPs was selected from a simple random sampling and were involved in a survey from which data were collected through questionnaires. The majority of the HCPs were male 78% and female 22%. Among the HCPs, 87.2% were doctors, 9.6% pharmacists, and 3.2% nurses. Data validity and reliability were tested, and data analysis was done using SPSS. The study findings revealed that 63.2% of the HCPs were not satisfied with the audio, 88% were satisfied with the knowledge obtained through the webinar, and 80% were satisfied with the communication style of the presenter through the webinar. Regression analysis results showed a significant relationship between satisfaction with sound quality ($p = 0.02$) and knowledge ($p = 0.05$), while there was no significant relationship with communication style, with a p-value > 0.05.ANOVA showed a significant difference in mean among the groups with a p-value <0.01. The study recommends conduction of dry run to ensure that the webinar is tested before the actual webinar to avoid audio problems. The use of a recorded webinar allows the avoidance of audio problems and ensures a good internet connection to avoid buffering and facilitate good sound quality. This study has implications for all stakeholders involved in webinars. The theoretical and practical implications provide benefits of the study to the government, business organizations, and NGO.*

Keywords *Audio, Communication Style, Healthcare Proffessionals, Satsfaction, Webinar.*

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Introduction

Background of the Study

For many years, face-to-face discussions have been used and were among the fundamental keys in learning but due to geographical expansion and the increase in the number of people who require information, there is an alternative way which has been developed, such as online learning. This type of learning is common in the developed world slowly started to be adopted in the developing countries. According to a report released by Wainhouse, the education and training sector of the web conference market reached around USD 680 million in 2009 and is expected to grow above USD billion by late 2014. This technology has a higher impact and great benefits as it allow real time communication between the speaker and audience and reaches a huge number of participants [1].

In recent years, there have been technological advancements, and most organizations have adopted different technologies, including multichannel market in carrying out various activities. Technology has influenced many business organizations to change their model of promotion and conduct business activities from traditional involvement of one-way promotion, which often focuses on printed copies, to multiple ways of promotion (multichannel), which include: webinar, email, retail store, website, portal, and mobile [2]. This study investigated one type of multichannel, which is a webinar (online meeting). There are many webinars conducted in major cities of Tanzania, such as Mwanza, Mbeya, Arusha, Dodoma, Moshi, and Dar es salaam but assessment on how participants are satisfied with these webinars is lacking.

Using one channel is not enough to meet participants' needs, and it is the old version of conducting business; as a result, many channels are currently used to deliver and communicate goods or services using more than two synchronized channels. In some organizations, the focus is more on using iPads for business promotion activities and other channels such as telephones, digital media, kiosks, and catalogs. As opposed to the usage of printed copies (hard copies), most of the organizations have adopted the use of soft copies, and they have special programs that have been installed on the iPads (CRM), which facilitate the reach of many participants [3].

Several webinars have been conducted in Dar es Salaam. GlaxoSmithKline (GSK) has been conducting global and local webinars to health care professionals in Dar es Salaam, Mwanza, Arusha, Iringa, Mbeya, Dodoma, Moshi, and other regions of Tanzania. Global webinars on asthma, HIV, antibiotic resistance, Allergic Rhinitis, and other health-related local webinars [4]. The Institute of Transport has been conducting a series of webinars on transforming urban mobility in transport as part of DART [5]. A series of webinars conducted by Groundwater Tanzania Ltd on microbiology [6]. The Canadian Coalition for Global Health Research has been doing different webinars on climate change in Tanzania [7]. Despite the availability of these webinars, the number of people who attend is usually small, especially for afternoon webinars, or those who attend most of them will be doing their own activities, such as surfing the internet. Sometimes intended audience is missing in the webinar, and unexpected participants appear in the webinar. Usually, invitations are sent early to the expected audience and follow-up is made, but most of the expected audience do not attend, resulted to poor participation, and if there is good participation usually have unintended audience.

It is expected that most HCPs will attend these webinars as they are free of charge, importantly, for health care professional, often it update them on new information about the management of diseases and new information about organization's products and service and some are accredited webinars in which they can get CPD points, but it is not the case as

participation is usually poor. HCPs may not be satisfied with webinars because of the following reasons: poor delivery methods, poor quality of material used, problems associated with technology mostly internet connection, this cause buffering and results in failure for HCPs to get a message from a presentation. Other causes may be content does not match the audience, a lack of interaction, and the timing of the webinar, especially global webinars, which are normally set at a time that is not favorable to most participants in local countries [8].

It is important that participants are satisfied with the webinar they attend. Participants' satisfaction is important for business success. Satisfaction can be defined as an assessment of how a product, service, and overall experience either fall short, meet, or exceed customer expectations [9]. It can also be explained as a personal judgment to perceive the outcome in contrast to expectations [10]. As participants are satisfied, they will increase organisation growth and revenue, have brand loyalty, brand buzz, and brand trust, which can increase the profitability of the firm [9]. Failure to satisfy can results to a lot of problems to organization, such as damaging reputation. According to Warren Buffet "It may take 20 years to build a reputation and five minutes to ruin it. If you think about that, you will do things differently''. Brand reputation is incredibly valuable, and it should be maintained. Other problems of participants' dissatisfaction are failure of participants to turn back to the business, decrease in participants' life value, and this result to decrease ability to acquire new customers, loss of the best employees, and this is because of damage to reputation and decrease in profit [11].

Multichannel market has been defined by SAS Institute as the practice of interacting with customers using a combination of indirect and direct communication channels such as mail order catalogues, website, and mobile. These channels facilitate customers to make decisions and take actions to buy the organizations' products or services. Multichannel marketing is important because it enables organizations to be where the customers are available, it enables customers to have a wide choice of organization products, especially when they want to get information about products and services, it enables many participants to be reached at the same time, facilitate not only a rise in sales but also organizational growth and development. Long term use of the multichannel market is also cost- effective [12].

Despite of advantages of multichannel, there are several challenges which include; lack of the integration of the channel, message delivered might not be appropriate to the audience, scope narrowing, organisation has to do a lot of campaign to ensure that the message reaches to the customers as required, inability to consider impact of the channel, technical challenges such as poor internet connectivity, delivery methods and last it is difficult to know which channel trigger well customers response towards organisation products and services [2, 12].

Availability of software can enable people to attend an online meeting known as a webinar. Because of the increase in the need to give information fast, this is among the reasons why webinars are used in different unions, academia, administration, and in manufacturing organizations [13]. When a webinar is used, people can see slides, videos, and a chat below or on the side line where they can ask questions or any comments related to the webinar presentation. Several companies and organizations use webinars to market their products, coordinate quick briefings of a certain event, and provide continuous medical education (CME) and other scientific meetings to the members, including HCPs and other professionals. As most webinars were previously conducted in developed countries, it has been seen that even in developing countries have tried to adopt online seminars as it is done in several countries [13].

Webinar was defined by Kolbi 1998 as an online meeting, but it can also be explained as an interactive seminar or presentation that is delivered over the internet using asynchronous communication (delay time) or synchronized communication (real-time) [14]. It originates from the following words: web which means World Wide Web, as well as seminar. Webinars are live events, but sometimes can be recorded, bringing people together at a particular time to attend a presentation. Most often participants use a telephone to listen presentation and a computer or iPads to watch the slides. Participants may be required to pay a fee, but most of the webinars are free. The duration of the webinar can take 60–90 mins, depending on the topic.

The number of speakers in this form of meeting will depend on the nature of the topic; different speakers can be in different countries and present the same webinar. Sometimes live cases are presented in the webinars, where a case is brought and discussed [13].

In the webinar event, a presentation or lecture is transmitted through the web using video conference software. One of the most important features of a webinar is the interactive element, where discussion is done in real time [15]. Using webinar applications, participants can share documents, audio, and videos with webinar participants. There are some specific applications that can be used to conduct webinars, such as live meeting software, Zoom, and Webex. In these applications, slides, videos, and a presenter can be seen, direct or indirect comments can be presented through [13].

A webinar is an effective way of sharing information as well as saving cost and time. Different materials can be used, such as video, slides, and documents. The recorded webinar can be taken for future usage. Various organizations use webinars for training, presentation and meetings. As part of an interactive session, participants may be allowed to ask a presenter different questions directly through the microphone, or there might be question cards in a venue where participants can write down their questions, then the questions are sent to the presenter through a specific button and are responded to at the end of the meeting. Apart from this, some presenters currently try to put some questions between the slides whereby after a certain interval of time slide question is displayed and participants can respond. All these are done to make sure that the webinar is interactive [14].

Other advantages of webinar include; increase access to education, affordable, has limited technology requirements, easy to access, has synchronized communication, improve participants skills and outcomes, interaction, real time dissemination of information, immediate feedback, allows education choice, content of webinar cab be modified easily, enable administrative efficiency, recorded seminars can rewatch later, provide update information in real time, huge number of customers can be covered at the same time, travel cost is reduced where presentation is needed for a certain product, can be easily done at the office to the participant through webinar, which seems to be most cost-effective way of doing promotion meeting for organisation products[1, 14].

It is a challenge to conduct a webinar in most of the cases; this is worse, especially in developing countries where internet connection is often poor [16]. Webinar is being conducted in many developing countries, there is usually buffering occur during the webinar which usually disappoint most of the participants as well as there may be cut of the sound or poor sound quality, feeling of isolation and dissatisfaction of the participants, Apart from this, creating content which suits everyone is another challenge, it take time for participant to feel comfortable with webinar system, knowing who actually look at the webinar presentation is also a challenge. Because of these challenges, it might result to participants' dissatisfaction when attending the webinar. Due to this

webinar can be set, but participation in the event can be poor [1, 17].

This study adopted the Model of Delone and Mclean of Information System Success; this is the model developed by Prof Delone and Prof Mclean tried to explain how well an information system can succeed and ultimately lead to participant satisfaction. Prof. Delon focuses more on the assessment of information system effectiveness and values the implementation and use of information technology. Prof Mclean's research focused on the value of information systems, management of information services, and career issues of information services.

This model was published in 1992 and revised in 2003. The original model was focusing to measure complexity of the dependent variable in IS research. D&M IS success model says that system quality tries to measure technical success, information quality measures semantic success, use, user satisfaction, individual impact, and organisation impact measure effectiveness success. These dimensions are interrelated; this was according to the original model. Two dimensions were involved in the original model, which are system quality and information quality. But from the 2003 revised model, one dimension was added, which was the service quality model and therefore the updated model has three dimensions, which are system quality, information quality, and service quality. According to the updated model, each should be measured independently, as they will affect subsequent use and user satisfaction, and they are closely related. Information quality, system quality, and service quality can lead to intention to use or satisfaction with the Information system. This model was used by Seddon and Kiew in their study on investigating a new university accounting system and found a significant relationship between system quality and user satisfaction, and user satisfaction and individual impact [18].

Three variables were obtained from this model: system quality, which reflected as sound quality; service quality, reflected as knowledge obtained through the webinar; and information quality, reflected as the communication style of the presenter. All these can lead to customer satisfaction, which is a dependent variable.

Different research studies have shown a variation levels of acceptances in webinars events, some of them indicated that they were satisfied with webinar, delivery method, clear program with exceeded expectations, comfortable to use it and recommend usage of webinars to others, while others reported technical difficulties such as poor sound quality or presentation style of the presenters, difficult to access it with poor internet connection, resulted to challenge of streaming and pausing the sessions, insufficient engagement, incept presenter, poor light, face to face absence, and inability to fever direct interaction [14, 19]. Other studies indicated the interest of the participants to attend a webinar because it saves time, and participants can attend at personalized environment, and it can enhance knowledge [20].

The main objective of this study was to determine factors that lead to health care proffessional satsfaction to maltchanel market (webinar) in Dar es Salaam, Tanzania. The specific objectives were: to assess if knowledge obtained through webinar leads to healthcare proffessional satsfaction, to determine whether audio quality in webinar leads to health care satsfaction, and to evaluate if the communication style of the presenter leads to healthcare professionals' satsfaction.

The novelty of this study includes; combination of Marketing and healthcare communication perspectives with an investigation of multiple factors and offering practical recommendations for webinar improvement in developing countries.

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Materials and Methods

This was a cross-sectional study, adopted quantitative design as an effective model for determining whether healthcare professionals are satisfied when attending a webinar. 250 healthcare professionals were involved; Doctors (218), nurses (8) and pharmacist (24) were involved in this study. The sample was drawn from a sample frame of 500 HCPs from three districts. A probabilistic sample (Stratified sampling) was used in this study. The study was in 2018, Dar es salaam Tanzania; three districts were selected, which were: Kinondoni, Ilala, and Temeke. Within the districts major hospitals were involved (Muhimbili National Hospital(Ilala), Mwananyamala Regional Hospital(Kinondoni), Temeke Regional Hospital (Temeke), and Amana Regional Hospital (Ilala). Assessment of the participants was done on the satisfaction level with webinar attendance.

Positivism was used in this study as part of a research paradigm with the assumption that webinar satisfaction can be quantified, and there is a possibility of determining factors that influence satisfaction with webinar attendance. These factors are: good internet connection and light, quality of materials, presentation style, good quality of the sound, and timing of the webinar. On the other end, factors that might cause dissatisfaction are: poor internet connection, inappropriate content, bad timing of the webinar, poor sound, light, and materials used. A questionnaire was used as an instrument for data collection and was distributed randomly. The researcher used five attributes when developing standardized research questionnaires, and these were: strongly disagree, disagree, neutral, agree, and strongly agree. This enabled easy and timely responses to questionnaires by respondents.

SPSS was used to analyze data, and Data validity was considered; the assumption was that the right participants were assessed. To ensure validity, pre-testing of questionnaires was done, and the questionnaire draft was revised by the supervisor. Reliability was tested by using Cronbach's Alpha, cut off point of 0.7 was adopted, so that the correlations between items of a particular scale were improved.

Regression analysis was used to assess the relationship between knowledge, audio quality, and communication style with satisfaction. ANOVA was used to assess the difference in mean between the variables, and a p-value of <0.05 was considered statistically significant.

Ethical Considerations

Permission to conduct this research was obtained from the Director of Research, Post Graduate Studies Office at the University of Dar es salaam and consent was requested from all participants. Names of the participants were not recorded to ensure confidentiality.

Results

Characteristics of Study Participants

Assessment of the distribution of healthcare professionals who attend webinar was done, and the rationale behind this was to show the distribution of the respondents and help the reader to understand how relevant information was collected from the sample in presenting the target population. A total of 250 HCPs were involved, 87% (n = 218) were doctors, 9.6% (n = 24) were pharmacists, and 3.2% (n = 8) were nurses, as illustrated in Table 1.

Table 1. Participants Distribution by Professional

Variables	Frequency (n)	Percent (%)
Doctors	218	87.2
Pharmacists	24	9.6

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Nurses	8	3.2
Total	250	100

Participants Distribution by Sex

Majority of the HCPs were males 78% (n = 195) and 22% (n = 55) were females, as indicated in Table 2.

Participants Distribution by Age

Among 250 HCPs, the majority were between the ages of 33–40 years and 41–49 years, which is almost 2/3 of the study population. The age distribution is illustrated in Table 3.

Table 2. Overall Participants Distribution by Sex

Variables	Frequency (n)	Percent (%)
Males	55	22
Females	195	78
Total	250	100

Table 3. Participants Distribution by Age

Variables	Frequency	Percent
17-34 years	11	4.4
25-32 years	47	18.8
33-40 years	112	44.8
41-49 years	50	20
>50 years	30	12
Total	250	100

Reliability Test of the Variables

Reliability test of knowledge obtained through a webinar was done, and the value of Cronbach's Alpha was 0.922, which was above 0.7 indicated that the variable is reliable. Reliability test of independent variable (sound quality) was done, and the value of Cronbach's Alpha was 0.214, which was below 0.7, indicating that the value is not reliable and Reliability test of communication style was done, and the value of Cronbach's Alpha was 0.128, which was below 0.7, indicating that the variable is not reliable, as illustrated in Table 4.

Table 4. Reliability Test of Knowledge, Audio Quality and Communication Style

Variables	Cronbach' Alfa
Knowledge	0.922
Sound Quality	0.214
Communication style	0.128

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Knowledge Satisfaction in Terms of Impact, Usefulness, and Relevance Obtained through the Webinar

Knowledge satisfaction obtained from the webinar was assessed; results showed 42.4% of healthcare professionals strongly agreed, and 47.2% agreed that the knowledge obtained has an impact on their daily activities. However, 4% of healthcare professionals strongly disagree, and 10% disagree that the knowledge obtained has an impact to their daily activities.

Out of 250 participants, 43.6% strongly agreed, and 47.2% agreed that knowledge obtained through a webinar is useful to them, while 1.6% strongly disagreed and 2.4% disagreed that knowledge obtained through a webinar is useful to them.

Among 250 healthcare professionals, 43.2% strongly agreed, and 48.4% agreed that knowledge obtained through a webinar is relevant to them, while 1.6% strongly disagreed, 2.4% disagreed on the relevancy of the knowledge, and 4.8% were neutral. All these results are illustrated in Table 5.

Table 5. Satisfaction of Knowledge (Impact, Usefulness, and Relevancy) through the Webinar

Variables	Knowledge Impact		Knowledge Usefulness		Knowlegde Relevancy	
	Frequency (n)	Percentage (%)	Frequency (n)	Percentage (%)	Frequency (n)	Percantage (%)
Strong agree	106	42.4	109	43.6	108	43.2
Agree	118	47.2	118	47.2	121	48.4
Neutral	12	4.8	11	4.4	11	4.4
Disagree	10	4.0	8	3.2	6	2.4
Strong disagree	4	1.6	4	1.6	4	1.6
Total	250	100	250	100	250	100

Audio Quality in terms of Audibility of the Audio, Echo of the Audio and Quality of the Audio

Different parameters were used to evaluate audio quality, these include: audibility of the audio, echo of the audio, and quality of the audio. Results showed that 42.4% of the HCP disagreed and 11.6% strongly disagreed that audio was audible through the webinar, while 27.6% of HCP agreed and 6.4% strongly agreed that audio was audible through the webinar.

Out of 250 HCP, 43.2% disagreed, and 9.6% strongly disagreed that they have experience with echo during webinar presentation, in contrast 31.6% agreed and 6.0% strongly agree that they have experience with echo during webinar presentation.

Among the participants, 38.8% responded that the quality of the audio was poor, and 3.6% responded that the quality of the audio was extremely poor. In contrast, 35.2% of the HCPs suggested that the quality of the audio was good, 3.2% highlighted that the quality of the audio was very good, and 19.2% were neutral. These results are illustrated in Table 6.

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Table 6. Audio Quality

Variables	Audibility of the Audio		Echo of the Audio		Quality of the Audio	
	Frequency (n)	Percentage (%)	Frequency (n)	Percentage (%)	Frequency (n)	Percantage (%)
Strong agree	16	6.4	15	6.0	8	3.2
Agree	69	27.6	79	31.6	88	35.2
Neutral	30	12	24	9.6	48	19.2
Disagree	106	42.4	108	43.2	97	38.8
Strong disagree	29	11.6	24	9.6	9	3.6
Total	250	100	250	100	250	100

Communication Style in terms of Destruction, Improvement and Comfort

Different parameters were used in this study to measure the communication style of the presenter, these include: destruction created by communication style, improvement of communication style, and the comfort level of communication style. Analysis of the results showed that 47.6% of the HCPs disagreed and 22.6% strong disagreed that the communication style of the presenter creates destruction during webinar presentation, while 11.6% of HCPs agreed and 6.4% strongly agreed that the communication style of the presenter creates destruction during webinar presentation.

Results also showed that 55.2% of the HCPs disagreed and 18.8% strongly disagreed that there was a need for improvement of the communication style, however, 10.0% of HCPs agreed and 2.8% strongly agreed that there was a need for improvement to communication style of the presenter.

Out of 250 HCPs, 57.6% agreed, and 22.4% strongly agreed that they are comfortable with the communication style of the presenter, but 8% of HCPs disagreed, 0.8% strongly disagrees on conformability of the communication style of the presenter, and 11.2% of HCPs were neutral. These results are illustrated in Table 7.

Table 7. Communication Style

Variables	Distruction Created by Communication Style		Improvement of Communication Style		Comfortability of Communication Style	
	Frequency (n)	Percentage (%)	Frequency (n)	Percentage (%)	Frequency (n)	Percantage (%)
Strong agree	16	6.4	7	2.8	56	22.4
Agree	29	11.6	25	10	144	57.6
Neutral	29	11.6	33	13.2	28	11.2
Disagree	119	47.6	138	55.2	20	8.0
Strong disagree	57	22.8	47	18.8	2	0.8
Total	250	100	250	100	250	100

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Satisfaction Level in term of Knowledge, Audio Quality and Communication Style

In this study, satisfaction levels were measured by the following parameters: satisfaction with knowledge, satisfaction with audio quality, and satisfaction with the communication style of the presenter. Analysis of the results showed that 46.8% of the HCPs agreed and 41.2% strongly agreed that they are satisfied with the knowledge obtained through the webinar, while 8.8% of the HCPs disagreed and 0.8% strongly disagreed that they are satisfied with the knowledge obtained through the webinar.

Among 250 HCPs, 53.6% disagreed, and 9.6% strongly disagreed that they are satisfied with audio quality, in contrast 28.8% of the HCPs agreed, and 4.4% strongly agreed that they are satisfied with the quality of the audio. Out of 250 HCPs, 47.6% agreed, and 24.8% strongly agreed that they were satisfied with the communication style of the presenter, while 12.8% disagreed, and 1.6% strongly disagreed that they are were satisfied with the communication style of the presenter. These results are illustrated in Table 8.

Table 8. Satisfaction Level (Knowledge, Audio Quality, and Communication Style)

Variables	Satsfaction with the Knowldge		Satsfaction with Audio Quality		Satsfaction with Communication Style	
	Frequency (n)	Percentage (%)	Frequency (n)	Percentage (%)	Frequency (n)	Percantage (%)
Strong agree	103	41.2	11	4.4	62	24.8
Agree	117	46.8	57	28.8	119	47.6
Neutral	6	2.4	24	9.6	33	13.2
Disagree	22	8.8	134	53.6	32	12.8
Strong disagree	2	0.8	24	9.6	4	1.6
Total	250	100	250	100	250	100

Correlation between the Variables

Regression analysis was done to assess the correlation between HCP's satisfaction and knowledge, audio quality, and communication style. Results showed that there was a moderate correlation between the variables (R = 0.462). 21.3% of the variation of HCP's satisfaction is explained by knowledge, audio quality, and communication style (R^2 = 0.213). Durbin-Watson result was 1.449, which shows a slightly positive correlation, as indicated in Table 9.

Table 9. Correlation between the Variables

Model	R	R-Square	Adjusted Square	Std. Error of the Estimate	DurbinWatson
	0.462	0.213	0.204	0.7117	1.449

Regression Analysis

A linear regression was done to assess the relationship between audio quality, communication style, knowledge, and satisfaction. Results showed that there was a significant relationship between sound quality and knowledge, with satisfaction, a p-value of 0.01 and 0.02, respectively, there is no

significant relationship with Communication style, with a p-value of 0.627. These results are illustrated in Table 10.

Table 10. Linear Regression

	Unstandardized Coefficients		Standardized Coefficients	t	sig
	B	Std. Error	Beta		
Constant	0.734	0.314		2.338	0.20
Sound Quality	0.236	0.75	0.179	3.137	0.02
Communication style	0.43	0.89	0.28	0.486	0.627
Knoweldge	0.449	0.64	0.404	7.064	0.000

Test of Null Hypothesis

The first null hypothesis stated that: Knowledge provided through the webinar has no influence on customer satisfaction. As illustrated in a linear regression Table 10, a p-value of variable knowledge is < 0.01, then the null hypothesis was rejected, and the conclusion was that knowledge provided through the webinar has an influence on HCP's satisfaction.

The second null hypothesis stated that: Audio quality does not influence HCP's satisfaction, as shown in linear regression Table 10, a p-value of variable sound quality was < 0.05; then we reject the null hypothesis, and the conclusion was audio quality influences on HCP's satisfaction.

The third null hypothesis stated that: Communication style has no influence on HCP's satisfaction. A linear regression Table 10 illustrated that a p-value of the variable communication style is > 0.05, then we do not reject the null hypothesis, and the conclusion was that communication style does not influence the satisfaction of HCPs.

Mean Difference among the Group

ANOVA was used to determine the difference in mean between the groups, and results showed that there is a significant difference among the groups with a p-value of <0.01, as illustrated in Table 11.

Table 11. Mean Difference among the Group

	Sum of square	df	Mean Square	f	Sig
Regression	33.793	3	11.264	22.238	0.000
Residual	124.607	246	0.507		
Total	158.4	249			

Discussion

This study revealed that, majority of health care professionals were doctors, this was expected as in most webinars doctors attend more as compared to pharmacist and nurses, these findings are similar to those highlighted by Yo et al. [21] which showed majority of participants were doctors (93.6%), nurses 1.2%, and pharmacist 0.1%, additionally in this study the majority were males (this was expected as in Tanzania system most of HCPs are male as compared to female), this align to a study done by Exavery et al. [22], emphasizing HCPs male dominance in Tanzania. The distribution of age among the participants was between 33 and 40 (This was expected as most of the HCPs are within that age). These findings are similar to the study done by Khechine et al. [23] which highlighted that the mean age of study

participants was 30 years, with the majority falling between 30 and 40 years.

In term of knowledge value, majority of the HCPs agreed that knowledge obtained through webinar had impact to their daily activities, was useful and relevant to them, these findings are similar to the study done by stain et al, Avila et al and Lee [24], which indicated that participants confirmed on the impact of knowledge obtained from the webinar on their daily clinical activities, its usefulness and relevancy respectively, additionally a study done by Kahemela et al. indicated that 78.9% of nursed reported positive learning experience and 74.3% suggested that e-learning had impact on teaching effectiveness., [25].

Majority of the HCPs complained about audio challenges, this include inability of the audible audio, echo, and poor quality of the audio, these findings are similar to the study done by Merwe et al, and Buxton et al. [26] which highlighted the problem of sound keeping going off during the webinar, experience of echo throughout the webinar and quality of the sound being poor. This is also explained by Awinia et al. [16] which highlighted inability to access digital platform due to poor internet. However, the other group denied the challenge of echo, this contradict a study done by Merwe et al. [26] which suggested that most of the participants were complaining about echo in the webinar.

Majority of the HCPs disagreed that communication style of the presenter create destruction, they are comfortable with presentation style of the presenter and there is a need to improve communication style these findings are similar to a study done by Allred et al. [27] which highlighted that presentation style does not cause destruction and they are comfortable with the communication style of the presenter however the improvement results of communication style contradict those of land [13] and Lukumay et al. [28] which highlighted the poor delivery of webinar.

In term of satisfaction level, majority of the HCPs agreed that they are satisfied with the knowledge obtained through webinar and communication style of the presenter, these findings are similar to that of Rich et. [14], Sze et al. [1], lee et al. [29] and Kahemela et al. [25] which suggested that majority of the participants were satisfied with the knowledge obtained through webinar and communication style of the presenter. Sze et al. highlighted higher satisfaction with knowledge from the participants, satisfaction results had mean value higher than 5 (1 = poor, 10 = excellent) with knowledge satisfaction has mean value of 8.38, however there was a challenge with the audio quality as majority were not satisfied and this contradict the findings of lee et al. [29] which highlight the satisfaction of audio quality from the participants [1].

The overall reliability test was above cut off point of Cronbach's Alpha of 0.7, but as individual dependent and independent variables were tested, two variables (communication style and audio quality were below cut off point of 0.7, this indicate that these two independent variables are not reliable. On the other hand, knowledge and satisfaction have Cronbach's Alpha above 0.7, which means these variables are reliable; this is aligned to the study done by Ahmad et al. [30], suggesting a poor reliability level if Cronbach's Alpha is less than 0.7.

Null hypothesis were tested; two null hypotheses were rejected, and these were; knowledge does not influence webinar satisfaction, the findings are similar to the study done by Rich et al. [14] and Ngowi et al. [31] who found that the majority of participants were satisfied with the knowledge obtained through the webinar and other hypothesis was that audio quality does not influence webinar satisfaction, these findings are similar to those of lee et al. [29] which suggested that the majority of the webinar participants were satisfied with audio quality. One null hypothesis (communication style) was not rejected in this study, as a p-value > 0.05; these findings contradict those of Lee et al. [29], which highlighted that most of the webinar participants were satisfied with the

communication style of the presenter.

Durbin-Watson was used in this study to check autocorrelation between variables. A result of this study shows that Durbin Watson is 1.444 and indicates that there is a positive correlation between dependent and independent variables. Predictive ability of the model was considered in this study, and the adjusted R-squared is far from 1, which means this study has a low adjusted R- square result. The predictive model of this study is low. Because of this low predictive model, it provide area of further research on the webinar, this align to the study done by Turnel et al. [32], Durbin Watson from 2, which may suggest autocorrelation.

Regression analysis results showed that there is a significant relationship between knowledge and sound quality with satisfaction, with a p-value of < 0.05. These findings are similar to those of Stain et al. [33], emphasizing the satisfaction level of knowledge, and Buxton et al. [34] highlight the satisfaction level of sound quality among HCPs who attend webinars. However, there is no significant relationship with communication style, which has a p- value of > 0.05; these contradict Button et al from which the participants were satisfied with the delivery method.

Conclusion

This study revealed that the majority of HCPs who attend webinars are doctors and male. Most of the HCPs were satisfied with the knowledge obtained through the webinar and the presenter's communication style. More than half of the HCPs were not satisfied with the audio from the webinar. A poor internet connection, which can result in poor audio quality, may lead to dissatisfaction and be one of the reasons why many HCPs do not attend webinars. Sometimes the contents of the webinar are not be relevant to them, which can also lead to dissatisfaction and poor attendance in the webinars. Regression analysis showed that there is a significant relationship between sound quality and knowledge with HCP's satisfaction, and there is no significant relationship between communication style and satisfaction of the HCPs.

Conflict of Interest

There is no conflict of interest.

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Ethical Approval

Ethical approval was obtained from the Director of Research Postgraduate Studies at the University of Dar es Salaam.

Data Availability

Data from this study is available upon request and approval from the Author.

Author Contribution

Beno Mbeya: Conceptualization, Methodology, Writing original draft, data curation, formal analysis.

Ulingeta Mbamba: Writing review, editing and supervision.

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