ORIGINAL ARTICLE

EFFECTIVENESS OF TRAINING WORKSHOP ON THE ATTITUDE OF HEALTHCARE PROVIDERS TOWARDS BREAKING BAD NEWS TO CANCER PATIENTS: A MULTI- INSTITUTIONAL STUDY

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ABSTRACT

Background: Breaking bad news (BBN) is a critical aspect of oncology care. Unfortunately, many healthcare providers (HCPs) in Nigeria lack formal training in this skill.

Objective: This study evaluated the effectiveness of a training workshop on HCPs' attitudes towards BBN to cancer patients across multiple institutions in Nigeria.

Methods: A quasi-experimental study was conducted across six federal hospitals in Nigeria, representing the country's six geopolitical zones. A total of 632 HCPs (doctors, nurses, and other professionals) were trained over 3 days on BBN, using didactic lectures, role play, group discussions, and interactive sessions. The SPIKES model and other communication strategies were emphasized. Attitudes towards BBN were assessed before and after training via an 8-item Likert scale. The data were analysed via SPSS v25, with statistical significance set at $p<0.05$.

Results: A total of 590 participants completed the pre-test, and 528 completed the post-test. Before training, 60.8% of the participants had never received formal BBN training, although 68.5% frequently engaged in BBN. Post training, there was a statistically significant improvement in confidence, understanding of communication models, and ability to handle patients' emotional reactions ($p<0.0001$). The attitude scores improved across all geopolitical zones and professional categories.

Conclusion: A structured BBN training workshop significantly improved healthcare providers' attitudes toward delivering bad news to cancer patients. The incorporation of such training into medical curricula and continuing professional education can enhance patient-provider communication and emotional support in oncology settings.

Keywords: Cancer communication, Psycho-Oncology, Breaking Bad News, SPIKES Model.

INTRODUCTION

Bad news is defined as 'any information that adversely and negatively affects the patients' view of their future.[1] In the context of oncology, it may include relaying information to patients about cancer diagnosis, recurrence, or treatment failure.[2] Despite its importance, breaking bad news to patients is one of the most complex, challenging, and unpleasant tasks of healthcare providers. [2] It is usually associated with difficulty for healthcare providers, patients, and their caregivers.[2] Breaking bad news is a complex healthcare provider-driven process that requires effective

verbal and nonverbal communication with patients and their caregivers.[3]

Advancements in cancer diagnosis and treatment, which have led to improved prognoses and outcomes, have also led to the need for specialized skills by physicians to break bad news to cancer patients.[4,5] Healthcare providers generally view breaking bad news to cancer patients as an unpleasant event, which leads to apprehension and the development of emotions among patients, their caregivers and healthcare providers.[5]

Early studies on breaking bad news among physicians showed that the majority of them did not receive any formal training on breaking bad news, did not feel adequate in their ability to break bad news, and were not comfortable with handling patients' emotions following the breaking of bad news.[4,5] This led to the

development of models for breaking bad news that are patient-centered; addressing the knowledge, perception, and attitude gaps; and ultimately leading to improved experiences, outcomes, and satisfaction with cancer patients.[6] These models incorporate essential ingredients such as being sensitive, being honest and empathic, giving information piecemeal, according to patients' level of understanding, with clarity of information, allowing patients' feedback, and watching out for patients' emotions and handling them appropriately.[6]

Some of the models developed for breaking bad news include the A-B-C-D-E, B-R-E-A–K-S, and S-P-I-K-E-S models, among others.[6-11] However, the S-P-I-K-E-S model is the oldest and most widely used model because of its simplicity.[11] The steps involved include the following: S- setting up the interview, P- assessing patients' perceptions, I- obtaining patients' invitation, K- giving knowledge, E- addressing patients' emotions, and **S**- summarizing. Many studies have demonstrated the wide use of the S-P-I-K-E-S model.[5]

In low-resource settings, such as Sub-Saharan Africa, where late presentation with advanced disease is the predominant mode of presentation of cancer patients, breaking bad news is of utmost importance to help optimize patients' compliance and utilization of scarce oncology resources available.[12,13] There are few studies on breaking bad news in this setting, which have generally demonstrated challenges such as a lack of training for healthcare providers, a lack of protocols, the low medical literacy of cancer patients, and the challenges faced by healthcare providers breaking bad news to cancer patients.[14-17]

Our study is a novel interventional study that aimed to document a training workshop for healthcare providers on breaking bad news to cancer patients and to assess the effect of the training on the attitudes of healthcare providers towards breaking bad news.

MATERIALS AND METHODS

Study Area

The workshop was conducted in Nigeria across the six geopolitical zones of the country, using designated Federal Hospitals as Study Sites. These hospitals include National Hospital, Abuja (North-Central Zone), University of Maiduguri Teaching Hospital, Borno State (North–East Zone), Usmanu Danfodiyo University Teaching Hospital, Sokoto State (North-West Zone), University of Nigeria Teaching Hospital, Enugu State (South–East Zone), University of Benin Teaching Hospital, Edo State (South–South Zone) and Lagos University Teaching Hospital, Lagos State (South–West Zone).

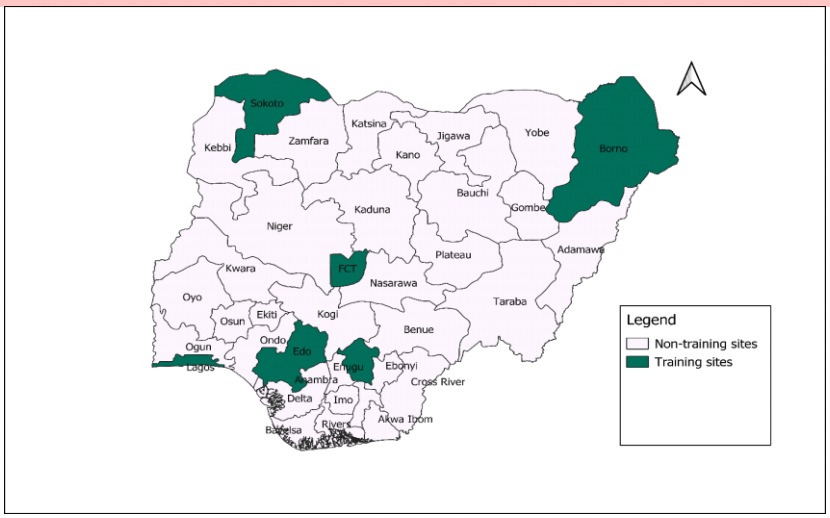


Plate 1. Map of Nigeria showing the states in which the training/study on breaking bad news was carried out

Study Design

This study employed a quasi-experimental design to evaluate the effect of a one-day training workshop on the attitudes of healthcare professionals toward breaking bad news.

Study Population

The participants were healthcare professionals within the designated hospitals, drawn from various specialties, including Doctors, Nurses, and Social Workers, who regularly encountered situations requiring the delivery of bad news to cancer patients. They were recruited through the Office of the Chairman, Medical Advisory Committee (CMAC), of each hospital.

Sampling Method and Sample Size

A total of 632 healthcare professionals across the six geopolitical zones were trained on breaking bad news. Purposive sampling of participants from the training workshop was performed. Informed consent was obtained from the participants before they participated in the study. A total of 590 participants completed the pre-test, whereas 528 completed the post-test questionnaire.

Intervention

Each of the six centres conducted the training for 3 consecutive days, where the selected healthcare workers, with prior experience in oncology, palliative care, or counselling of cancer patients, were divided into cohorts of 30-40 participants and trained on breaking bad news to cancer patients over 8 hours. A total of 18 cohorts were trained across the six geopolitical zones.

The workshop consisted of a combination of didactic lectures, role-play exercises, group discussions, and interactive sessions designed to improve participants' knowledge, attitudes, and confidence in breaking bad news. The core topics included the following: the psychological impact of taking bad news, communication models for taking bad news (e.g., the SPIKES model), cultural sensitivity, ethical considerations, handling difficult

reactions and providing emotional support, and the role of nurses as well as the role of multidisciplinary teams in taking bad news. These lectures and activities were conducted by trained facilitators from different Institutions across the country, with expertise in psycho-oncology and communication skills. The evaluation of participants' attitudes towards breaking bad news was performed before the commencement of training and after the completion of training.

Data collection tool

Data were collected with the aid of a semi-structured questionnaire. The questionnaire was designed via an online data collection tool, the Kobo Toolbox. The questionnaire was divided into sections that asked about the sociodemographic characteristics of the participants and 8-item questions concerning their attitudes towards breaking bad news to cancer patients. The responses to the 8-item questions were graded via a 5-point Likert scale: strongly agree, agree, neutral, disagree, and strongly disagree.

Data collection method

The questionnaire was administered electronically to the participants 10–20 minutes before the commencement of the workshop. The same questionnaire was administered to them after the 8-hour training workshop on breaking bad news. The questionnaire was administered by the team leaders for each group.

Statistical analysis

Data were extracted from the Kobo Toolbox on an Excel sheet. Data cleaning was performed, and the data were then input into the Statistical Package for Social Sciences (SPSS) version 25 for analysis. Variables were summarized via tables and charts. Numerical variables such as age and duration of practice were computed via means and standard deviations, whereas categorical variables were summarized via frequencies and percentages. The sociodemographic variables of the participants before and after the test were compared via difference-of-two means and chi-square tests to ensure that there was no significant difference between the two groups; thus, the differences in attitudes between the two groups were attributable to the training workshop and not to differences in their sociodemographic characteristics. The attitude score was computed for each of the 8 questions. The Likert scale responses were assigned scores - Strongly Agree- 1, Agree- 0.8, Neutral-0.6, Disagree-0.4, and Strongly Disagree- 0.2. For each participant, the attitude score was computed by summing the scores assigned to each of the 8 questions. The possible minimum and maximum attitude scores were 1.6 and 8.0, respectively. The attitude grade was determined by grouping the attitude score as follows: poor (1.6--3.9), average (4.0--5.9), and good (6.0--8.0) attitudes. The difference in the mean test was used to assess significant differences between the pre- and post-training attitude scores. The associations between attitudes and sociodemographic variables were assessed via the chi-square test. The level of significance α was set at 0.05.

Ethical Considerations

This study was carried out in accordance with the World Health Assembly's Declaration of Helsinki. All participants were duly informed about the study and informed of their right to withdraw from participation at any point. They all provided written consent before participation, and measures were taken to protect participant confidentiality, including anonymizing data. No identifiable information was disclosed in the study results.

RESULTS

A total of 590 healthcare workers participated in the study, 590 of whom participated in the pretraining test and 528 (89.4%) of whom participated in the post-training survey. The mean age of healthcare providers was 39.2 ± 9.1 years, with 385 (64.4%) being females and 205 (35.6%) being males. Doctors, nurses, and other healthcare providers constituted 210 (35.6%), 211 (35.8%), and 169 (28.6%), respectively (Table 1). There was no significant variation in the sociodemographic characteristics of the pretraining and post-training populations, as demonstrated in Table 1. Figure 1 shows the distribution of participants across the six geopolitical zones of Nigeria, which consisted of doctors, nurses, and other healthcare providers. The participants had a mean of 11.6±7.9 years of professional experience (Table 1). The majority (359, 60.8%) of the participants had never received any prior formal training on breaking news to cancer patients, whereas 231 (39.2%) had ever received formal training. Among those who had ever received training on breaking bad news, 100 (43.2%) had trained for more than 2 years. Conversely, 404 (68.5%) of the respondents either occasionally or frequently broke bad news to cancer patients (Figure 2

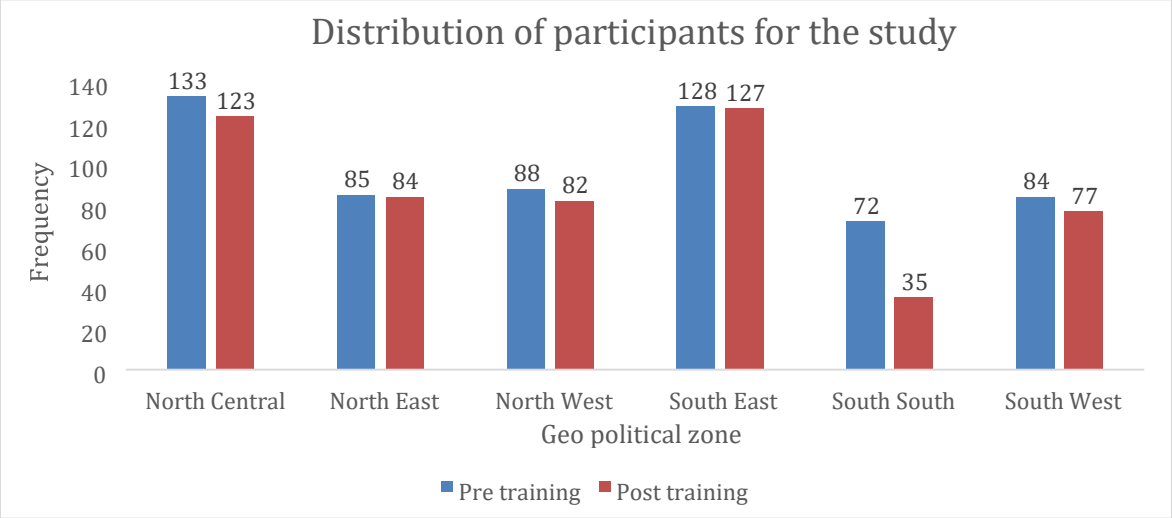
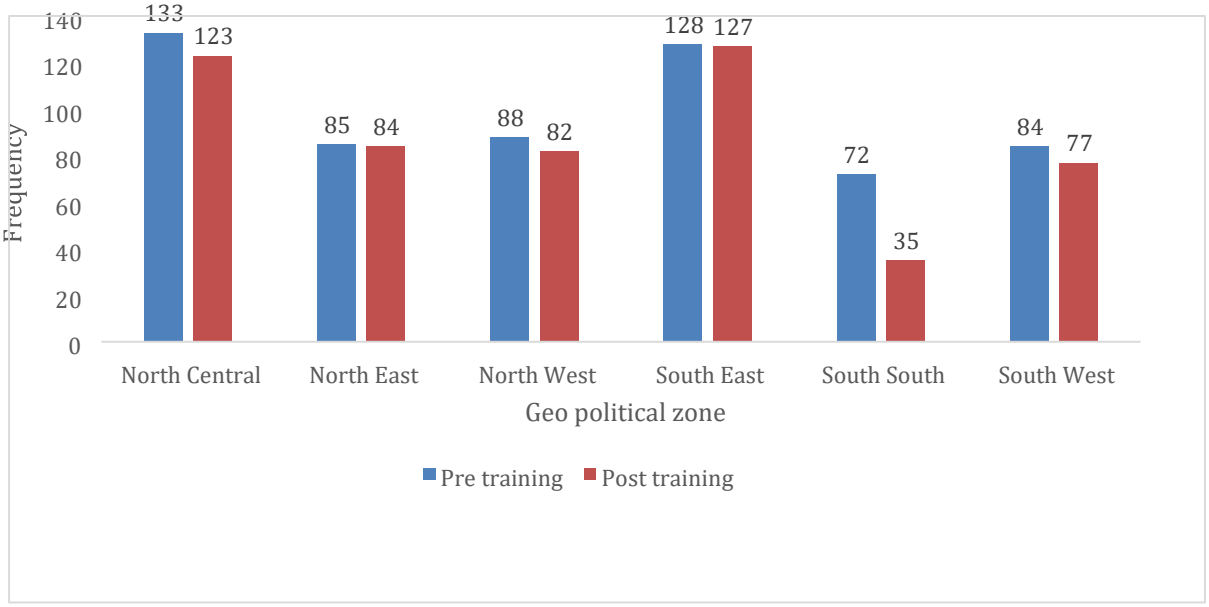


Figure 1. Distribution of respondents in the study (n= 590)

Table 1. Sociodemographic characteristics of healthcare providers for BBN training

Variable	Pre-training (n= 590)	Post-training (n= 528)	Test statistics	P value
Mean Age (Years)	39.2 ± 9.1	38.8 ± 9.2	0.673	0.412
Gender				
Male	205	180	0.850	0.434
Female	385	340		
Marital status				
Married	441	388	0.231	0.631
Not married	149	140		
Profession				
Doctors	210	182	1.03	0.598
Nurses	211	204		
Others	169	142		
Mean years of professional experience	11.6±7.9	11.4±7.9	0.141	0.707



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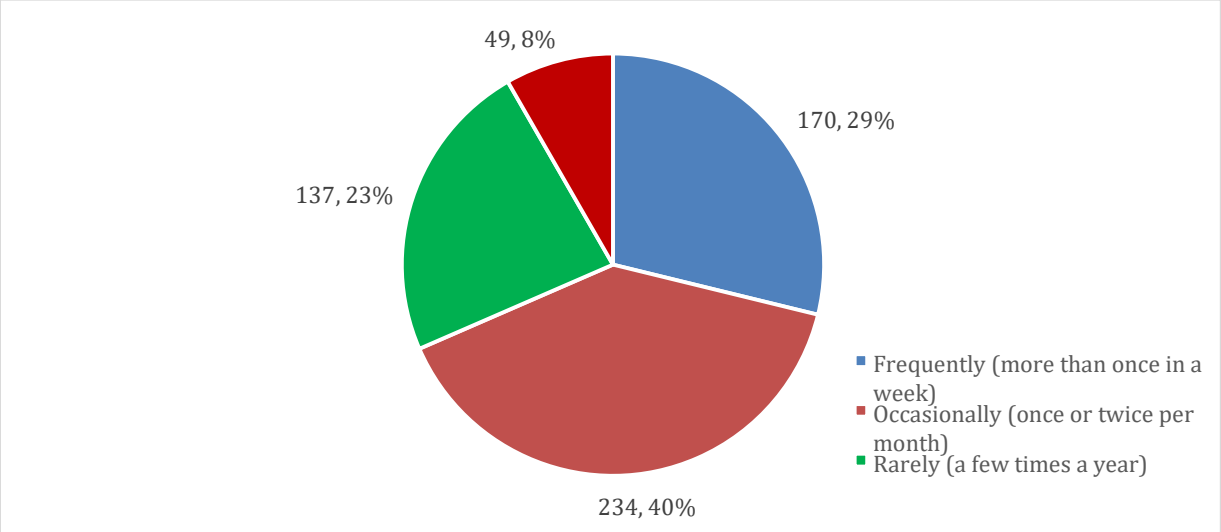

Figure 2. Frequency of breaking bad news to cancer patients by healthcare providers (n= 590)

The attitudes of healthcare providers toward breaking bad news prior to the training workshop were significantly associated with their geopolitical zone (<<0.00001), years of practice experience (0.0001), and prior formal training on breaking bad news (<0.0001) (Table 2).

There was a significant improvement in the attitudes of healthcare providers following training workshops (Table 3, Figure 3). When the participants were categorized into geopolitical zones, a significant difference was maintained across each of the six geopolitical zones (Table 4).

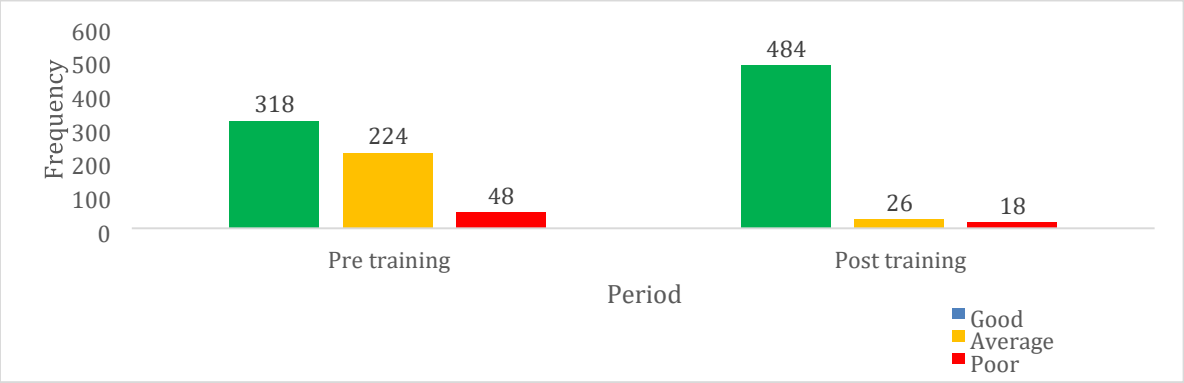

Figure 3. Attitude grades of healthcare providers towards breaking bad news (pretraining, n=590; post training, n=528)

Table 2. Associations between attitudes toward breaking bad news before training and the sociodemographic variables of healthcare providers (n= 590)

Variable	Attitude Grade			Statistics		
	Good	**Average**	**Poor**	X^2	**df**	**P value**
Geopolitical zone						
North Central	75	50	8	32.5	10	<0.00001
Northeast	46	37	2			
Northwest	50	31	7			
Southeast	52	52	24			
South South	46	23	3			
Southwest	49	31	4			
Gender						
Male	108	78	19	0.58	2	0.753
Female	210	146	29			
Age (years)						
≤30	63	43	10	5.87	6	0.438
31- 40	127	93	16			
41- 50	108	59	14			
>51	30	29	8			
Marital status						
Married	236	170	35	1.45	2	0.485
Not married	82	52	15			
Profession						
Doctor	112	83	15	6.40	4	0.171
Nurse	125	71	15			
Others	81	70	19			
Years of practice experience						
< 5	64	42	12	24.45	4	0.0001
5- 10	104	96	19			
>10	214	86	17			
Prior formal training on BBN						
Yes	158	62	11	32.50	2	<0.0001
No	160	162	37			

BBN: breaking bad news

Table 3. Attitudes of healthcare providers toward breaking bad news before and after training (pretraining, n=590; post training, n=528)

Questions on attitude	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Test statistics X^2/F	*df*	*p value*
I am confident in my ability to break bad news								
Pre training	98	270	178	24	20	188	4	<0.00001
Post training	259	212	29	13	15			
I understand the key steps in the SPIKES model of breaking bad news								
Pre training	101	223	156	75	35	323	4	<0.00001
Post training	333	159	16	1	19			
I am aware of the common emotional responses of patients receiving bad news (e.g., anger, denial, fear)								
Pre training	210	303	45	9	23	99	4	<0.00001
Post training	335	162	7	3	21			
I know how to handle difficult reactions from patients (e.g., anger, emotional breakdowns)								
Pre training	91	289	153	43	14	180	4	<0.00001
Post training	235	246	26	7	14			
I am comfortable discussing end-of-life care with cancer patients								
Pre training	64	220	173	105	28	171	4	<0.00001
Post training	201	223	61	26	17			
I am confident in providing emotional support to patients after delivering bad news.								
Pre training	101	293	138	40	18	182	4	<0.00001
Post training	250	233	25	1	19			
I understand the cultural and ethical considerations when breaking bad news in Nigeria.								
Pre training	99	313	128	34	16	209	4	<0.00001
Post training	218	218	16	3	18			
I can identify when patients may require additional psychological or emotional support.								
Pre training	110	350	90	26	14	155	4	<0.00001
Post training	262	232	16	2	16			

Table 4. Healthcare providers' overall attitude scores for breaking bad news before and after training

Geopolitical region	Mean score	Standard deviation	Frequency	ANOVA test *t*	P value
North Central					
Pre training	5.98	1.02	133	7.40	<0.0001
Post training	6.97	1.12	123		
Northeast					
Pre training	5.98	0.86	85	6.83	<0.0001
Post training	6.89	0.91	84		
Northwest					
Pre training	5.98	1.03	88	2.70	0.0077
Post training	6.56	1.71	82		
Southeast					
Pre training	5.58	1.28	128	10.7	<0.0001
Post training	7.07	0.91	127		
South South					
Pre training	6.09	0.84	72	5.04	<0.0001
Post training	7.03	1.03	35		
Southwest					
Pre training	6.13	0.97	84	6.09	<0.0001
Post training	7.09	1.03	77		
Total					
Pre training	5.92	1.05	590	16.20	<0.0001
Post training	6.94	1.15	528		

DISCUSSION

The healthcare providers who participated in the study included doctors, nurses, and psychologists who were fairly widespread across the six geopolitical zones of Nigeria and who provided healthcare to cancer patients and had to break bad news to them frequently. The average age of the participants was 39.2 ± 9.1 years, with an average professional experience of 11.6 years; 385 (65.2%) were female, 35.6% were doctors, and 35.7% were nurses. These findings were consistent with those of a study on breaking bad news among healthcare providers from selected African countries (Nigeria, Kenya, Ghana, and Rwanda), with an average age of 42 years; 62% were females, 48% were doctors, and 42% were nurses.[15] These findings indicate that the selected targets for training were multidisciplinary, young, and potentially had long years of service ahead of them; as such, the training will expectedly fill the need for formal training on breaking bad news among healthcare providers of cancer patients.

Before the training workshop, 404 (68.5%) respondents either occasionally or frequently broke bad news to cancer patients; however, only 231 (39.2%) of them ever received any formal training on breaking bad news. These findings were similar to those of a study among African healthcare providers, where only approximately 30% had received any formal training on breaking bad news;[15] in contrast with the original survey among physicians, where only 4.8% had any formal training;[4] and another study in Nigeria, where only 22.1% of respondents had training.[18] These findings

highlight the underlying dynamics whereby clinicians and other healthcare providers who regularly break bad news to cancer patients receive little to no formal training on breaking bad news.[2]

The overall attitudes of the participants before training were predominantly between average and good. Many of the respondents strongly identified that breaking bad news was very important but were not fully confident in their ability to break bad news properly, identify and handle patients' emotional reactions, and use structured guides to break bad news. These findings are consistent with previous studies.[19] A study on breaking bad news that assessed the attitudes of doctors from the patient perspective revealed that 61.1% felt that the doctors emotionally supported them, 57.5% felt that the time allocated by the doctors was sufficient, and 65.4% were satisfied overall with the meeting.[20] In this study, 62.3% were confident in their ability to break bad news (before the training), which was higher than the 52.6% obtained in a pioneer study among physicians[4] but much lower than the > 80% recorded among healthcare providers in some studies.[15,21]

The attitude towards breaking bad news before training was significantly associated with years of practice experience and prior training received by healthcare providers. Furthermore, following training, overall, there was a significant improvement in the attitudes of healthcare workers towards breaking bad news, which was consistent across all the geopolitical zones and across the 8 domains of attitudes asked. These findings present strong evidence in support of training cancer healthcare providers to acquire the right skills, knowledge, and attitudes toward breaking bad news to cancer patients.

This study is not without limitations. First, the methods of assessing attitude scores and grades are novel and may need to be subsequently validated. Additionally, the time interval between the completion of training and post-training assessment may be too short to represent the true change in attitudes following training.

CONCLUSION

Breaking bad news is a very important aspect of the management of cancer patients and requires the right set of skills, knowledge, and attitudes to be effective in communicating appropriately with cancer patients. The formal training of healthcare providers has been identified as a gap and has been demonstrated in this study to significantly improve the attitudes of healthcare providers.

RECOMMENDATIONS

The training of cancer healthcare providers in breaking bad news should be incorporated into their formal training. There should be regular training and retraining of healthcare workers to break bad news.

DECLARATIONS

Ethics approval and consent to participate

This study was carried out in accordance with the World Health Assembly's Declaration of Helsinki. All participants were duly informed about the study and informed of their rights to withdraw participation at any point. They all provided written consent prior to participation, and measures were taken to protect participant confidentiality, including anonymizing data. No identifiable information was disclosed in the study results.

Consent for Publication

All the Participants were duly informed in the Consent Form that the findings would be published and consented to this by signing to indicate their approval.

Availability of data and materials

All the Data used for this study are attached as a Supplementary file, at submission. They can also be accessed via the KoboToolbox: https://ee.kobotoolbox.org/x/kOSR56mB

Competing Interests:

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as potential conflicts of interest.

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The National Institute for Cancer Research and Treatment (NICRAT) organized and sponsored the nationwide training of cancer healthcare providers on breaking bad news in October 2024. Data for this research was acquired at the training. However, there was no Funding specifically for the Research and Publication aspect; this was done on an out-of-pocket basis by the Authors.

Authors' Contributions:

All authors made significant contributions to the study and have approved the final version of the manuscript.

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