Physicians' Practices and Attitudes Regarding the Delivery of Bad News to Patients under the SPIKES Protocol

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Abstract

Background: Breaking bad news is a critical skill for healthcare providers that require sensitivity, empathy, and effective communication. By utilizing structured approaches like the SPIKES protocol, providers can navigate these difficult conversations more successfully, ultimately improving patient care and satisfaction. **The study aimed to** examines skills and attitudes of physicians in Saudi Arabia's eastern region in delivering bad news to patients based on the SPIKES protocol. **Research design:** a cross-sectional multicentre study. **Sample:** 294 physicians of different specialties. **Tools:** Physicians characteristics and training of delivering bad news, self-administered questionnaire involved physicians' knowledge and skills regarding BBN and the breaking bad new attitude scale (BBNAS). **Results**: The study showed that 46.5% and 36.84% of residents rated their perceived competence in BBN and managing the patient's emotions during BBN as good or very good respectively with a total mean and standard deviation of SPIKES score 0.6135 ± 0.29605. In addition, the cumulative mean and standard deviation of physicians' attitudes towards the training about BBN are 0.6148 ±0.36572. **Conclusion:** The current study findings showed that less than half and more than one third of residents rated their perceived competence in BBN and managing the patient's emotions during BBN as good or very good. According to the findings, BBN skills and attitudes are not significantly correlated with hospital work experience or the individuals to whom bad news is delivered. A positive correlation was found between BBN skills and attitudes and receiving education or training on patient rights. Time of taking education on patient rights was significantly negatively correlated with BBN skills.

Keywords: Breaking bad news, Physicians, Skills in Breaking Bad News, SPIKES Protocol.

Introduction

Breaking bad news is, communicating "any information that has a serious and adverse effect on an individual's view of his future". So, courses in communication skills have provided clinicians with a structure to follow when disclosing new information and practice concerning how to explore and support emotional cues with their patients **(Tranberg & Brodin, 2023).**

The complexity of communicating bad news lies in numerous factors, such as the health professional's response to the emotional reactions of patients and their caregivers, who may feel fearful or unable to cope with the situation, which can result in emotional reactions that include shock, anger, sadness, denial, relief and acceptance; as well as managing ones' own emotional reactions to bad news **(Gutierrez-Sanchez et al., 2021).**

Other critical factors in breaking bad news to a patient or family member in an appropriate manner: the provision of clear, precise, comprehensive information, and the empathy of the physician who gives the information and breaks the bad news. Therefore, delivering BBN requires not only theoretical knowledge, but also the development of a series of humanistic, emotional and communication skills **(Mohamed, & Abou-Abdou, 2018).**

Establishing an effective and good communication consequently reduces stress and increases satisfaction among the recipients of health services. One of the most important aspects of communication in clinical systems is the process of the breaking bad news. Bad news is any health-related information that causes cognitive, behavioral, and emotional

defects in the recipient of that news and it goes beyond dealing with bad news. News related to the diagnosis of life-threatening diseases, progressive diseases, poor prognosis, failure in treatment, treatment complications, amputation and death are among the bad news that health care workers exposure, usually. Reporting the bad news is different from other clinical communications, because news receivers expect to receive more information compared to usual and controllable conditions **(Jalali, Jalali & Jalilian, 2023)**

Delivering bad information is challenging for patients and physicians. Physicians may fear causing suffering to their patients or being blamed. A study on medical residents in the United States of America (USA) found that physicians consider BBN a very stressful event and are poorly prepared in this regard. Other studies revealed that more than 80% of surveyed physicians had no training in communicating any news to patients **(Elashiry, Abdel Wahed & Elhady, 2022).**

It is recommended that for having a good relationship, when presenting bad news, the human dimension of bad news should be considered, as well as empathy, compassion, support, and listening without any judgment. The existence of a calm, appropriate, and secluded space has also been suggested as an effective factor on a bad news presentation process **(Jalali, Jalali & Jalilian, 2023)**

Accordingly, breaking bad news requires specialist training in communication skills to help physicians perform this task. Hence, the development of training programs designed to facilitate communication in critical situations is mandatory in medical education courses **(Mohasseb, & Hegazy, 2021).**

Established protocols like SPIKES, had redefined ways of breaking bad news and death. However, in the absence of proper training, continuous evaluation, and feedback, this learnable skill is not optimally developed amongst all practitioners. SPIKES protocol consists of six consecutive steps. The first step is the "S" or setting up phase meaning the preparation of the medical environment, which should preferably be a private, reserved, pleasant, and welcoming site. The second step is the "P "or perception, which is to discover what the patient already knows about his/ her illness by using open-end questions **(Sengupta et al., 2022).**

The third step is the "I" or invitation, which is the moment to analyse the patient's willingness level to clarify the patient's doubts about the disease. The fourth step is the "K" or knowledge meaning that everything in relation to the diagnosis must be announced in simple words, without medical terms, in order to transmit the information. The fifth step is the "E "or emotion and this is the time to express empathy, recognize the patient's emotions, and provide support. The last step is the "S" or strategy and summary, which is the moment to suggest suitable treatment and possible prognosis of the disease, as well as sum up everything that has been said in order to confirm that the patient has understood. By following the SPIKES Protocol, healthcare professionals can effectively communicate difficult news while ensuring the patient's emotional well-being **(Sengupta et al., 2022).**

Significance of the study

In order to deliver bad news to patients, it is imperative that effective communication is used. The SPIKES protocol addresses this need in a meaningful way. By fostering trust and understanding, structured communication frameworks like SPIKES improve physicians' confidence and patient outcomes **(Mahendiran, 2023).** Furthermore, recent research highlights the ethical importance of such protocols in supporting patients' cultural and emotional sensitivities, ensuring that they receive information in an empathic and clear manner **(dos Santos, 2021).**

Research Aim & Hypothesis

The present study aimed to examine skills and attitudes of physicians in Saudi Arabia's eastern region in delivering bad news to patients based on the SPIKES protocol. In addition, examine the factors that influence such disclosures. To fulfil this aim it was hypothesized that physicians differ significantly in their abilities to deliver bad news based on the characteristics that indicate greater skill in the SPIKES concordance scale.

Methods

Study design- settings

This is a cross-sectional multicentre study which is used to determine how an outcome is or to find correlations between variables without changing setting (Hunziker & Blankenagel, 2024) that was carried out on 294 physicians of different specialties and workplaces in Al Ahsa, Saudi Arabia, King Faisal General Hospital- MCH-King Fahd Hospital- Ben Jalawy Hospital- Psychiatric Hospital – Al Omran Hospital- Al Mosa Hospital- Al Manee Hospital. It was conducted between May to December, 2023.

Ethics

The study protocol was approved by the Research Ethics Committee of the King Fahad Hospital-Hofuf's IRB KFHH No. (H-05-HS-065) Date: 1/5/2023. IRB Log No: 02-EP-2023. The participants provided written informed consent.

Participants and data collection

A convenience sample of 294 physician was who agreed to complete the questionnaires in the previously mentioned hospitals were included in this study, but the physicians whose responses to questionnaires were incomplete were excluded (18 physician were excluded).

Study Tools

Three tools were used to collect data for the present study.

First tool: Demographic data which contain the Physicians characteristics as age, gender, specialty, qualification, experience and previous training regarding BBN. **Second Tool:** Self-administered Questionnaire involved Physicians Knowledge and Skills regarding BBN (dos Santos, 2021). Developed by dos Santos in 2021, the "Physicians Knowledge and Skills regarding BBN" tool assesses and enhances physicians' capabilities to effectively communicate bad news (BBN) to patients. Structured communication strategies, such as SPIKES, are highlighted in this tool, which guide physicians through delivering difficult information in a sensitive manner. This tool uses a scoring system to help measure competence, with higher scores reflecting higher proficiency and understanding.

Third Tool: The Breaking Bad New Attitude Scale (BBNAS) (dos Santos, 2021). The BBNAS is not a tool for assessing knowledge of the SPIKES protocol, but it rather evaluates how much the physician/student agrees with the SPIKES values and principles, which have been recognized as essential for BBN. The BBNAS is the newly developed 15-item scale. Respondents are asked to rate how much they agreed with each statement using a 5-point scale from 0 (strongly disagree) to 4 (strongly agree).

A BBNAS score calculated as 11 items for practice skills and attitude towards BBN, the high score indicates positive attitudes. The second factor in the proposed instrument was able to measure the attitude towards training behaviours of giving bad news, considering the relationship that the individual has with the need to improve communication and receive training. The high score in this domain indicates that the participants positively consider the possibility of participating in training for this skill.

Validity and Reliability:

Content validity testing was performed on the proposed tools by inspecting the items to determine whether the tools measure what supposed to measure. The stage developed by a jury of 5 experts from different academic categories of nursing specialty. The tools were modified somewhat after being examined by specialists; proposed tools underwent statistical testing for reliability using the Cronbach alpha (0.75, 0.80 & 0.89) for first, second & third tool respectively

Pilot study

A pilot study was carried out on 10% of the total sample to test the feasibility, objectivity, and applicability of the data collection tools. Based on the results of the pilot study, no modifications were made by the researcher.

Study procedure

In order to gather data, the researchers reviewed the relevant literature and then created the necessary instruments. Researchers instructed all participants who fulfilled inclusion criteria about the study's goals and methods. Those who agreed to take part in the study were subsequently asked to provide written consent by the researcher. Survey questions about demographic data, as well as questions about previous BBN training, were completed. Participants were then asked to complete the SPIKES and BBN questionnaires.

Data analysis

SPSS version 23 was used to analyse the data. In order to measure the characteristics of the participants and their experiences with bad news, descriptive statistics analyses were carried out, including frequencies, percentages, means, and standard deviations.

Results

The demographic data of the participants are shown in Table 1. In terms of gender, 149 (50.7%) of the participants were female. In terms of qualifications, 77 (26.2%) of the participants were residents, while 67 (22.8%) were Master Board/Fellowship holders. Among those with work experience in hospitals, 152 (51.7%) had between zero and five years, while 86 (29.3%) had more than ten years. Of the participants, 171 (58.2%) provided bad news to the patients. In relation to reporting serious infectious diseases without taking the consent of the patients, more than half of the participants 167 (56.8%) answered no. The majority of respondents 243 (82.7%) reported receiving education/training on patient rights. In regards to receiving education on breaking bad news, almost two thirds of participants 189 (64.3%) stated that they had done so.

A summary of how physicians reported their own skills in BBN is shown in Figure 1. On a 5-point scale, 46.5% and 36.84% of residents rated their perceived competence in BBN and managing the patient's emotions during BBN as good or very good, respectively. A mean score of 2.76 was reported for the skill of showing support, respect, and understanding after giving bad news. Taking second place is the skill of trying to understand if the patient has been informed about their prognosis with a mean score of 2.72, while the lowest score comes from the skill of preparing a suitable place to deliver bad news. The SPIKES total score had a mean and standard deviation .6135 ± .29605.

Figure 2 illustrates the physicians' attitudes towards the training about BBN. The cumulative mean and standard deviation are .6148±.36572

Table (2) illustrates the correlation between physicians' characteristics, their experience delivering bad news, and their ability to deliver bad news. According to Pearson correlation values and significance levels, there was no significant correlation between age, gender and work speciality and BBN skills and attitudes. One of the most noteworthy findings of the study was the significant negative correlation between qualification and skills as well as attitudes, which indicated that a higher educational level was associated with lower BBN skills and less favourable attitudes. In order to improve their BBN capabilities, more qualified physicians may require additional training or support.

According to the findings, BBN skills and attitudes are not significantly correlated with hospital work experience or the individuals to whom bad news is delivered. In contrast, the study found that reporting serious infectious diseases without patient consent is negatively correlated with both skills and attitudes, indicating that physicians with lower BBN skills and less favourable attitudes tend to report serious infectious diseases without patient consent. A positive correlation was found between BBN skills and attitudes and receiving education or training on patient rights. Time of taking education on patient rights was significantly negatively correlated with BBN skills, suggesting that more recent training would be beneficial.

Table (1): Demographic data of the study sample (n=294)

Age per complete years		**Mean 32.5**	
Items		**Count**	**Column N %**
Demographic data of the participants			
Gender	Female	149	50.7%
	Male	145	49.3%
Specialty/ Work department	Family Medicine	67	22.8
	GP	26	8.8
	ICU	1	.3
	Intern	53	18.0
	Medicine Surgery	41	13.9
	OB/Gynae	41	13.9
	Paediatrics	35	11.9
	Psychiatry	26	8.8
	Radiological technologies	2	.7
	Respiratory therapist	1	.3
	Urology	2	.6
Qualification/ Educational level	Intern	53	18.0
	Resident	77	26.2
	Master Board/Fellowship	67	22.8
	Ph.D. Board/Fellowship	46	15.6
	Consultant	51	17.3
Years of experience	0-5	152	51.7%
	6-10	56	19.0%
	More than 10 years	86	29.3%
Delivering bad news concerning the patient	Family member	123	41.8%
	Patient	171	58.2%
Reporting serious infectious diseases without taking the consent of the patients	No	167	56.8%
	Yes	127	43.2%
Receiving education or training on patient rights	No	51	17.3%
	Yes	243	82.7%
Received education on breaking bad news	No	105	35.7%
	Yes	189	64.3%

Figure (1): Self-evaluation of physician' different skills used in breaking bad news "Factor 1 – SPIKES Concordance Skills

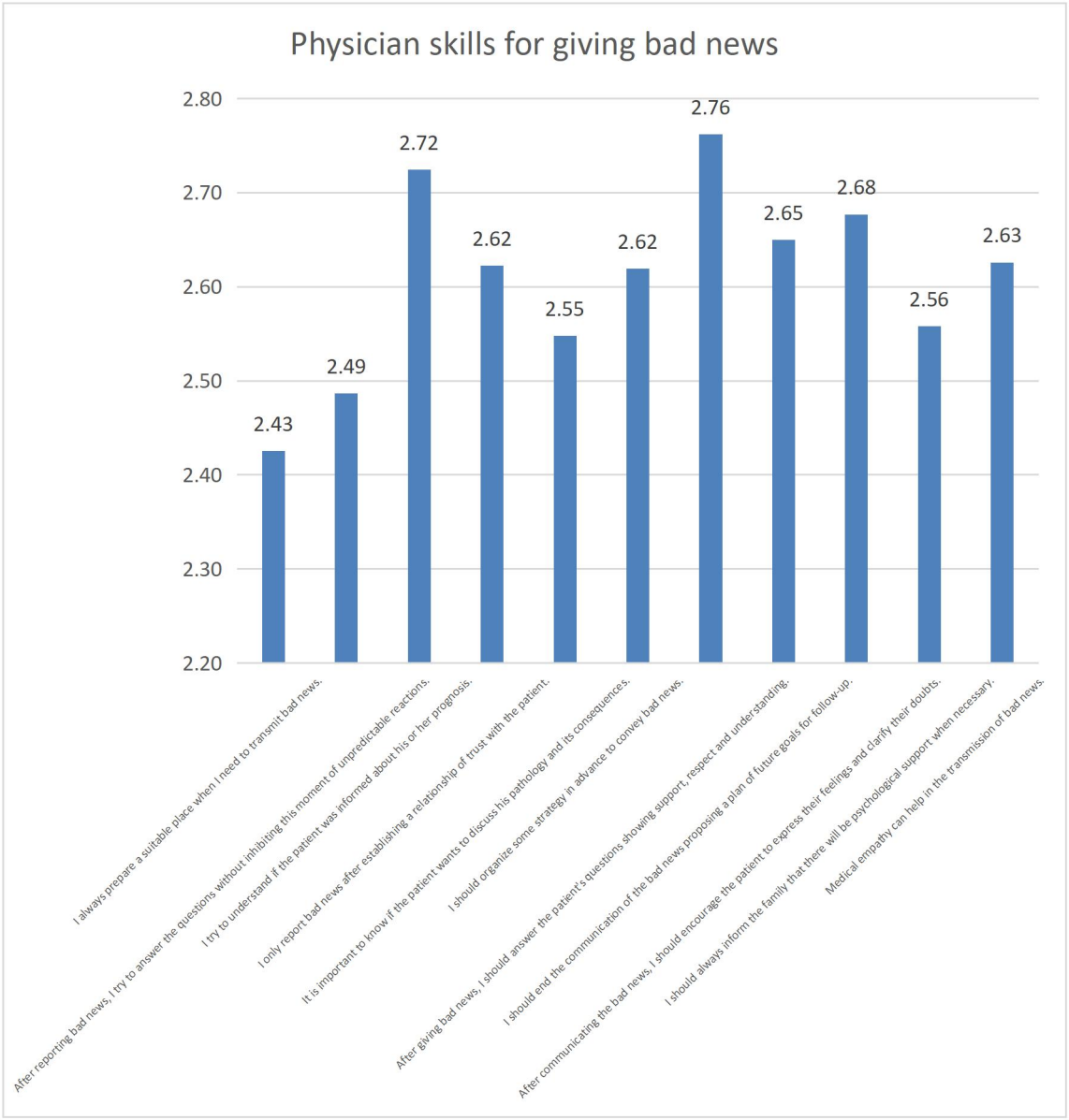

Figure (2): Physicians attitudes regarding training in delivering bad news (n=294)

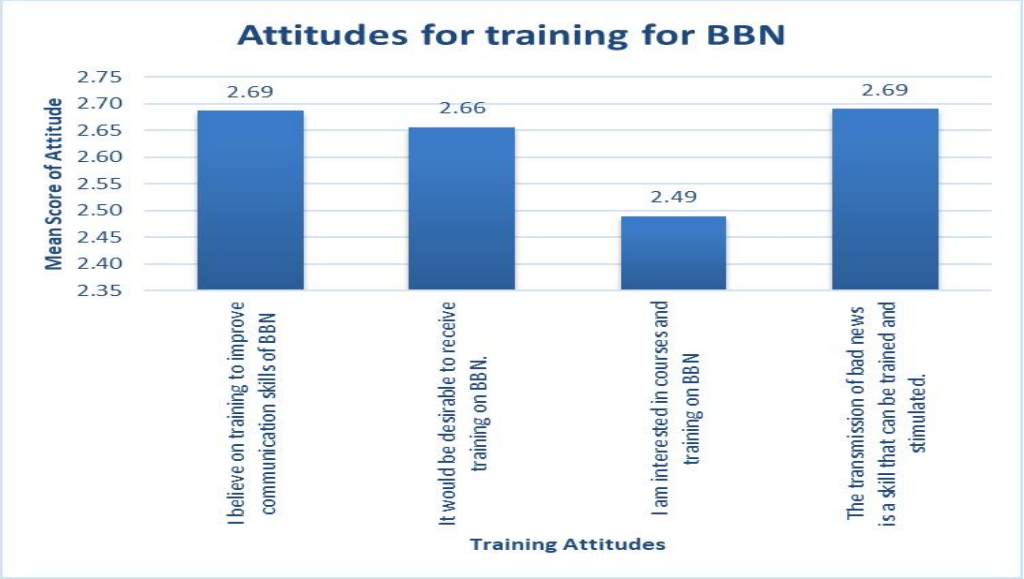

Table (2): Association of physicians' characteristics and their experience of bad news with their skills in BBN

		Skills	Attitudes
Age per complete years	Pearson Correlation	.040	.066
	Sig. (2-tailed)	.498	.260
Gender	Pearson Correlation	.049	-.031
	Sig. (2-tailed)	.401	.601
Specialty/ Work department	Pearson Correlation	.108	.093
	Sig. (2-tailed)	.065	.113
Qualification/ Educational level	Pearson Correlation	-.209**	-.265**
	Sig. (2-tailed)	.000	.000
How many years of hospital work do you have?	Pearson Correlation	.038	.070
	Sig. (2-tailed)	.520	.229
Delivering the bad news concerning the patient	Pearson Correlation	.104	.031
	Sig. (2-tailed)	.075	.601
Reporting serious infectious diseases without taking the consent of the patients	Pearson Correlation	-.245**	-.044
	Sig. (2-tailed)	.000	.454
Receiving education/training on patient rights	Pearson Correlation	.255**	.119*
	Sig. (2-tailed)	.000	.041
Receiving education on breaking bad news	Pearson Correlation	.027	.020
	Sig. (2-tailed)	.639	.727
When did you receive education on breaking bad news?	Pearson Correlation	-.260**	-.091
	Sig. (2-tailed)	.000	.118
**. Correlation is significant at the 0.01 level (2-tailed).			
*. Correlation is significant at the 0.05 level (2-tailed).			

Discussion

This research was conducted to evaluate physicians' abilities in Breaking Bad News and identify attitudes towards BBN training. As regard physician characteristics, the current study findings showed that, in terms of gender, more than half of the study participants were female. From the researcher point of view, it may be explained as over the past few decades, there has been a significant increase in the number of women entering medical schools globally. In many regions, women now represent a larger proportion of medical students, leading to a greater representation in the workforce.

These findings agreed with **Elashiry et al. (2022)** who concluded that more than half of physicians were female. In contrast this findings were opposite to **Al Kindi et al. (2024)** and **Mohasseb et al. (2021)** whose study findings showed that more than half of physicians were males.

Concerning to educational level, more than one quarter of study participants were residents while more than one fifth were Master Board/Fellowship holders. These results may be explained by the fact that in healthcare systems, residents often make up a significant proportion of the workforce, as they are in the early stages of their medical careers and undergoing training. This explains why more than one-quarter of participants were residents. Also, Achieving Master Board or Fellowship qualifications typically require significant time, effort, and resources. As a result, fewer physicians reach this level compared to those still in the residency phase.

This study results is similar to the study of **Jallab, (2023)** whose study findings showed that more than third of study participants were residents. These results are analogous to the results of a study conducted by **Mohasseb et al. (2021)** who concluded that more than two thirds of physicians were residents followed by Ph.D./Fellowship holder. The current study finding was compatible with the study conducted by **Homendro et al. (2024)** who reported that more than two thirds of physicians were residents while slightly more than one thirds were higher (MD/MS, Diploma, PHD) holder. This result was in contradiction with **Al-Sabaawi et al. (2021)** whose study results concluded that more than half of the respondents were specialists.

As regards years of experience, the current study findings showed that more than half of physicians had less than five years of experience. This may be rendered to a larger proportion of junior physicians, including residents and early-career practitioners, would be expected.

The current study finding was compatible with the study conducted by **Sadaqat et al. (2022)** who reported that almost four fifth of study participants had less than ten years of experience. The same as reported by **Homendro et al. (2024)** whose study findings showed that more than half of study participants had less than five years of experience.

As regards delivering bad news, more than half of the study participants delivered the bad news to the patients directly. This may be explained with, in medical practice, delivering bad news is often seen as a critical part of a physician's duty to maintain transparency and build trust with patients. Moreover, many patients expect direct communication from their physicians regarding their health status, including bad news. This approach aligns with respecting patient autonomy and ensuring they are fully informed about their condition.

This study results is similar to the study of **Elashiry et al. (2022)** who reported that more than two thirds of physicians had broken any bad news to a patient. Also, **Ferreira da Silveira et al. (2017)** reported that more than half of study participants deliver bad news to patients. This result was in contradiction with **Dafallah et al. (2020)** whose study findings displayed that more than two thirds of physicians preferred to deliver bad news to patients' close relatives rather than the patients.

Regarding to receiving any education/training on patient rights and breaking bad news, high percentage of the study participants reported that they had received education/training on patient rights and breaking bad news.

This result was in contradiction with 3 studies conducted by **Al-Sabaawi et al. (2021), Elashiry et al. (2022)** and **Homendro et al. (2024)** who reported that more than half of the study participants hadn't any training program regarding breaking bad news before.

Regarding self-evaluation of physicists' different skills used in breaking bad news, the current study findings showed that less than half and more than one third of residents rated their perceived competence in BBN and managing the patient's emotions during BBN as good or very good. This may be explained with residents being in the early stages of their medical careers, may have had limited exposure to real-life situations involving BBN. While they might have received theoretical training, practical application often requires time and experience to build confidence and skill.

The current study finding was similar to **Dafallah et al. (2020) and Elashiry et al. (2022)** who reported that the vast majority of physicians have a good agreement level and the minority had a partial agreement level with the principles of SPIKES protocol. The current study finding disagreed with the study done by **Mohasseb et al. (2021)** and **(Homendro et al. (2024)** who reported the majority of the participants, had poor knowledge of breaking bad news protocol (SPIKES) and only less than fifth of the participants had received training on breaking bad news.

According to the findings, BBN skills and attitudes are not significantly correlated with hospital work experience or the individuals to whom bad news is delivered. In contrast, the study found that reporting serious infectious diseases without patient consent is negatively correlated with both skills and attitudes, indicating that physicians with lower BBN skills and less favourable attitudes tend to report serious infectious diseases without patient consent. A positive correlation was found between BBN skills and attitudes and receiving education or training on patient rights. Time of taking education on patient rights was significantly negatively correlated with BBN skills, suggesting that more recent training would be beneficial.

The skill of residents regarding BBN was not significantly related to age, gender and work speciality. The current study finding was compatible with the study conducted by Elashiry et al. (2022) who displayed that the skill of residents to BBN was not associated with age and has not shown a significant relationship with years of professional experience and training specialty (medical, surgical, and emergency medicine). At the same line, **Zemlin et al. (2024)** reported that there was no any significant association between personal characteristics and items of P-SPIKES. In contrast **Alshami et al. (2020)** concluded that differences in the SPIKES scores may be related to factors such as the age, gender, and cultural background of the residents.

One of the most noteworthy findings of the study was that a higher educational level was associated with lower BBN skills and less favourable attitudes. Similarly, **Elashiry et al., (2022)** documented that the number of years of experience and qualification had no association with the physicians' agreement scores with the SPIKES protocol. The researchers regarded that to the fact that the fellowship and consultant physicians weren't obliged to attend the BBN training conducted at their hospitals.

Conclusion

The current study findings showed that less than half and more than one third of residents rated their perceived competence in BBN and managing the patient's emotions during BBN as good or very good. According to the findings, BBN skills and attitudes are not significantly correlated with hospital work experience or the individuals to whom bad news is delivered. A positive correlation was found between BBN skills and attitudes and receiving education or training on patient rights. Time of taking education on patient rights was significantly negatively correlated with BBN skills.

Recommendations

Training on the practice of BBN should be included in the medical school's curricula as well as physicians continued professional development. Further research is required to evaluate the effect of training programs on physicians' BBN practice

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