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Resident Doctors' Experiences in Breaking Bad News: The Level of Using Spikes Protocol and Related Factors

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ABSTRACT

Objective: This study aimed to determine assistant doctors' experiences of giving bad news, their use of the SPIKES protocol, and effective factors.

Methods: The study was conducted at Atatürk University Faculty of Medicine between September-December 2017 with 232 assistant doctors. The participants' experiences of delivering bad news were assessed using a questionnaire based on the SPIKES protocol. The questionnaire, consisting of 20 questions on a five-point Likert scale, covered six key areas: environment, perception, invitation, information, affect, and plan-summary. Factors that could affect participants' methods of breaking bad news were questioned. Significance level was accepted as $P<.05$.

Results: Of the participants, 57.3% (n=133 were male, 57.3% (n=133) were married, and 70.3% (n=163) were working in internal sciences. Mean age was 29±3.5 years, and mean total working time was 4.5±3.3 years. 64.7% (n=150) had no pre-graduation training in giving bad news, and 90.9% (n=211) had no post-graduation training. 38% felt competent, 35.8% found difficulty in giving bad news. 60.8% devoted enough time to interviews, 24.1% arranged quiet rooms, and 43.1% used warning sentences, and 75.9% empathized, 69% had quiet rooms during interviews. All participants allowed their emotions, and 84.9% made eye contact. Male participants introduced themselves more frequently than females before interviews ($P<.05$).

Conclusion: To gain the skill of giving bad news of assistant doctors the training needs should be met and they should be supported. More training and experience in areas such as setting the environment, invitation and information are important, especially for the full implementation of the SPIKES protocol.

Keywords: Patient-physician communication, Breaking bad news, SPIKES protocol

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INTRODUCTION

Breaking bad news is defined as "a message that destroys hope, poses a threat to both the physical and mental well-being of the individual, risks disrupting their lifestyle, and implies a reduction in life choices".[1] In medicine, breaking bad news is one of the most special situations in patient–physician communication. Breaking bad news is difficult, and effective communication techniques should be used.[2,3] Therefore, breaking bad news requires complex communication skills. Failure to break bad news appropriately increases the destructive effect of bad news and negatively affects patient compliance with treatment.[4]

Some techniques for delivering bad news have been developed to facilitate clinicians' work. These techniques are not protocols that physicians must follow but can be adapted and followed in every culture, guiding the physician and making this difficult task easier and more professional. One of the most well-known and accepted models is the SPIKES protocol. SPIKES is a protocol named after the initials of the structured steps to be taken when delivering bad news. This approach consists of six steps: "S-Setting Up the Interview, P-Assessing the Patient's Perception, I-Obtaining the Patient's Invitation, K-Breaking Knowledge And Information to the Patient, E-Addressing the Patient's Emotions With Empathic Responses, S-Strategy And Summary".[5]

Breaking bad news skills is an area that is often underemphasized in medical education, but it has critical importance in clinical practice. It is vital for physicians to communicate empathically and effectively with their patients both to ensure patient trust and to minimize negative emotional reactions.[3,4] However, the limited number of studies on the knowledge and skills of resident physicians, who play important roles in breaking bad news, and the fact that it has only recently started to be included in pregraduation and postgraduate training have resulted in a lack of knowledge and experience among all other healthcare professionals, especially resident physicians. Further research in this field may contribute to the development of bad news skills in medical education and the adoption of more effective communication strategies in clinical practice.

This study aimed to determine the experiences of resident doctors working at Atatürk University Faculty of Medicine Hospital in breaking bad news, the level of use of the SPIKES protocol while breaking bad news and the effective factors.

METHODS

Study Design

This cross-sectional study was conducted at Atatürk University Faculty of Medicine (AUFM) Hospital between September and December 2017.

Setting and Sample

The population of the study consisted of 318 resident doctors working at AUFM Hospital on the dates of the study. Since all residents were planned to be included in the study, no sample calculations were performed. The study was conducted with volunteers. Volunteer consent forms were obtained from all participants.

Measurements and Data Collection

Data were collected through a questionnaire consisting of two parts. In the first part of the questionnaire, age, gender, marital status, having children, year and branch of residency, years in the profession, number of years given bad news, training on breaking bad news before and after graduation, difficulty in breaking bad news, and experience breaking bad news were recorded. The second part of the questionnaire consisted of 20 questions prepared according to the SPIKES protocol, which is accepted as a breaking bad news model. The five-point Likert scale (never, rarely, sometimes, most of the time, always) covered six main areas: Setting up, Perception, Invitation, Information, Emotoion and Strataegy-Summary. The aim of this section was to assess the ways in which resident doctors deliver bad news.

Data were collected via the face–to–face survey method. The questionnaire forms were distributed to the resident physicians who agreed to participate and were collected one week later. The participants who stated that they had never given bad news before could not answer the second part of the questionnaire.

The inclusion criteria were as follows: being a resident physician at Ataturk University Faculty of Medicine Hospital, volunteering to participate and having given bad news before. Non-volunteers, those with no previous bad news experience and residents in basic sciences were excluded.

Statistical analysis

Statistical analysis was performed via SPSS Statistics 20 (IBM SPSS Corp., Armonk, NY, USA). For descriptive statistics, the number (n) and percentage (%) were used for categorical data, and the mean and standard deviation (SD) were used for numerical data. The conformity of the numerical variables to a normal distribution was evaluated via a skewness test. Chi-square tests and Student’s t tests were used in the analyses. A statistical significance level of $P<.05$ was accepted.

Ethical approval for the study was obtained from the Ataturk University Faculty of Medicine Clinical Research Ethics Committee (number: B.30.2.ATA.0.01.00/102-Date 28.09.2017). Informed consent was obtained from the participants.

RESULTS

A total of 232 resident doctors participated in the study. A total of 72.9% of the population was reached. The mean age of the participants was 29±3.5 years, 42.7% (n=99) were female, and 57.3% (n=133) were married. A total of 70.7% (n=164) of them were from internal medical science. The rate of receiving training on breaking bad news before graduation was 35.3% (n=82), whereas it was 9.1% (n=21) after graduation.

When asked how competent they considered themselves in breaking bad news, 13.4% (n=31) answered very good, 24.6% (n=57) answered good, 53% (n=123) answered fair, 8.2% (n=19) answered bad, and .9% (n=2) answered very bad. When asked how difficult it was for the residents to give bad news, 9.5% (n=22) answered definitely not difficult, 30.6% (n=71) answered definitely not difficult, 24.1% (n=56) answered undecided, 31.9% (n=74) answered difficult, and 3.9% (n=9) answered definitely difficult. The analysis of the participants' answers to the survey questions prepared according to the SPIKES protocol is presented in Table 1. The answers of the participants to each question were categorized by accepting 'never' and 'seldom' answers, as the item was not applied, 'sometimes' as sometimes applied, and 'always' and 'most of the time' as applied.

Table 1. Distribution of participants' answers according to the SPIKES protocol

Questions	Yes n (%)	Sometimes n (%)	No n (%)
1. Do you prepare a quiet and comfortable room?	56 (24.1)	63 (27.2)	113(48.7)
2. Do you allocate enough time for the meeting?	141 (60.8)	65 (28)	26 (11.2)
3. Do you make eye contact with the patient/relatives?	198 (85.3)	27 (11.6)	7 (3)
4. Do you sit opposite the patient/relatives?	112 (48.3)	73 31.5)	47 20.3)
5. Do you review the information one last time?	162 (69.8)	55 (23.7)	15 (6.5)
6. Do you introduce yourself during the interview?	199 (85.8)	20 (8.6)	13 (5.6)
7. Do you ask what the patient and/or relatives know about the disease before breaking information?	93 (40.1)	86 (37.1)	53 (22.8)
8. Do you ask permission from the patient and/or their relatives before breaking bad news? (I will give you information about the disease. Is it okay for you?	98 (42.2)	65 (28.0)	69 (29.7)
9. Do you use medical terminology when breaking bad news?	29 (12.5)	87 (37.5)	116 (50)
10. Do you provide clear information about the disease?	205 (88.4)	19 (8.2)	8 (3.4)
11. Do you act sincerely and affectionately when breaking bad news?	149 (64.2)	64 (27.6)	19 (8.2)
12. Do you check whether the patient understands the information you give?	175 (75.4)	45 (19.4)	12 (5.2)
13. Do you use preparatory phrases such as "I'm sorry/I wish I could give you better news" before breaking bad news?	100 (43.1)	75 (32.3)	57 (24.6)
14. Do you allow for a period of silence and emotion after breaking bad news?	160 (69)	50 (21.6)	22 (9.5)
15. Do you empathize with your patient?	176 (75.9)	43 (18.5)	13 (5.6)
16. Do you share your feelings when the patient is emotional?	96 (41.4)	77 (33.2)	59 (25.4)
17. Do you allow patients and/or relatives to ask questions?	208 (89.7)	18 (7.8)	6 (2.6)
18. Do you explain what has been done thus far and what will be done next in your meetings with the patient.?	190 (81.9)	34 (14.7)	8 (3.4)
19. Do you inform us about the multidisciplinary approach in case of a possible treatment?	180 (77.6)	35 (%15.1)	17 (7.3)
20. Do you arrange follow-up meetings with the patient and/or relatives?	96 (41.4)	66 (28.4)	70 (30.2)

When the answers of the participants to the questions prepared according to the SPIKES protocol are evaluated, the five items that they apply the most and the five items that they apply the least are shown in Table 2 and Table 3.

Table 2. The most applied substances according to the SPIKES protocol

Questions	n	%
1. Do you allow patients and/or relatives to ask question?	208	89.7
2. Do you provide sufficient and clear information about the disease?	205	88.4
3. Do you introduce yourself during the interview?	199	85.8
4. Do you make eye contact with the patient and/or their relatives?	198	85.3
5. Do you explain what has been done thus far and what will be done next?	190	81.9

Table 3. Fewer applied substances according to the SPIKES protocol

Questions	n	%
1. Do you prepare a quiet and comfortable room?	56	24.1
2. Before breaking information, do you ask what the patient and/or relatives know about the disease?	93	40.1
3. Do you arrange follow-up meetings with the patient and/or relatives?	96	41.4
4. Do you share your feelings when the patient is emotional?	96	41.4
5. Do you ask permission from the patient and/or their relatives before breaking bad news? (I will give you information about the disease, is it suitable for you? etc.)	98	42.2

The questions examining the SPIKES protocol were grouped according to subheadings. The questions investigated in compliance with the Setting up step were questions 1, 2, 3, 4, 5, and 6; the questions investigated in the Perception stage were question 7; the questions investigated in the Invitation stage were question 8; the questions investigated in the Knowledge stage were questions 9, 10, 12 and 17; the questions investigated in Empathy were questions 11, 13, 14, 15 and 16; and the questions investigated in the Strategy and Summary stages were questions 18, 19 and 20. The averages of the answers given to the questions grouped as subheadings of the SPIKES protocol are given in Table 4. The participants who attended the postgraduate seminar used medical terminology less when they broke bad news and practiced the "Setting up" stage more (P<.05). The scores of those who received postgraduate training (3.9±0.4) were significantly higher than those of those who did not (3.6±0.5) (P<.05). A total of 39.4% of the female residents and 58.6% of the male residents introduced themselves during the interviews (P<.05). No difference was observed between internal and surgical sciences in terms of the answers given to the questions (P>.05).

Table 4. Means of answers to SPIKES protocol subheadings

SPIKES	Mean ± SD
Setting up	3.6± 0.5
Perception	3.2± 1.1
Invitation	3.0± 1.1
Knowledge	3.6± 0.5
Emotions	3.5± 0.6
Strategy and Summary	3.7±0.7

DISCUSSION

In this study, most of the participants did not receive training on breaking bad news before and after graduation. In addition, the participants generally saw themselves at an intermediate confidence level in breaking bad news. The Invitation stage, which involves determining how the patient wants to receive information about his/her disease and obtaining permission before breaking information, which is recommended as one of the stages of breaking bad news, was the least practiced SPIKES item. The strategy and summary stage, which involves making and summarizing a plan for treatment, was practiced the most. Among these items, more than half of the physicians did not arrange a follow-up appointment for the patient. Research on breaking bad news suggests that clinicians' skills and experience difficulties in this regard, and the need for evidence-based education and studies on practical applications have been emphasized.[6] According to the survey results of the American Society of Oncology Clinicians' symposium on breaking bad news,

less than 10% of the participants had formal training for breaking bad news, and only 32% had the opportunity to regularly observe the interviews in which bad news was given during training.[7] A study conducted in Turkey reported that physicians experienced a very high rate of emotional difficulty while breaking bad news, with less eye contact with patients and less attention given to the language used when delivering bad news.[8]

It has been reported that physicians who struggle with delivering difficult news may hesitate to discuss crucial topics such as prognosis with the patient, inadvertently offering unrealistic hope and preferring unnecessary aggressive treatments. Consequently, some physicians may experience guilt as a result.[9] In a Malaysian study in which cancer patients evaluated physicians who gave bad news, patients gave the highest score to the physician's honesty about the severity of the patient's condition and the lowest score to allowing emotion.[10] In our study, 38% of the physicians thought that they were good at breaking bad news, whereas 35.8% stated that they had difficulty breaking bad news. Compared with the relevant literature, it was determined that the physicians who participated in our study thought that they had less difficulty breaking bad news. In our study, 35.3% of the physicians received training on breaking bad news, more than half of them did not receive any training on breaking bad news in the pregraduation period, and more than 90% did not participate in any training on the subject in the postgraduate period. This may explain why research residents perceive themselves as not sufficient at breaking bad news.

In a randomized controlled study conducted with intensive care physicians in England, it was determined that there were positive changes in the communication skills of physicians after the breaking bad news course.[11] Another study comparing research residents and specialists in Greece reported that only 35.5% of physicians were trained to give bad news and that research residents gave bad news less than five times a month, whereas specialists gave bad news approximately 10 times a month.[12] It is obvious that breaking bad news training given to physicians both before and after graduation has a significant effect on the performance of breaking bad news. Studies have shown that communication with patients and breaking bad news skills can be taught and improved.[13-15]

According to the SPIKES protocol, the first step in breaking bad news is to prepare a suitable interview environment.[5] In a study involving 350 patients in Germany, adequate time allocation and appropriate conditions that ensure privacy were two of the most important demands for patients (94.5% and 86.9%, respectively), and these arrangements were found to be satisfactory for only 60% of the patients. It has been shown to exist.[16] A study conducted in Brazil reported that 78% of physicians preferred to give bad news in private, and physicians who were experienced and had more years in the profession were more careful in choosing an environment that would ensure patient privacy.[17] In our study, the findings suggest a difference between the physicians' ability to create a suitable environment for breaking bad news and their allocation of time for the interview. While nearly half of the physicians reported challenges in providing a quiet and comfortable room, a majority indicated that they dedicated sufficient time to the interview. This incongruity raises questions about the prioritization of resources and attention in clinical settings. This underscores the importance of not only allocating adequate time but also ensuring conducive environments for such sensitive conversations to occur effectively. Future interventions and training programs could focus on addressing these disparities to increase the quality of patient-centered care during difficult conversations.

In line with the SPIKES protocol, there are important steps in the interview where it is crucial to ask questions before sharing information. During 'Perception' subheadings of the SPIKES framework, clinicians utilize open-ended questions to gain insight into the patient's perspective on their medical condition. By asking questions such as "What have you been told about your medical situation thus far?" Clinicians aim to establish a foundation of understanding before delivering potentially distressing news. This approach not only allows for the correction of any misconceptions but also enables the customization of the breaking bad news to align with the patient's comprehension level.[18] In our study, physicians received the lowest score in the second stage (perception) of the SPIKES protocol. Accordingly, fewer than half of the participants questioned whether the patients and/or their relatives had information about the disease before breaking bad news. The characteristics of the physicians, such as working in surgical or internal medical sciences departments, taking a pregraduation course on breaking bad news, attending a postgraduate seminar, and gender, did not affect this result. This may be because most of the research residents did not receive any training on providing bad news. This step requires more professional communication knowledge and attitudes.

Patients' preferences regarding information about their illnesses vary across cultures. While some cultures may not encourage open discussion of bad news, approximately 90% of patients generally prefer to discuss their medical condition and treatment options with their doctors, although half of them may not receive information about their life expectancy.[19,20] In our study, most physicians (88.4%) reported providing clear information about the disease, explaining current and future treatment plans (81.9%), and allowing patients and/or relatives to ask questions (89.7%). Physicians who received postgraduate training tended to use less medical terminology when delivering bad news.

Notably, the younger physicians in our study often provided detailed information, reflecting a commitment to honesty in healthcare delivery. Research indicates that cancer patients prioritize honesty from their physicians, particularly during information sharing.[10] The use of phrases that prepare patients before giving bad news reduces the likelihood of experiencing the shock after the bad news; thus, it is easier to convey the necessary information about the current situation.[21] Fewer than half of the physicians who participated in our study stated that they used initial sentences such as "I am sorry/I wish I could give you better news" before giving bad news, which indicates that bad news is coming and aims to reduce the negative effect of bad news.

When bad news is broken, verifying patient comprehension can prevent misconceptions about treatment efficacy or purpose. This collaborative approach to decision-making not only empowers patients but also lessens the burden on physicians if treatment outcomes are unfavorable.[22] In our study, 75.4% of the physicians confirmed patients' understanding of the information provided. These findings highlight physicians' active role in ensuring that patients and caregivers grasp the situation accurately.

Meeting the patient's emotions appropriately and responding correctly is a challenging aspect of delivering bad news.[7,23] Studies from England and Germany have highlighted patients' high preferences for factors such as physicians' emotional behavior, empathy, and closeness to the patient.[16,24] In our study, most physicians allowed time for silence and acknowledged patients' emotions after delivering bad news. However, more than half of them did not express their own feelings during this emotional moment. Sharing feelings is crucial for demonstrating empathy, yet many physicians in our study did not do so. A study with oncology patients in Turkey revealed that a significant portion did not feel that they had the opportunity to express their emotions when receiving bad news.[25] While our study suggests that physicians have a relatively better emotional approach, there are still deficiencies in expressing their own emotions, underscoring the need for training to address these shortcomings.

CONCLUSION

In conclusion, while the SPIKES protocol is widely accepted and utilized in many countries as a framework for breaking bad news, there remains a notable absence of standardized guides tailored to enhance physicians' skills in accordance with this protocol. Future studies incorporating culturally adapted guides based on the SPIKES steps specific to each country hold promise for yielding more objective results and facilitating cross-study comparisons. It is imperative that communication and breaking bad news skills training be integrated throughout medical education and postgraduate.

Ethics Committee Approval: Ethical approval for the study was obtained from the Ataturk University Faculty of Medicine Clinical Research Ethics Committee (number: B.30.2.ATA.0.01.00/102-Date 28.09.2017).
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