

Assessing Physicians' Knowledge, Attitude, and Practice Towards Breaking Bad News: A Multicenter Study in Egypt

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ABSTRACT

Background: Breaking bad news (BBN) is challenging for patients and physicians. Physicians are usually poorly trained or untrained at all in BBN despite the existence of consensus protocols for BBN.

Objective: This study aimed to assess physicians' knowledge, attitude, and practice (KAP) regarding SPIKES protocol for BBN.

Patients and Methods: This is a cross-sectional multicenter study carried out on 395 physicians of different specialties and workplaces in Fayoum Governorate, Egypt. Data were collected through a self-administered questionnaire consisting of three sections of questions about physicians: the background characteristics questions, questions assessing their knowledge regarding BBN, and questions assessing their attitude regarding SPIKES protocol for BBN. The attitude was assessed using the BBN attitude scale (BBNAS).

Results: Only 24% of physicians ever received training on BBN and 10% knew about SPIKES protocol. Bad experience after BBN was reported by 52% of physicians. Most (75%) physicians preferred BBN to the patient's family rather than the patient. Physicians' agreement level with the SPIKES strategy was very high (91.8%). Agreement to the SPIKES protocol steps was statistically significantly higher among men, younger and older age groups (≤ 30 and > 40 years of age) physicians, psychologists and oncologists, and those who received previous training on BBN.

Conclusion: The majority of physicians highly agreed with the SPIKES strategy for BBN, but they lacked essential knowledge for BBN. Specific training and standardized protocols in this regard deem to be necessary during medical school study and continuous professional development.

Keywords: Breaking bad news, Knowledge, Attitude, Physicians, SPIKES.

INTRODUCTION

The term "bad news" means any information that is given to patients and/or their families, which directly or indirectly reveals any negative or severe disorder that alters the patient's view of his/her future drastically ^[1].

Breaking bad news (BBN) is necessary for physicians, particularly in the current era of pandemics such as COVID-19, where healthcare professionals regardless of their age, specialty, or experience level may be redeployed for the end-of-life care of pandemic patients. BBN if performed improperly, negatively affects both patients and physicians. On the other hand, well-developed communication skills establish a good physician-patient relationship that is associated with better adherence to treatment, satisfaction, and health outcomes, in addition to helping physicians to overcome stress in delivering news to patients or their families ^[2]. Furthermore, physicians are not allowed to mislead patients about their diagnosis and prognosis. Thus, physicians have a legal obligation to deliver bad news to patients and their families ^[3].

BBN is challenging for patients and physicians. Physicians may fear causing suffering to their patients or being blamed ^[4, 5]. 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 ^[4]. Other studies revealed that more than 80% of surveyed physicians had no training in communicating any news to patients ^[6, 7, 8].

Unfortunately, the focus in medical education is usually on technical and scientific skills rather than communication skills which may have led to physicians' incompetency and avoidance of communication with patients and stressing treatment without taking into account patients' feelings ^[4, 6]. Therefore, physicians are usually poorly trained or untrained at all in BBN despite the existence of consensus protocols for BBN ^[8].

One of the most popular communication protocols is the SPIKES protocol developed by **Buckman** ^[9].

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. This is the right moment to establish a good physician-patient relationship. 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. The third step is the "I" or invitation, which is the moment to analyze 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 it ^[1, 10]. A Canadian study that employed both quantitative and qualitative methods demonstrated that the SPIKES protocol essentially reflects the opinions of many patient groups ^[11]. Patients' perspectives towards the SPIKES protocol have been studied in a number of studies ^[12, 13].

Physicians on the other hand, have wide differences in clinical practice and training regarding BBN ^[14], and little is known about physicians' knowledge, attitude, and practice (KAP) in the context of BBN, particularly in Egypt and more particularly in healthcare settings outside of the capital city. Thus, this study aimed to assess the KAP of physicians regarding BBN in Fayoum governorate in Egypt. This could inform the planning of training and continuing medical education programs for physicians on communicating bad news.

Methodology

Study design and setting

This is a cross-sectional multicenter study carried out on physicians of different specialties and workplaces in Fayoum Governorate, Egypt.

Sampling:

In each workplace, physicians who accepted to participate were included till the required total number of participating physicians (n.=395) was reached. The sample included men and women of different ages, qualifications, and specialties. The sample size was calculated using openEpi with the study population set as 10000 physicians in Fayoum Governorate and the assumption of a 50% proportion (physicians' agreement score to the SPIKES protocol), a confidence level of 95%, and a precision level of 5%.

Data collection:

Data were collected from October 2020 to March 2021. To explore the self-reported KAP of physicians in BBN in relation to the steps of the SPIKES protocol a self-administered questionnaire was administered consisting of three sections of questions; questions about the physicians' background characteristics; questions assessing the knowledge and practice regarding BBN, and questions of the BBN attitude scale (BBNAS) that assessed physicians' attitudes towards the steps of the SPIKES protocol.

The BBNAS scale was developed by Santos *et al.* ^[15] and showed adequate validity and good reliability. BBNAS scale evaluates two parts of attitude among physicians; the level of agreement with the SPIKES

protocol of BBN (concordance part) and the level of agreement with the possibility of training on BBN skills (training part). The BBNAS scale is composed of 15 items. The attitude toward each item was measured as a score on a 5 points Likert scale ranging from strongly disagree (0) to strongly agree (4). The questionnaire was pilot-tested on 30 physicians and modified accordingly. The Cronbach's alpha reliability value of the questionnaire was 0.80 demonstrating good internal consistency.

Ethical approval:

The Research Ethics Committee of the Public Health department, Faculty of Medicine, Fayoum University approved this study. Participants received the questionnaire with a cover letter explaining the study objectives, respondents' rights, and the data's confidentiality.

Statistical analysis

Analysis was carried out using SPSS version 18. Frequency distributions with numbers and percentages of qualitative variables and mean \pm standard deviation (SD) of quantitative variables were produced. The comparison of BBNAS scores according to physicians' background characteristics was performed using the T-test (if the comparison is between two groups) and ANOVA test (if the comparison is between more than two groups). The significance level was set at $p < 0.05$.

Two scores were computed for the BBNAS; one for concordance (that assesses clinicians' agreement with the SPIKES strategy) including 11 items with a potential maximum score of 44, and one for training (that assesses agreement to be trained on SPIKES) including 4 items with a potential maximum score of 16. For each BBNAS statement, the score obtained was also transformed into a percentage of agreement with the SPIKES, and two cutoff points were suggested based on tertiles. Percentages from 0–33% were interpreted as disagreement, 34–66% as partial agreement, and over 66% as agreement.

RESULTS

A total of 395 physicians completed the survey. Females constituted 61% (n = 241). The sample included surgeons (25%), pediatricians (16%), general practitioners and family physicians (11%), obstetricians and gynecologists (10%), medical oncologists (5%), and psychologists (3%) others (11%).

The mean age was 37.4 ± 8.7 years. Most participating physicians worked in district/public hospitals (42.9%) and university hospitals (35.7%). Regarding qualifications, the majority held postgraduate qualifications; master's degrees, doctorate degrees, diplomas, or fellowship/board (30%, 25.6%, 13%, and 9% respectively) (Table 1).

Table (1): Background characteristics of the physicians

Characteristics		n.	%
Gender	Women	241	61.0
	Men	154	39.0
Age	≤30 years	85	21.5
	31- 40 years	215	54.4
	>40 years	95	24.1
	Mean ±SD	37.4±8.7	
Years of experience	<5	103	26
	5-10	78	20
	>10	214	54
Qualifications	MBBS	86	21.7
	Diploma	52	13.2
	Master	119	30.1
	Medical Doctorate	101	25.6
	Fellowship/Board	37	9.4
Workplace	District/Public hospital	169	42.8
	Teaching hospitals	22	5.6
	Primary health care centers	63	15.9
	University Hospital	141	35.7
Specialty	Surgery	99	25.1
	General Medicine	74	18.7
	Pediatrics	63	15.9
	GP and FP	45	11.4
	Obstetrics and Gynecology	38	9.6
	Oncology (Medical)	20	5.1
	Psychology	12	3.0
	Others	44	11.1

MBBS= Bachelor of Medicine, Bachelor of Surgery, MD= Medical Doctorate. GP= General Practitioner, FP= Family Physician.

As depicted in table (2), the majority of physicians had experienced BBN with patients' families (85.3%) or directly with the patients (75.4%).

Less than one-fourth of physicians reported receiving any training on BBN and only 10% ever heard about the SPIKES protocol for BBN. More than half of the physicians (51.6%) had a bad experience due to improper breaking of bad news.

Only 40% of physicians preferred to talk with patient for BBN and the majority (74.7%) preferred to talk with the patient's family. Only 34.7% believed that bad news should be delivered directly to patients.

Table (2): Knowledge and self-reported practice and experience of physicians regarding breaking bad news and SPIKES protocol

Questions	Yes		No	
	n.	%	n.	%
Have you ever broken any bad news to a patient?	298	75.4	97	24.6
Have you ever broken any bad news to patients' families?	337	85.3	58	14.7
Have you ever received education /training for breaking bad news?	93	23.5	302	76.5
Did you have any bad experiences due to improperly breaking bad news?	204	51.6	191	48.4
Do you prefer to talk to a patient when you break bad news?	161	40.8	234	59.2
Do you prefer to talk with a patient's family when you break bad news?	295	74.7	100	25.3
Do you believe that bad news should be delivered directly to the patient?	137	34.7	258	65.3
Did you hear about the "SPIKES protocol" before?	41	10.4	354	89.6

Figure (1) demonstrated that the majority of physicians had positive attitudes toward all items of the BBNAS questionnaire. The level of physicians' agreement with the SPIKES strategy using the BBNAS scale was determined, and it was found to be over 91% of physicians that had a good agreement with the SPIKES strategy and only 8.6 % of participants had a partial agreement (figure 1).

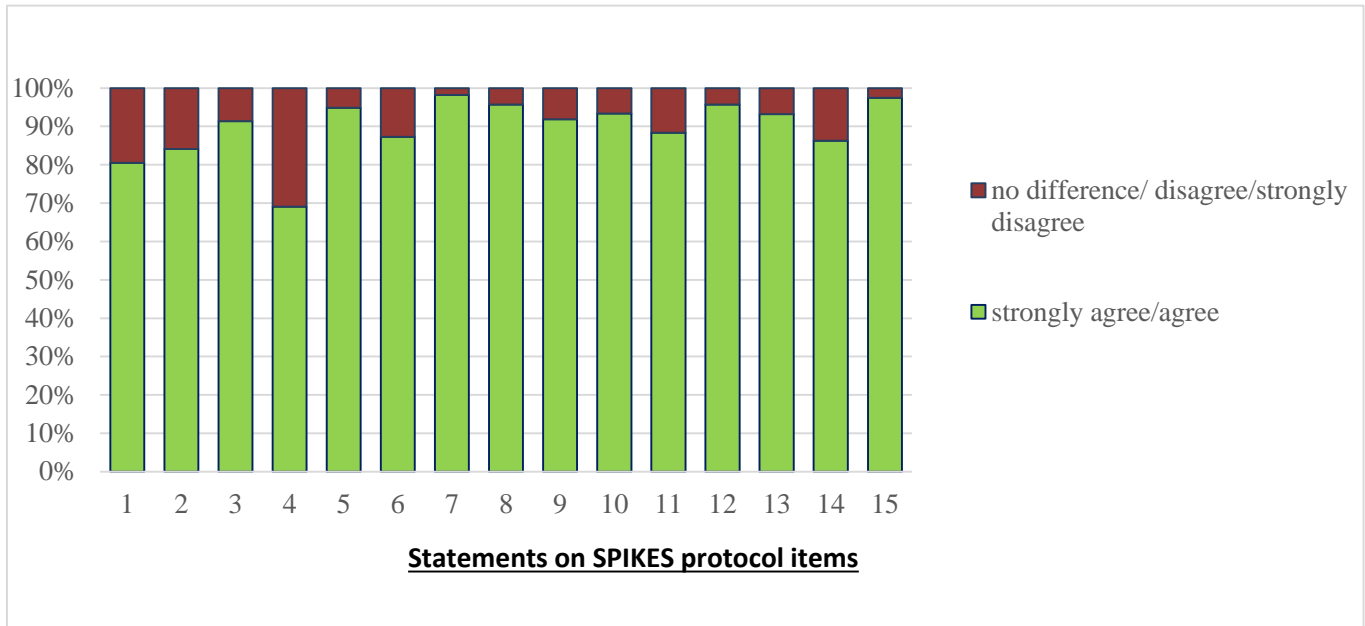


Figure (1): Percent distribution of physicians (n = 395) regarding their attitudes toward SPIKES steps of breaking bad news.

- 1: Prepare a suitable place when I need to transmit bad news
- 2: After reporting bad news, I try to answer the questions without inhibiting this moment of unpredictable reactions
- 3: I try to understand if the patient was informed about his or her prognosis
- 4: I only report bad news after establishing a relationship of trust with the patient
- 5: Knowing if the patient wants to discuss his pathology and its consequences is important
- 6: I organize some strategies in advance to convey bad news
- 7: After giving bad news, I answer the patient's questions showing support, respect, and understanding
- 8: I end BBN by proposing a plan of future goals for follow-up
- 9: After BBN, I encourage the patient to express their feelings and clarify their doubts
- 10: I always inform the family that there will be psychological support when necessary
- 11: Medical empathy can help in BBN

- 12: believe there should be improvements and/or more investment in improving communication skills for BBN
- 13: It would be desirable to receive training on BBN
- 14: I am interested in courses and training on BBN
- 15: BBN is a skill that can be trained on

Table (3) showed that the BBNAS scores were significantly higher among males (51.14 ± 5.30) than females (48.96 ± 5.68), younger and older age groups (≤ 30 years and > 40 years respectively) than the middle age group (35-44 years old), primary healthcare (PHC) and teaching hospital physicians than others working in district/public or university hospitals.

As regards specialty, the BBNAS scores were highest among psychologists and oncologists than among physicians in the other specialties. No statistically significant differences in BBNAS scores were detected between different physicians based on qualifications or years of experience. By comparing BBNAS scores according to training status, it was obvious that the mean concordance and total SPIKES scores were higher among physicians who received previous training on BBN than non-trained physicians.

Table (3): Comparison of BBNAS scores (concordance and training scores) according to different physicians' background characteristics

Variables		Concordance		Training		SPIKES	
		Mean	SD	Mean	SD	Mean	SD
Specialty	GP/FM (241)	35.78	4.12	13.68	1.90	49.47	5.29
	General Medicine (74)	35.62	4.08	12.82	1.95	48.45	5.29
	Pediatrics (63)	35.73	3.87	13.02	2.12	48.75	5.28
	Surgery (99)	36.94	4.62	13.48	1.76	50.42	5.42
	Obstetrics and Gynecology (241)	35.95	3.91	13.68	2.20	49.63	5.83
	Oncology (241)	37.00	5.66	14.10	2.07	51.10	7.46
	Psychology (241)	41.33	2.06	15.50	0.52	56.83	2.52
	Others (241)	36.45	4.25	13.79	1.84	50.25	5.59
	P value	0.002		<0.001		<0.001	
Received training on BBN	Yes (241)	37.57	3.52	13.38	1.98	50.95	5.15
	No (241)	35.98	4.49	13.48	1.98	49.46	5.73
	P value	0.002		0.659		0.026	

Table (3) (continued): Comparison of BBN (concordance and training) scale according to different factors

Variables (n.)		Concordance		Training		SPIKES	
		Mean	SD	Mean	SD	Mean	SD
Gender	Women (241)	48.96	5.68	13.29	2.04	35.67	4.29
	Men (154)	51.14	5.30	13.71	1.85	37.42	4.18
	P value	<0.001		<0.001		<0.001	
Age	≤30 years (85)	36.94	3.61	13.38	2.12	50.33	5.2
	31-40 years (215)	35.85	4.33	13.33	1.96	49.17	5.59
	>40 years (95)	36.97	4.79	13.8	1.86	50.78	5.95
	P value	0.041		0.143		0.043	
Years of experience	<5 (103)	36.39	5.09	13.54	1.99	49.93	6.23
	5-10 (78)	36.23	4.26	13.44	2.00	49.67	5.73
	>10 (214)	36.38	3.97	13.42	1.97	49.80	5.31
	P value	0.961		0.870		0.952	
Qualification	MBBS (86)	36.48	3.69	13.37	1.95	49.85	4.96
	Diploma (52)	36.718	3.99	13.50	2.24	50.21	5.93
	Master (119)	35.65	4.33	13.33	1.85	48.98	5.54
	MD (101)	36.71	4.78	13.58	1.85	50.29	5.60
	Fellowship/board (37)	36.86	4.84	13.62	2.42	50.49	6.89
	P value	0.310		0.863		0.391	
Workplace	Primary health care (63)	37.97	4.04	14.22	1.75	52.19	5.16
	District/public hospital (169)	35.597	4.35	13.09	2.10	48.69	5.94
	Teaching hospitals (22)	37.55	4.15	13.55	1.18	51.09	4.13
	University hospital (141)	36.36	4.28	13.53	1.93	49.89	5.31
	P value	0.001		0.001		<0.001	

MBBS= Bachelor of Medicine, Bachelor of Surgery MD= Medical Doctorate GP= General Practitioner, FP= Family Physician

DISCUSSION

In our study, more than 50% of physicians reported having bad experiences about BBN. This percentage was even higher in a study conducted in Nigeria where more than 85% of the BBN encounters did not go well [6]. Another study conducted in Italy found that 64% of physicians considered BBN not only a bad experience but actually the most difficult task in their practice and that this consideration was independently associated with a high risk of physician burnout (OR=3) [5].

Likewise, in an Ethiopian study, half of the physicians reported feeling depressed after BBN. This figure was much less in Korean and Sudanese studies (30% and 44% of physicians respectively). This variation could be attributed to the variation in the level of training on BBN. Noticeably, in the Korean and Sudanese studies, 63% and 56% of physicians respectively received formal training about BBN [14] compared to our study, to the Nigerian, and to the Ethiopian studies where less than 25%, 22%, and 16% of the physicians ever received any training on BBN. These findings showed that the possibility of physicians having bad experiences after BBN was inversely proportionate to the amount of training on BBN they receive (figure 2).

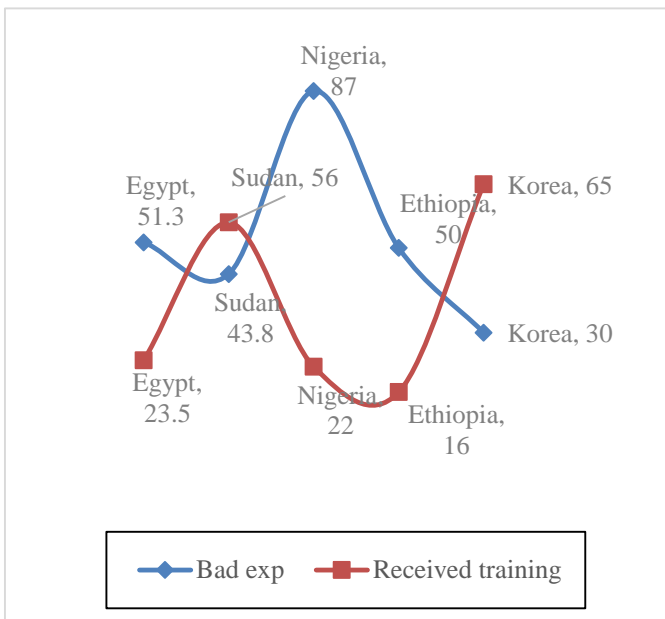


Figure (2): Percent proportion of physicians reporting having bad experiences after breaking bad news (BBN) and physicians received training on BBN in different countries.

This may in part explain why in this study we found minority (35%) of the physicians believe that bad news should be delivered directly to the patient, while the majority (85.3%) preferred to deliver bad news to the patient’s family rather than directly to the patient. This corroborates the results of two studies in Saudi Arabia, where more than 70% of physicians preferred BBN to patients’ close relatives rather than the patients and 32% said they would even inform the patient’s

family without the patient’s consent which is an explicit threat to patient’s autonomy [16, 17].

These findings somewhat differ from the findings of a study conducted in Sudan where almost double that proportion (65%) of physicians did believe that bad news should be delivered directly to the patient, yet in their practice, 58% preferred BBN to the patient’s family. Physicians may find this less stressful for them and the patients when physicians are not well-trained on BBN [16]. However, these preferences in practice may not be solely due to lack of adequate training but may also be due to social and cultural influences, which can often take precedence over professional considerations and have a significant impact on BBN decision-making [18]. This is obvious even in settings where healthcare professionals received appreciable levels of formal training such as in Korea, China, and Japan, or in European countries such as Spain and Italy [6, 18]. However, as is the case in the majority of eastern countries, the family is valued more highly than the individual, and it is normal to inform family members of bad news before they determine whether to inform the patient as well. It is a common practice for healthcare providers in African countries to relay bad news to patients via the eldest male family member, who is seen as more capable of handling the situation and is expected to convey bad news to the rest of the family and the patient with great prudence [6, 18]. This cultural motive is exacerbated by the lack of training on BBN, leaving the doctor more vulnerable to uncomfortable situations and more inclined to reveal medical information to relatives even without the patient’s consent [17]. **Salem and Salem** [19] developed a model for BBN in Muslim countries named IGAAD (I for an interview, G for gathering information or background, A for assessing family and religious views, A for achieving rapport, and D for disclosure of information to the patient or the family based on physician’s evaluation).

Following the COVID-19 pandemic, which brought about a high level of solidarity among families and communities and a change in the attitude toward terminal illnesses, the patient-family-centered approach to BBN may have the chance to fit into Eastern and African societies. On the other hand, in the USA, the majority of healthcare providers believed that patients should be informed of bad news before informing their families. This truth-telling strategy is supported by evidence of improved key metrics, including quality of life [17]. Nevertheless, it has been also noted, that some physicians in the USA avoid having this kind of conversation because it upsets them; they may not feel equipped to deal with or have the time to effectively address such sensitive topics. As a result, physicians’ emotions are negatively affected, patients’ distress tends to rise, and patients may become unwilling to disclose problems, which could delay their recovery [16].

In the current study, about 90% of physicians did not know about the SPIKES protocol. Similar high

proportions were found in Nigerian, Ethiopian, Brazilian, and Iranian studies (93%, 82%, 60%, and 86% respectively) [6, 7].

However, in our study, the majority of physicians perceived training on BBN as a positive significant method to improve skills in BBN (table 2). The same physicians' attitude was noted in Korea, Sudan, Ethiopia, Greece, and Italy [7, 16, 21]. In contrast, in the Nigerian study, it was concluded that the majority of healthcare participants were unconsciously incompetent in BBN and rated themselves as highly competent in BBN while they were not aware of any BBN protocols and the majority of them did not even receive any training on BBN [6]. Most of the patients' complaints about physicians are related to issues of communication rather than clinical competence, yet, many physicians tend to overestimate their communication skills [17]. Hence, continuous medical education and training are essential for creating insight for physicians about the skills that need to be improved.

In the current study, the vast majority (91%) of physicians have a good agreement level and 8.6% had a partial agreement level with the principles of SPIKES protocol. This is similar to previous study done in Egypt [20] that found that more than two-thirds of the physicians had a good level of agreement and a qualitative study in Greece where all physicians agreed on the necessity to have principles for BBN similar to the SPIKES principles. In some studies, although physicians had appropriate awareness of the importance of BBN protocols, their practice was still unsatisfactory due to the absence of a consistent communication process and standardized procedures for BBN [21]. In an Egyptian study conducted in a family health center in Menoufia Governorate, only 68% of physicians had good knowledge about the SPIKES protocol even though 100% of them received previous training on it [20], which indicates that training only is not enough to maintain knowledge but rather the continuous practical application.

In the current study, there was a small but statistically significant difference between men and women in terms of the SPIKES scale with positive attitudes more seen in men than in women. However, according to research by **Farber et al.** [22], women were more likely than men to agree with the strategy of the SPIKES protocol. That was explained by that the SPIKES strategy linked to individual psychological characteristics such as empathy [22], which with women typically is displaying more empathy in clinical settings. This explanation was also provided by **Rasmus and colleagues** [23] when they investigated the gender variations in the BBN approach at the Emergency Room. But in studies conducted in Egypt and Sudan, gender was found to be not associated with agreement or adherence to the SPIKES' protocol [16, 20].

We also found a significant correlation between age and the SPIKES scale. The younger and older age groups physicians (≤ 30 and > 40) have got the highest

BBNAS scores. This agrees with research by **Farber and colleagues** [22] that found physicians over the age of 50 years well performing emotional items than younger, which differs with studies of Menoufia, Egypt [20], Sudan [16], and Saudi Arabia [17]. But there was no significant correlation between age and empathy similar to a study carried out at Tabriz University, Iran [24]. This discrepancy regarding gender and age roles might be explained by considering the profound cultural differences in BBN settings. For instance, in certain communities, female doctors might avoid BBN to avoid being harmed while male doctors may be more respected by the same community and thus more courageous in being involved in BBN.

In the current study, there was a significant association between workplace and agreement to the SPIKES with higher agreement scores obtained by the PHC and teaching hospital physicians compared to university and public hospitals. This could be attributed to the heightened stress level due to excessive workload and low resources in the university and public hospitals that made physicians less interested or convinced with the usefulness of the protocols for BBN compared to PHC physicians who always refer the difficult or at-risk patients to the higher care level to deal with [25].

Regarding the specialty, our study revealed that psychologists and oncologists got the highest agreement scores. This finding is expected as oncology patients are the primary population for which BBN recommendations are developed and validated [4]. The guidelines also are based on psychological aspects of which psychiatrists are most aware. This differs from the findings of other studies that found that family physicians and GPs have the highest scores [20, 22].

In our study, physicians who received training on BBN exhibited a statistically higher level of agreement with the SPIKES protocol. This is consistent with the results of research by **Setubal and colleagues** [26], where it was found that training has a significant impact on physicians' attitudes toward the BBN protocol because it demonstrates the professional utility of protocol implementation, increasing physicians' appreciation of the protocol's abstract value.

In the current study, the number of years of experience and qualification had no association with the physicians' agreement scores with the SPIKES protocol. This agrees with the findings of studies carried out in Saudi Arabia and Sudan [16, 17].

CONCLUSION AND RECOMMENDATIONS

Physicians' knowledge is generally poor, but their attitude is highly positive, regarding the SPIKES principles for BBN. 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.

STRENGTHS AND LIMITATIONS

In our opinion, the strengths of our study include being a multi-center study with a sample of physicians of varied medical specialties and qualifications. Nevertheless, our study is not without limitations; the study was conducted in only one governorate and the sociocultural or demographic context of the participants may have had an impact on our findings limiting their generalizability to other populations. Additionally, as these were not the objectives of the study, the study lacked data on patients' perceptions of the SPIKES principles, and also it merely displayed the physicians' attitudes toward these principles, yet, they do not necessarily behave as they believe.

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REFERENCES

1. Lino C, Augusto K, Oliveira R *et al.* (2011): Uso do protocolo Spikes no ensino de habilidades em transmissão de más notícias [Using the Spikes protocol to teach skills in breaking bad news]. *Rev Bras EduMéd.*, 35 (1): 52-7.
2. Jimenez O, Trajera S, Ching S (2022): Providing End-of-Life Care to COVID-19 Patients: The Lived Experiences of ICU Nurses in the Philippines. *International Journal of Environmental Research and Public Health*, 19 (19): 12953.
3. Ferreira da Silveira F, Botelho C, Valadão C (2017): Breaking bad news: doctors' skills in communicating with patients. *Sao Paulo Medical Journal*, 135: 323-331.
4. Luz R, George A, Spitz E *et al.* (2017): Breaking bad news in prenatal medicine: a literature review. *Journal of reproductive and infant psychology*, 35 (1): 14-31.
5. Messerotti A, Banchelli F, Ferrari S *et al.* (2020): Investigating the association between physicians' self-efficacy regarding communication skills and risk of "burnout". *Health and quality of life outcomes*, 18 (1): 1-12.
6. Adebayo P, Abayomi O, Johnson P *et al.* (2013): Breaking bad news in clinical setting - health professionals' experience and perceived competence in Southwestern Nigeria: a cross-sectional study. *Ann Afr Med.*, 12 (4): 205-11.
7. Fisseha H, Mulugeta W, Kassu R *et al.* (2020): Perspectives of Protocol Based Breaking Bad News among Medical Patients and Physicians in a Teaching Hospital, Ethiopia. *Ethiopian journal of health sciences*, 30 (6): 1017-1026.
8. Narayan A, Dromi S, Meeks A *et al.* (2018): Breaking bad news: a survey of radiology residents' experiences communicating results to patients. *Current problems in diagnostic radiology*, 47 (2): 80-83.
9. Boissy A, Windover A, Bokar D *et al.* (2016): Communication skills training for physicians improves patient satisfaction. *J Gen Intern Med.*, 31: 755-76.
10. Von Blanckenburg P, Hofmann M, Rief W *et al.* (2020): Assessing Patients' Preferences for Breaking Bad News according to the SPIKES-Protocol: The MABBAN Scale. *Patient Educ Couns.*, 103: 1623-1629.
11. Mirza R, Ren M, Agarwal A *et al.* (2019): Assessing patient perspectives on receiving bad news: a survey of 1337 patients with life-changing diagnoses. *AJOB empirical bioethics*, 10 (1): 36-43.
12. Gorniewicz J, Floyd M, Krishnan K *et al.* (2017): Breaking bad news to patients with cancer: A randomized control trial of a brief communication skills training module incorporating the stories and preferences of actual patients. *Patient Educ Couns.*, 100 (4): 655-66.
13. Hudis C, Gianni L (2011): Triple-negative breast cancer: an unmet medical need. *The oncologist*, 16 (S1): 1-11.
14. Servotte J, Bragard I, Szyld D *et al.* (2019): Efficacy of a short role-play training on breaking bad news in the emergency department. *Western Journal of Emergency Medicine*, 20 (6): 893.
15. Dos Santos K, Gremigni P, Casu G *et al.* (2021): Development and validation of The Breaking Bad News Attitudes Scale. *BMC Med Educ.*, 21 (1): 196. doi: 10.1186/s12909-021-02636-5. PMID: 33827548; PMCID: PMC8028222.
16. Dafallah M, Ragab E, Salih M *et al.* (2020): Breaking bad news: Awareness and practice among Sudanese doctors. *AIMS Public Health*, 7 (4): 756-768.
17. Al-Mohaimed A, Sharaf F (2013): Breaking Bad News Issues: A Survey Among Physicians Oman Medical Journal, 28 (1): 20-25 DOI 10. 5001 /omj .2013.05.
18. Rajasooriyar C, Kelly J, Sivakumar T *et al.* (2016): Breaking Bad News in Ethnic Settings: Perspectives of Patients and Families in Northern Sri Lanka. *Journal of global oncology*, 3 (3): 250-256. <https://doi.org/10.1200/JGO.2016.005355>
19. Salem A, Salem A (2013): Breaking bad news: current prospective and practical guideline for Muslim countries. *Journal of Cancer Education*, 28 (4): 790-794.
20. Mohasseb M, Hegazy N (2021): Breaking Bad News to Patients: Physicians' Awareness and Practice. *Egyptian Family Medicine Journal*, 5 (2): 129-138.
21. Oikonomidou D, Anagnostopoulos F, Dimitrakaki C *et al.* (2017): Doctors' Perceptions and Practices of Breaking Bad News: A Qualitative Study from Greece, *Health Communication*, 32 (6): 657-666.
22. Farber N, Urban S, Collier V *et al.* (2002): The good news about giving bad news to patients, *J Gen Intern Med.*, 17: 914-922.
23. Rasmus P, Kozłowska E, Robaczyńska K *et al.* (2020): Evaluation of emergency medical services staff knowledge in breaking bad news to patients. *Journal of international medical research*, 48 (6): 0300060520918699.
24. Azadi A, Abdekhoda M, Habibi S (2018): Medical Student's Skills in Notifying Bad News Based on SPIKES Protocol. *J Liaquat Uni Med Health Sci.*, 17 (04):249-54, doi: 10.22442/jlumhs.181740587
25. Neme A, Workineh D, Getachew B (2019): Perceived Adherence to Professional Ethics and Associated Factors among Health Professionals in Bale Zone Public Hospitals, Oromia Regional State, South-East Ethiopia. <https://doi.org/10.21203/rs.2.12522/v1>
26. Setubal M, Gonçalves A, Rocha S *et al.* (2017): Breaking bad news training program based on video reviews and SPIKES strategy: what do perinatology residents think about it?. *Revista Brasileira de Ginecologia e Obstetrícia*, 39: 552-559.