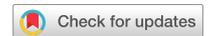


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Characteristics affecting the attitude and approach of physicians to breaking bad news: Uncertain medical situations

Eray Serdar Yurdakul¹, Zuhale Yapici Coskun^{2,3}, Oktay Sari⁴ & Ali Kagan Coskun⁵

Breaking bad news is a difficult but unavoidable responsibility of physicians. It constitutes a set of stressful duties, which become more critical during uncertain medical situations such as the COVID-19 pandemic. The purpose of the current study; To determine the factors that affect physicians' attitudes and approaches in giving bad news about, life-threatening medical conditions. All staff working in the COVID-19 wards as physicians were invited to complete a standardized questionnaire evaluating the descriptive properties and attitude and approach to breaking bad news in this cross-sectional study. A total of 120 physicians were included in the study. An approximately equal number of physicians working in internal medicine and surgical branches were included in the study ($p = 0.540$). Internal medicine specialists encountered breaking bad news more commonly than surgeons ($p = 0.002$). Only 14.2% of them stated that they "always" felt competent. Approximately, 68.3% ($n = 82$) of the physicians did not receive any kind of training on breaking bad news. More than half of the physicians stated feeling anxious about breaking bad news, particularly when announcing death. Announcement of death due to COVID-19 (5.8%) followed announcing fatal diseases (13.3%) and limb loss with function loss (8.3%). The COVID-19 pandemic revealed the physicians' need for education on "breaking bad news." Physicians with a shorter work experience had a higher rate of receiving undergraduate education about breaking bad news than those with more work experience. As the length of service increased, there was a significant increase in the rate of receiving education regarding breaking bad news after graduation ($p = 0.037$). Additionally, it helped to convey the optimal approach in extraordinary and uncertain medical situations. Our study findings support this statement. The most common reason for breaking bad news is the announcement of death, which should be conveyed to the patient's relatives in accordance with communication principles, taking into account their current situation. This approach can effectively reduce the anxiety experienced by the physician breaking the news and mitigate reactions from the patient's relatives such as refusal and incomprehension in the face of the patient's loss.

¹Department of Medical History and Bioethics, Gulhane Medical Faculty, University of Health Science, Ankara, Turkey. ²Obstetrics & Gynecology Clinic, Ankara Bilkent City Hospital, Ankara, Turkey. ³Department of Medical Education, Institutes of Health Sciences, Gazi University, Ankara, Turkey. ⁴Department of Family Medicine, Gulhane Medical Faculty, University of Health Science, Ankara, Turkey. ⁵Department of General Surgery, Gulhane Medical Faculty, University of Health Science, Ankara, Turkey. ✉email: erayserdar.yurdakul@sbu.edu.tr

Introduction

Any health-related information that may cause all kinds of emotional and behavioral disorders in a person can be defined as “bad news” (Tikka et al. 2020). Breaking bad news is very different from other clinical communications. Strong emotions may arise in the person receiving the bad news and may affect the perception of the information, resulting in uncontrolled behavior and mismanagement of the situation. These situations make healthcare professionals reluctant to give bad news.

One of the situations that doctors do not like to face is uncertain medical conditions. The concept of uncertainty is simply a cognitive state characterized by the awareness that a situation or event is not fully understood (Han, 2013, Mishel, 1981). But this is a unique situation in the medical field. Medical uncertainty is important, arising from many potential situations in everyday clinical practice, such as not knowing the patient’s diagnosis, treatment or management of the subsequent process. It is similar to the experience of indecision or a deadlock situation in everyday life with additional responsibility to the patient. It raises concerns about patient safety and physician responsibility (Wellbery, 2012).

The worldwide spread of SARS-CoV-2 infections, which originated in Wuhan, China in early 2020, has caused mortality ranging from 1 to 10% in different countries (World Health Organization, 2020, Huang et al. 2020). Vague prognoses and high fatality rates were concerns caused by the disease at the beginning of the pandemic. While people were concerned about having a COVID-19-positive relative, it has been difficult and stressful for the healthcare staff who are responsible for providing information to patients’ relatives (Galehdar et al. 2020).

One of the most serious downfalls of this disease is that patients die alone (Nelson, 2020). Thus, a challenging responsibility during the COVID-19 pandemic was conveying to the family “Currently, visitors are not permitted due to hospital policy,” instead of “We are doing our best to keep him alive until you arrive at the hospital” (Wakam et al. 2020). These visitor restrictions caused emotionally painful experiences (Nelson, 2020). In general, physicians do not find giving bad news an easy task. The effect of bad news and the reaction of patient’s relatives to it are sources of anxiety for physicians (Biazar et al. 2019). Specialists of infectious diseases and other disciplines encounter these patients due to widespread disease (Sari et al. 2020).

Therefore, almost all clinicians are faced with breaking unwanted news due to uncertain medical situations, including COVID-19 infection, before the underlying pathology is known (Soosaipillai et al. 2020). Careful attention should be paid to the management of patients and families to minimize the damage that may occur due to the uncertainty seen at the beginning of the pandemic (Koffman et al. 2020). COVID-19 pandemic has increased the frequency of breaking bad news. Although it may seem easy in theory by establishing healthy communication and making decisions jointly, it can reduce the unwanted situations that health personnel face in situations where bad news needs to be given (Koffman et al. 2020, Barnett et al. 2007). As a general approach to breaking bad news, some doctors use the “SPIKES” or “six-step” protocol. The clinician’s aim here is to collect information about the patient during the meeting of bad breaking news, to convey medical information about the current situation, to provide support, and to ensure cooperation while developing a strategy plan for the following situation (Walter et al. 2000). However, these protocols may not be sufficient in pandemic processes with uncertain medical conditions. Therefore, trainings and strategies related to different approaches can be developed by taking advantage of these periods (Khalaf et al. 2022, Alansari, 2021). It is important to plan the training of clinicians, starting from the undergraduate period, to be both practically and

theoretically adequate in terms of communication techniques, especially when breaking bad news, including the factors that created the situation (Mansoursamaei et al. 2023). Moreover, although Covid-19 seems to be more prominent in our study in terms of bad breaking news, it is also important in other medical conditions that require. Herein, we aimed to investigate the approaches to breaking bad news in life-threatening situations as well as the factors that effect these approaches.

Methods

This cross-sectional study was approved by the institutional ethics committee (No: 2020-158; date: June 5, 2018) and conducted between June 2020 and October 2020 at our hospital. Written informed consent was obtained from all the participants before being enrolled in the study. Subsequently, the physicians filled out the survey created by the researchers.

The physicians were grouped based on how long they had been working: <5 years, 5–10 years, and >10 years. Based on specialties, the clinicians were grouped as internal medicine and surgical branches. The physicians were also categorized based on their academic levels as residents, specialists, and faculty members. The circumstances, which worry the physicians, primarily uncertain medical conditions, positivity, and mortality were rated by the participants from 1 to 10, with “1” being the worst and 10 being the best.

The second part of the survey consisted of questions about physicians breaking bad news in the context of COVID-19, their educational status, and appropriate environment. They were asked to rate the events that worried physicians the most, especially the news of death, from “1 to 10,” with “1” being the most severe. The third part of the survey included approaches utilized for breaking bad news related to COVID-19.

The fourth part of the survey was a 10-question attitude survey to identify the approaches utilized by the participants to break bad news. The attitude survey utilized the 5-point Likert scale, which consists of “never,” “rarely,” “sometimes,” “usually,” and “always” as answers. (Likert, 1932). The survey included eight positive and two negative statements. The negative statements were coded in reverse and evaluated. The most appropriate answer was awarded 10 points, and the score was calculated over 100 points. The last section of the survey included the “communication skills inventory,” which was developed by Ersanlı and Balcı and has been validated and found to be reliable in previous studies (Ersanlı and Balcı, 1998). It reveals the communication style, thoughts, and emotions of the participants.

This Likert-type scale evaluated the communication skills for cognitive, emotional, and behavioral aspects. The statements related to each aspect are as follows:

Cognitive aspect: 1, 3, 6, 12, 15, 17, 18, 20, 24, 28, 30, 33, 37, 43, 45.

Emotional aspect: 5, 9, 11, 26, 27, 29, 31, 34, 35, 36, 38, 39, 40, 42, 44.

Behavioral aspect: 2, 4, 7, 8, 10, 13, 14, 16, 19, 21, 22, 23, 25, 32, 41.

The choices for the communication skills statements were “never,” “rarely,” “sometimes,” “usually,” and “always.” Cognitive communication skills include demonstrating empathy, reading gestures, and body language. Emotional communication skills include expressing emotions. Behavioral skills include active listening, effective response, and anger control. The lowest score that can be scored was 45 points and the highest was 225 points.

Statistical analysis. All statistical analyses were performed using SPSS (version 22). Normality of data distribution between groups

was examined. The student t-test was used to compare two groups if the data were normally distributed. The non-parametrical t-test was used to compare variables that were not normally distributed. Categorical data were analyzed using the chi-square test. The relationship between variables was assessed using the Pearson correlation test. A *p*-value < 0.05 was considered statistically significant.

Results

A total of 120 physicians were included in the study. The mean age of the participants was 30.78 ± 5.42 years (range: 25–48 years). Of the included physicians, 91 (75.8%) were male and 29 (24.2%) were female (*p* < 0.001). The mean years of service was 6.07 ± 5.67 years (median: 4 years; min-max: 1–23 years). Approximately 65.0% (*n* = 78) of the physicians had <5 years of service, 15.8% (*n* = 19) had 5–10 years of service, and 19.2% (*n* = 23) had >10 years of service.

The number of physicians working in the internal medicine (*n* = 61, 50.8%) and surgical (*n* = 59, 49.2%) branches was almost equal (*p* = 0.090). There was no significant difference in sex between the speciality branches (*p* = 0.069). The frequency of breaking bad news was “always” in 10.8% (*n* = 13) of the participants. Physicians in the internal medicine branches broke bad news more often than those in the surgical branches (*p* = 0.002) (Fig. 1).

Approximately 68.3% (*n* = 82) of the physicians declared that they did not receive any education on breaking bad news to patients or their relatives. Residents had a higher rate of education before graduation than faculty member. Specialists and

faculty members had a higher postgraduate education rate than residents (*p* = 0.037) (Table 1).

Only 14.2% (*n* = 17) of the physicians stated that they always feel competent when breaking bad news. Approximately 24.1% (*n* = 29) of the physicians declared that they rarely or never conveyed bad news to the patients or their relatives. Approximately 50.8% (*n* = 61) of the physicians often felt anxious about breaking bad news. The underlying cause of this anxiety was concern regarding the patient’s response to bad news (*n* = 60, 50%) (Table 1). A comparison of the frequency of reporting bad news between the surgical and internal branches is shown in Fig. 1. The most common cause of a patient’s or their relative’s reaction to bad news was refusal and failure to understand (Fig. 2).

The participants declared that the most distressing aspect of breaking bad news to patients or their relatives was the announcement of death (65.8%). Announcement of death due to COVID-19 (5.8%) followed announcing fatal diseases (13.3%) and limb loss with function loss (8.3%). (Fig. 3). Only two physicians (1.7%) reported announcing COVID-19-related death as the most distressing event. Information patients regarding COVID-19-positivity was the most distressing event for 19 (15.8%) of the physicians, with approximately 45.8% (*n* = 55) of the physicians experiencing moderate to severe anxiety. The question related to availability of appropriate time and setting for breaking bad news was rated 6.67 ± 1.80 (min-max: 2–10) out of 10 points. The mean attitude was 73.4 ± 9.35 (median: 72, min-max: 48–98) out of 100. The mean score for the emotional aspect of the communication skill assessment was lower than that of the cognitive and behavioral aspect.

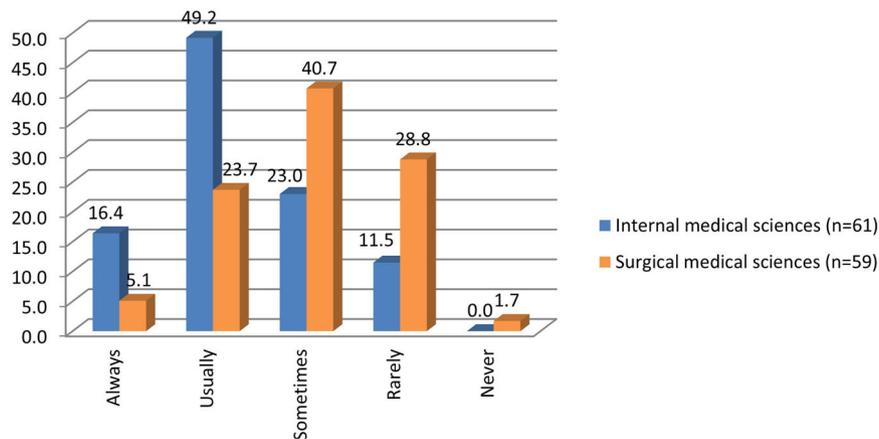


Fig. 1 Frequency of breaking bad news. This figure is covered by the Creative Commons Attribution 4.0 International License. Reproduced with permission of Eray Serdar YURDAKUL; copyright © Eray Serdar YURDAKUL, all rights reserved.

Table 1 Comparison of the physicians based on the years of service and title along with their status of being trained in breaking bad news.

		Status of being educated on breaking bad news			<i>P</i> *
		No education n, (%)	Undergraduate n, (%)	Postgraduate n, (%)	
Title	Resident (<i>n</i> = 99)	62 (62.6)	33 (33.4)	4 (4.0)	0.048
	Specialist (<i>n</i> = 13)	7 (53.8)	4 (30.8)	2 (15.4)	
	Faculty member (<i>n</i> = 8)	6 (75.0)	—	2 (25.0)	
	Total	75 (62.5)	37 (30.8)	8 (6.7)	
Years of service	<5 years (<i>n</i> = 78)	45 (57.7)	30 (38.5)	3 (3.8)	0.037
	5-10 years (<i>n</i> = 19)	14 (73.7)	4 (21.1)	1 (5.3)	
	>10 years (<i>n</i> = 23)	16 (69.6)	3 (13.0)	4 (17.4)	
	Total	75 (62.5)	37 (30.8)	8 (6.79)	

*Chi-square test

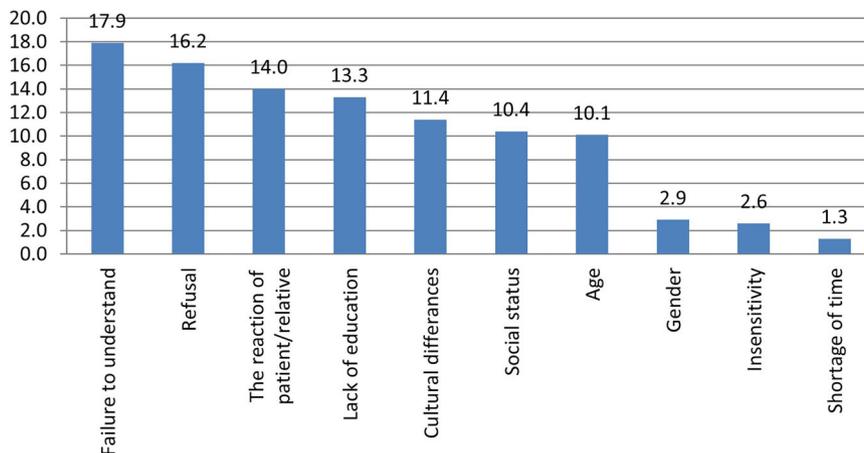


Fig. 2 The most important factors affecting the response to bad news. This figure is covered by the Creative Commons Attribution 4.0 International License. Reproduced with permission of Eray Serdar YURDAKUL; copyright © Eray Serdar YURDAKUL, all rights reserved.

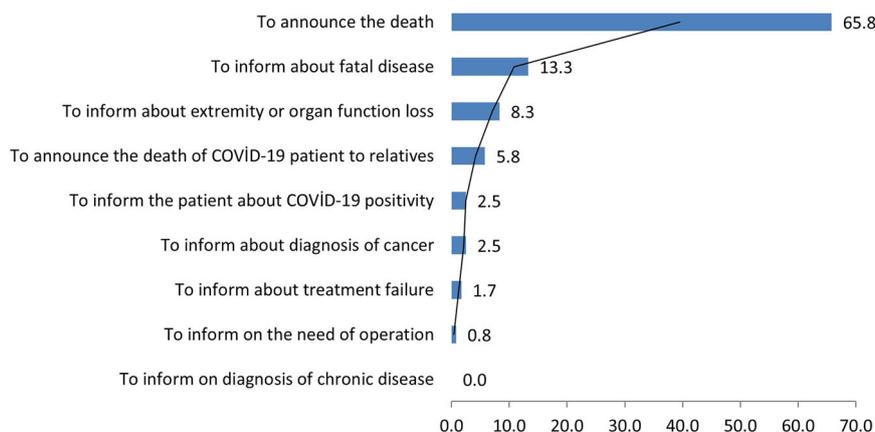


Fig. 3 Approaches to breaking bad news. This figure is covered by the Creative Commons Attribution 4.0 International License. Reproduced with permission of Eray Serdar YURDAKUL; copyright © Eray Serdar YURDAKUL, all rights reserved.

Approximately 81.7% ($n = 98$) of the physicians introduced themselves first. Approximately 65% ($n = 78$) of the physicians rarely or never switched off their communication devices. Half of the participants usually kept supporting staff nearby in case any negative event occurs when breaking bad news. Only 8.3% of the participants always kept supporting staff nearby. Although it is more appropriate for physician to break bad news, 8.3% of them delegated this task to another staff and 11.7% were careless about avoiding medical terminology (Table 2).

The total attitude score for breaking bad news of physicians with <5 years service was significantly lower than that of physicians with >10 years of service ($p = 0.017$). Similarly, the attitude score of the residents was significantly lower than that of specialist physicians ($p = 0.007$). The attitude score of specialist physicians was significantly higher than that of faculty members ($p = 0.030$). The total communication and behavioral scores of the internal medicine specialists were higher than those of the surgical specialists ($p = 0.019$ and $p = 0.005$ respectively) (Table 3).

Discussion

The overall mortality rate of COVID-19 infection reportedly ranges from 0 to 1.63% (Ioannidis, 2021). More physicians had to announce death due to COVID-19 (5.8%), followed by fatal disease (13.3%) and limb loss with functional loss (8.3%). Breaking bad news regarding COVID-19-positivity was the most

distressing event (15.8%) for the physicians. Breaking news regarding COVID-19-positivity is a source of concern for the physicians not only because of the unknown response of patients or their relatives but also the physician is at risk of developing an infection when breaking bad news. The physicians are at a risk of developing infection; however, they must do their duty even under conflict of fear and conscience (Galehdar et al. 2020). In our study, conveying the news regarding COVID-19 positivity was the most distressing event for 15.8% of the participants. There was no statistically significant difference in the demographical variables such as age, sex, and speciality branch between the physicians, indicating that the groups were distributed homogenously.

Approximately 10.8% of the participants “always” had to break bad news to the patients. Internal medical physicians had to break bad news more commonly than the surgical physicians. For example, cancer is a common condition in the public, and internal medical specialists usually convey this diagnosis to patients. Only some of these patients are referred to surgeons, and during this period, most of the patients are aware of their diseases. COVID-19 is an infectious disease treated by internal medicine branches. However, it is currently a pandemic and healthcare providers from all specialty branches are contributing to this battle.

Breaking bad news is a struggle among all physicians from different specialities. If the response of a patient or their relative, whose

Table 2 Thoughts of physicians regarding breaking bad news.

			n	%
How frequently do you encounter breaking bad news?	Internal medical branches (n = 61)	Always	10	16.4
		Usually	30	49.2
		Sometimes	14	23.0
		Rarely	7	11.5
		Never	1	1.7
	Surgical branches (n = 59)	Always	3	5.1
		Usually	14	23.7
		Sometimes	24	40.7
		Rarely	17	28.8
		Never	1	1.7
Total (n = 120)	Always	13	10.8	
	Usually	44	36.7	
	Sometimes	38	31.7	
	Rarely	24	20.0	
	Never	1	0.8	
Have you been educated on breaking bad news?	No		82	68.3
	Yes		38	31.7
		Undergraduate	30	25.0
	Postgraduate	8	6.7	
Did the education program have a clinical aspect?	Clinical		16	13.3
	Theoretical		22	18.3
Do you feel competent about breaking bad news?	Always		17	14.2
	Usually		49	40.8
	Sometimes		40	33.3
	Rarely		12	10.0
	Never		2	1.7
Will you attend a course developed on breaking bad news?	Absolutely yes		14	11.7
	Yes		55	45.8
	Not sure		30	25.0
	No		17	14.2
	Absolutely no		4	3.3
How much do you think theoretical education contributes to breaking bad news skills?	Absolutely contributes		20	16.7
	Contributes		62	51.7
	Not sure		24	20.0
	Not contribute		9	7.5
	Absolutely not contribute		5	4.2
How much do you think practical training contributes to breaking bad news skills?	Absolutely contributes		28	23.3
	Contributes		59	49.2
	Not sure		24	20.0
	Not contribute		6	5.0
	Absolutely not contribute		3	2.5
How often do you think patients or their relatives are informed about bad news?	Always		11	9.2
	Usually		54	45.0
	Sometimes		26	21.7
	Rarely		22	18.3
	Never		7	5.8
Are you worried about breaking bad news?	Always		22	18.3
	Usually		39	32.5
	Sometimes		38	31.7
	Rarely		18	15.0
	Never		3	2.5
Are you worried about the reaction of patients or their relatives to bad news?	Always		12	10.0
	Usually		48	40.0
	Sometimes		40	33.3
	Rarely		16	13.3
	Never		4	3.3

lives radically and negatively change, cannot be canalized or a disease causes hopelessness, it can lead to certain situations such as violence against medical staff (Buckman and Kason, 1992). In a study in Sudan, 95.3% of the physicians encountered breaking bad news to patients; however, only 56.3% were educated and trained for this. Approximately 43% of the physicians accepted that breaking bad news was a bad experience, and 65.6% believed that bad news

should be directly delivered to the patient. Additionally, most of them believed that physicians should be educated regarding breaking bad news (Dafallah et al. 2020). In another study by Ferras Goncalvez et al., 78% of the physicians believed that they required education on breaking bad news. Young physicians reportedly need significantly more education than older physicians regarding breaking bad news (85 vs. 71%) (Ferraz Gonçalves et al. 2017). In our study, only 14.2% of physicians stated that they always felt competent to break bad news. Furthermore, the undergraduate education rate was higher among residents than among the faculty members. However, the postgraduate education rate was significantly higher among specialists and faculty members than among residents ($p = 0.048$). Thus, the undergraduate curriculum currently includes more lectures related to breaking bad news than those of previous years. Additionally, physicians enrolled in the postgraduate program are educated regarding this via seminars, courses, and congresses. Goncalves et al. determined that courses on breaking bad news positively affected the physician’s approach to it. Nevertheless, there is a major requirement for education and training of physicians.

The physicians should demonstrate empathy because they are also at risk of developing the infection, which results in several complications. Like periods of medical uncertainty, new diagnoses or deaths are common. In times of medical uncertainty, such as the beginning of a pandemic, it is difficult to break bad news to patients or their relatives. However, because physicians are also at risk of being infected, breaking bad news in optimal conditions is also very challenging. In a study on physicians’ communication skills for breaking bad news, 51.24% of the physicians were able to make enough time to deliver bad news. Additionally, they were able to listen to 56.2% of the those receiving the bad news without interrupting them. Occupational experience significantly affected these rates. Professionals who had been working for >20 years had looked for an appropriate place (83.33%) to break the bad news. Furthermore, 31.87% of physicians with <10 years work experience stated that they could not find an appropriate place (Ferreira da Silveira et al. 2017). In our study, the participants scored the question related to opportunity of appropriate time and place for breaking bad news as 6.67 ± 1.80 out of 10 points. Additionally, approximately 24.1% of physicians declared that they never or rarely conveyed bad news to the patients or their relatives. This rate was lower in the study by da Silveira et al. This may be due to time period the study was conducted. COVID-19 has increased the work load in the last 1.5 years.

The mental health of healthcare workers is affected by the workload, infection risk, fear induced by deployment, hopelessness, anxiety, and depression. Interpersonal communications, including breaking bad news, can also negatively affect mental health. Institutional support is recommended to protect healthcare workers against mental health problems (Fukuti et al. 2021, Sockalingam et al. 2020). In our study, approximately 50.8% of the physicians have anxiety regarding breaking bad news. These rates may have increased with the increase in having to break the news reharding COVID-19 infections before the pathology is known. In our study, 50% of the physicians stated that they experienced anxiety because of the unpredictable response of patients. Most physicians believed that this response was because of “refusal”. The physicians are also concerned regarding being appropriately educated and trained to break bad news, providing patient care while being at risk of infection themselves, lack of appropriate time and setting for breaking the news, and patient’s relatives response due to concern for themselves and the patient. In our study, the patient’s relatives reaction in failure to understand the situation was 17.9% and the reaction of refusal was 16.2%. In this context, institutional support may include education programs regarding breaking bad news, communication with healthcare workers, and psychological consultancy and guidance.

Table 3 Communication skills inventory scores of physicians.

	Mean	Median	Std. Deviation	Minimum	Maximum
Total attitude score	73,40	72,00	9347	48	98
Total communication score	146,98	146,00	11,803	124	198
Cognitive aspect	50,73	50,00	4033	44	64
Emotional aspect	45,38	45,50	5215	33	69
Behavioral aspect	50,88	50,00	5111	40	67

In this study, 65.8% of the physicians were mostly concerned about declaring death. This is an expected result. Furthermore, more than half of the physicians experienced moderate to severe anxiety when delivering news regarding COVID-19 positivity. This was correlated with not knowing the illness progression in the first half of the disease course. However, after providing information regarding the treatment, the stress would reduce.

In a qualitative study, the physician stated the following: “If the family members are informed well and in a detailed way, they may contribute positively to the process” (Oikonomidou et al. 2017). Most of the physicians reported becoming sad when they had to break bad news regarding fears and doubts of a condition (40.83%). In addition, they were afraid of the patient’s response (58.6%) and being accused of being responsible for the situation (66.9%). Furthermore, they have gained experience in breaking bad news by following and observing other specialists (42.15%). Most of the physicians believed that it was important (45.45%) or very important (42.15%) to include education regarding breaking bad news to the curriculum (Ferreira da Silveira et al. 2017).

In our study, the physicians usually delegate the task of breaking bad news to other staff; however, it should ideally be done by the physician. Furthermore, two-thirds of the physicians switch off their mobile devices or place them on silent mode before breaking bad news. Although cellphones are a part of everyday life, speech regarding life should not be interrupted by it. Our study findings revealed that half of the physicians “usually” kept supporting staff nearby against inappropriate responses of the patients or their relatives to bad news, and only 8.3% of the physicians “always” keep supporting staff nearby. Furthermore, approximately 11.7% of the physicians were careless about avoiding medical terminology. The attitude scores of the residents were lower than those of the specialists, and this can be explained in the same way. Internal medicine physicians had higher total communication and behavioral scores than surgeons. This may be because surgeons are more focused on surgery than communication. The total communication score and behavioral score of internal medical specialists were higher than those of surgical specialists ($p = 0.019$ and $p = 0.005$, respectively). This can be explained by the fact that internal medicine physicians see more patients during the COVID-19, and they have longer conversations with patients.

Uncertain medical situations, such as the COVID-19 disease, has negatively affected the standard approach to breaking bad news (Soosaipillai et al. 2020). However, this process can be utilized in education and training courses to bridge the gap in the field and determine the approach in extraordinary circumstances (Soosaipillai et al. 2020). In the timeline of the COVID-19 pandemic, defining the pathology of the virus and the production of vaccines has accelerated the progression of treatment. This effectively decreased the stress on healthcare workers for delivering news regarding COVID-19 positivity. No attention was paid to the solutions developed in the COVID-19 pandemic. The lack of a clear approach in extraordinary situations, as well as the physician’s lack of foresight about the patient, are situations that disrupt patient-physician communication under optimal conditions (Rimmer, 2020). As such, there is a need for trainings on the approach to medical conditions where there is uncertainty in the

initial period. In our study, 45.8% of the participants stated that they would participate in such trainings if they were available. Protocols, including those for remote communications, are available to effectively convey bad news. Modifying these protocols for COVID-19 may yield better results in terms of patient-physician relationship (Alansari, 2021). A training toolbox has been created to help train people on how to deliver bad news via phone or video calls (Vitto et al. 2022).

Postgraduate medical training is needed to build competence in delivering bad news in relation to this pandemic. A pandemic is both an uncertain medical situation and a crisis. It is important that doctors receive the necessary training on how to manage it in order to be prepared. Simulation-based training tools for breaking bad news support learning using an immersive hands-on experience, which is beyond standardized patient scenarios (Shirani, 2021). Training for breaking bad news should be included in the medical or postgraduate curriculum when providing education regarding general communication skills (including empathy) (Mansoursamaei et al. 2023, Ozyemisci-Taskiran et al. 2017). In our study, 68.3% ($n = 82$) of the physicians stated that they did not receive training regarding breaking bad news. We found that the residents were more educated than undergraduate faculty members, and they were significantly more educated during the postgraduate program than the experts and faculty members ($p = 0.037$). In conclusion, postgraduates should be educated regarding breaking the bad news. Only 14.2% of the physicians stated that they “always” felt competent about breaking bad news.

The study had some limitations. The data were collected during the first half of the COVID-19 pandemic. Thus, we could not determine the absolute results of the ordinary conditions. Hence, to compare the COVID-19 pandemic conditions with ordinary conditions, the study should be repeated at the end of the pandemic. The study was limited to research hospital physicians. Participant of private medical centers and other state hospitals were not included. The increased stress levels caused by vague prognoses and high fatality rates at the beginning of the pandemic decreased with the identification of the disease etiology. This changed the reaction of healthcare providers. The overrepresentation of male doctors and short work experience were other limitations of our study.

Conclusion

The most common reason for breaking bad news is the announcement of death, which should be conveyed to the patient’s relatives in accordance with communication principles, taking into account their current situation. This approach can effectively reduce the anxiety experienced by the physician breaking the news and mitigate reactions from the patient’s relatives such as refusal and incomprehension in the face of the patient’s loss. The study also identified shortcomings in education and training in breaking bad news. While face-to-face training remains invaluable, digital technologies such as video conferences and webinars offer viable alternatives for physician training in this area. Establishing supportive policies and providing training through both online and simulation-based platforms can alleviate the stress associated with this responsibility. Furthermore,

updating the curriculum to address both theoretical concepts and practical skills related to breaking bad news can serve to effectively address these shortcomings.

Data availability

The datasets generated during and/or analyzed during the current study are not publicly available to preserve the privacy of participants but are available from the corresponding author on reasonable request.

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Author contributions

ESY: conceptualization, methodology, supervision, validation, writing—review, and editing. ZYC: conceptualization, methodology, analysis, writing—review & editing. OS: conceptualization, methodology, analysis, writing—original draft. AKC: conceptualization, methodology, analysis, writing—review, and editing. The final version was approved by all authors.

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Informed consent

Written informed consent was obtained from all individuals before the study. It was obtained from the participants during the survey administration.

Additional information

Correspondence and requests for materials should be addressed to Eray Serdar Yurdakul.

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