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LEVEL AND FREQUENCY OF KNOWLEDGE OF POSTGRADUATE RESIDENTS IN BREAKING BAD NEWS TO THE PATIENTS IN A TERTIARY CARE HOSPITAL, KARACHI

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Abstract

OBJECTIVE: *To determine the level of knowledge of postgraduate residents in breaking bad news to the patients in a tertiary care hospital, Karachi.*

METHODOLOGY: *This multicenter cross-sectional study design was conducted in 15th January to 15th april 2025 within the Anesthesia Department of Civil Hospital, Karachi, involving the participation of 140 postgraduate residents from a variety of governmental and private training institutions. In Karachi the study was approved by institutional review board, Dow University of Health Sciences (IRB-3775/DUHS/2024/27). After written informed consent eligible participants, aged between 24 and 40 years, representing both genders, were incorporated to evaluate the extent and prevalence of knowledge pertaining to the communication of adverse news among postgraduate anesthesia residents. The dataset was subjected to analysis via SPSS version 26, utilizing both descriptive statistics and the Chi-square test for comprehensive assessment.*

RESULTS: *The mean age of the participants was 28.42 years (± 1.92 SD). Females were dominant (73.6%) while males were (26.4%). In the last six months, 87.1% of participants had broken bad news 1–24 times, while 12.9% had done so more than 24 times. The level of knowledge was determined as good (55.71%) and poor (44.29%).*

CONCLUSION: *Although postgraduate residents frequently engage in the delivery of adverse news, a noteworthy fraction exhibited inadequate comprehension in this domain. These results underscore the necessity for the implementation of organized communication training, encompassing the SPIKES protocol, within residency curricula to improve residents' proficiency and facilitate patient-centered care.*

INTRODUCTION

Communicating terrible news involves a difficult conversation between a patient and the doctor where the doctor informs the patient or family members that they have a threatening life-long, terminal or chronic

illness [1]. Of course, this is neither a complete nor necessarily a universally valid definition, since the way the news affects the recipient is greatly different and depends on so many factors, such as previous experience, life philosophy, spirituality, religion, age, culture, education, etc. [2]. Not only does the doctor need to have experience, but knowledge and ability as well as continuous communication skills training are important in the skills of the physicians the aim is to show undesirable news [3]. Little is known about what constitutes effective delivery of bad news to patients and the ramifications of poor communication [4], and this is one of the most significant reasons physicians struggles with breaking bad news to patients. Some doctors are prepared to deal with problems like that, some just want to steer clear. While most people who turn down the harder things are well-intentioned, they simply don't know how to execute upon them. They are afraid that saying any inappropriate comments would make the patient or family to burst into tears or shout in panic [5]. In fact, most practicing physicians have never learned how to deliver bad news and rarely do. Thus, passing on bad news becomes a solitary job. Every physician knows this is part of the job and that this does not seem to be specific to specialty [6–7].

There are many protocols for breaking the bad news, like Background; Rapport; Explore; Announce; Kinding; Summarise (BREAKS), Advance preparation; Build a therapeutic relationship; Communicate well; Deal with patient and family reactions; Encourage and validate emotions (ABCDE), and Setting and listening skills; Patients perception; Invitation to give information; Knowledge; Explore emotions and empathise; Strategy and summarise (SPIKES) model. Though they have almost similar component, SPIKES model is the most commonly followed in clinical scenarios [8-9]. This will lead to good communication between residents and patients and attendants. In a study conducted by Al-Sabaawi et al., it was noted that 63% of residents demonstrated poor knowledge regarding breaking bad news, while 37% exhibited good knowledge [10]. In addition, another study identified the distribution of knowledge levels among physicians, where they were defined as poor (3.5%), fair (28.2%) and good (68.3%) knowledge[11].

Speaking truthfully is difficult work that requires a spectrum of communication, understanding, and compassion skills. In its proper context — delivering bad news to a patient can be alarming and dangerous without proper training. These failures of communication with patients can have significant downstream outcomes in the patient understanding of their disease and whether patients discontinue or adhere to medical therapy. Moreover, literature is quite limited regarding breaking bad news knowledge reported in Pakistan, hence further studies are required to create awareness among health care providers that they must recognize the importance of breaking bad news knowledge. The current study intended to assess the knowledge among residents in order to formulate educational guidelines for SPIKES protocol for residents.

METHODOLOGY

This was a multicenter, cross-sectional study carried out from 15th January to 15th april at the Department of Anesthesia, Civil Hospital Karachi. The study included a cross-sectional study of 140 postgraduate residents from different government and private training institutes registered for postgraduate study and recognized by the College of Physicians and Surgeons Pakistan in Karachi.. We used non-probability, consecutive sampling to enroll those who took part in the study if they fulfilled the inclusion criteria, including internal medicine doctors working in medical and surgical ICUs, medical and surgical emergencies, and attended a communication skills course in last 2years. We included residents aged 24-40 years of either gender and excluded consultants, Anesthesiologists and non-consenting residents.

The knowledge of breaking bad news was evaluated using a 21-item questionnaire, with multiple-choice questions. The residents were considered to have "good knowledge" if they answered at least 16 out of 20 questions correctly. Those who answered fewer than 16 questions correctly were categorized as having "poor knowledge." A written informed consent was obtained from each participant, and they were provided with the questionnaire, which was collected once completed. Good knowledge was defined with a score of 16 and above on the knowledge assessment and poor knowledge when below 16.

Data was entered and analyzed via the application of SPSS 26. The mean with standard deviation and frequencies and percentages were used to obtain descriptive statistics for quantitative and categorical variables respectively. The Chi-square were used to evaluate the statistical significance, and p-values ≤ 0.05 were assumed statistically significant.

RESULTS

As delineated in Table I, the investigation encompassed a cohort of 140 participants with a mean age of 28.42 ± 1.91 years. A significant majority of the participants (90%) fell within the age range of 24 to 30 years, whereas 10% were above the age of 30. Concerning the level of residency, the predominant group was comprised of third-year residents (R-3, 32.1%), followed by first-year residents (R-1, 24.3%), fourth-year residents (R-4, 23.6%), second-year residents (R-2, 18.6%), and fifth-year residents (R-5, 1.4%). The preponderance of participants identified as female (73.6%), while 26.4% identified as male. A significant majority of residents hailed from urban locales (85%), whereas 15% originated from rural environments. In terms of experience in the dissemination of unfavorable news over the preceding six months, 87.1% reported having engaged in this practice between 1 and 24 instances, while 12.9% indicated that they had done so more than 24 times. Participants exhibited near-equal distribution across various specialties, with 52.1% engaged in Medical & Allied fields and 47.9% involved in Surgery & Allied disciplines.

As illustrated in Table II, among a total of 140 participants, 78 individuals (55.7%) exhibited a high level of knowledge, whereas 62 individuals (44.3%) demonstrated a low level of knowledge. The average age within both categories was comparable (28.50 ± 1.82 years for those with good knowledge versus 28.33 ± 2.03 years for those with poor knowledge, p=0.623), thereby suggesting the absence of a significant correlation between age and knowledge proficiency.

No statistically significant correlations were identified between knowledge proficiency and the variables of age group, gender, residential status, or year of residency (p>0.05 for all comparisons). In a similar vein, the distribution across medical and surgical disciplines did not yield a statistically significant difference in knowledge proficiency (p=0.112), although a marginally higher percentage of participants from the Surgery & Allied specialties attained good knowledge (53.8%) relative to their counterparts in the Medical & Allied sectors (46.2%). Nevertheless, a statistically significant relationship was detected between knowledge proficiency and the frequency with which participants reported having delivered bad news in the preceding six months (p=0.036). Participants who had conveyed bad news between 1 and 24 times exhibited a higher likelihood of possessing good knowledge (82.1%) in contrast to those who had done so more than 24 times (17.9%), implying that moderate exposure may be associated with enhanced knowledge.

Table I: Baseline Characteristics Study Participants (n=140)

Variable	**n** (%)
Age (Mean ± SD) = 28.42 ± 1.91 years	
24-30 years	126 (90.0)
>30 years	14 (10.0)
Years of Residency	
R-1	34 (24.3)
R-2	26 (18.6)
R-3	45 (32.1)
R-4	33 (23.6)
R-5	2 (1.4)
Gender	
Male	37 (26.4)
Female	103 (73.6)

Residential Status	
Urban	119 (85.0)
Rural	21 (15.0)
Number of times bad news was broken in the last six months	
1 – 24 times	122 (87.1)
> 24 times	18 (12.9)
Field	
Surgery & Allied	67 (47.9)
Medical & Allied	73 (52.1)

Table II: Comparison of Level of knowledge with Study Participants (n=140)

Characteristics		Level of knowledge		95% C. I	P-Value
		Good (n=78)	Poor (n=62)		
Age in years, Mean ± SD		28.50 ± 1.82	28.33 ± 2.03	-0.48 ⎓ 0.80	0.623
Age Group	24 – 30 years, *n* (%)	70 (89.7)	56 (90.3)	0.30 ⎓ 2.86	0.910
	>30 years, *n* (%)	8 (10.3)	6 (9.7)		
Gender	Male, *n* (%)	20 (25.6)	17 (27.4)	0.42 ⎓ 1.94	0.813
	Female, *n* (%)	58 (74.4)	45 (72.6)		
Residential Status	Urban, *n* (%)	64 (82.1)	55 (88.7)	0.21 ⎓ 1.54	0.273
	Rural, *n* (%)	14 (17.9)	7 (11.3)		
Year of Residency	R-1, *n* (%)	17 (21.8)	17 (27.4)	0.53 ⎓ 0.99	0.276
	R-2, *n* (%)	11 (14.1)	15 (24.2)		
	R-3, *n* (%)	27 (34.6)	18 (29.0)		
	R-4, *n* (%)	21 (26.9)	12 (19.4)		
	R-5, *n* (%)	2 (2.6)	0 (0.0)		
Field	Surgery & Allied, *n* (%)	42 (53.8)	25 (40.3)	0.87 ⎓ 3.39	0.112
	Medical & Allied, *n* (%)	36 (46.2)	37 (59.7)		
Frequency of Breaking Bad News	1 - 24, *n* (%)	64 (82.1)	58 (93.5)	0.09 ⎓ 1.01	0.036
	>24, *n* (%)	14 (17.9)	4 (6.5)		

P-Value = Level of Significance, 95% C.I. = Confidence Interval

DISCUSSION

Based on the study, 87.1% of postgraduate residents in the past had broken bad news 1–24 times and 12.9% of postgraduate residents had broken bad news >24 times. This illustrates that even though these tasks are vital to patient care, residents may have had relatively little exposure to them. The knowledge level regarding breaking bad news were found to be dichotomous among participants where good and poor knowledge was found in 55.71% and 44.29% respectively. Our study aligns with other studies that stress the importance of training and communication skills in healthcare.

A study by Al-Sabaawi et al. revealed that 63% of residents had poor knowledge in breaking bad news, with only 37% exhibiting good knowledge [10]. This suggests that despite the essential nature of breaking bad news as part of medical practice, many healthcare

professionals lack the required competence in this area. The repercussions of the lack of knowledge and skills can be huge for patients and other healthcare providers, as the delivery of bad news can be highly challenging for patients and family physically and psychologically.

Identically, knowledge levels of physicians in another study were distributed as 3.5% poor, 28.2% fair and 68.3% good [11]. While this means that a majority of the doctors knew and understood well, it leaves a sizeable part of the healthcare workers informing that there is a gap that needs continuous training and support.

The findings of this research are in agreement with a study conducted by Annadurai and Muthukumar exploring the practices, perceptions, and challenges facing postgraduate students breaking bad news. Their findings revealed the importance of true understanding of the process of communication and receiving poor preparedness for performing that essential task despite medical students' appreciation of the importance of communicating bad news [12]. Mansoursamaei et al described a substantial mismatch between residents' perceptions of their own abilities and encountered barriers to breaking bad news, highlighting the urgent need for improvement in training and support [13].

Further, Ahmed et al. demonstrated that online teaching programs have the validity to change residents' attitudes and knowledge with respect to delivering bad news [14]. This was also effective programs fostered in developing confidence and competence in this critical area of medical practice. Prabhu et al. highlighted the requirement for the "Spikes" protocol, which serves as a guideline for how to deliver bad news in a structured way, but noted that many postgraduate residents did not know of it or failed to practice it regularly [15].

Based on these results, Abdullah et al. emphasizing the worrying gap in communication skills especially bad news delivery by health practitioners in the country. This deficiency has also been echoed in another study which recommended incorporating a communication training as part of the curriculum [16]. Lastly, Sarwar et al.'s observation that postgraduate residents in Lahore, Pakistan, while performing the skill of breaking bad news encounter difficulties which aligns with a worldwide plea for reform in this branch of medical education [17].

This study has some limitations, a major limitation of the study is that non-probability, consecutive sampling introduces selection bias, as the survey passes through the availability and consent of researchers, which results in an unrepresentative sample. The exclusion of consultant anesthesiologists limits the comparison between residents and more experienced professionals, and the sample's homogeneity, with participants primarily from anesthesia departments, reduces the generalizability of the findings. The 21-item questionnaire was self-report based, so it may have led to some social desirability bias, where participants inflated knowledge. Again, the questionnaire's multiple-choice nature potentially misses a much broader approach to patients' expected competencies in breaking the bad news, like emotional readiness or non-verbal skills.

To overcome these limitations, future studies are recommended to apply more representative sampling technique (i.e., stratified random sampling) and recruit healthcare professionals of various specialties. Alongside qualitative methods such as interviews or focus groups, this would lead to better understanding of what issues residents encounter. A more comprehensive assessment tool, including scenario-based questions, would better evaluate both knowledge and practical skills. Longitudinal studies tracking residents' progress over time could also provide a clearer picture of how communication skills develop with training. Improved, interactive communication training is essential to address knowledge gaps and enhance residents' competence.

CONCLUSION

Although postgraduate residents frequently engage in the delivery of adverse news, a noteworthy fraction exhibited inadequate comprehension in this domain. These results underscore the necessity for the implementation of organized communication training, encompassing the SPIKES protocol, within residency curricula to improve residents' proficiency and facilitate patient-centered care.

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