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Sharing Unpleasant Health Updates with Patients

A baseline study exploring physician attitudes, practices, and adherence to the SPIKES protocol at a tertiary hospital in Muscat, Oman

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Abstract

Objectives: This study aimed to investigate knowledge, attitudes, and experiences in sharing unpleasant health information and adherence to the SPIKES protocol among physicians at a tertiary hospital in Muscat, Oman. ***Methods:*** This cross-sectional study was conducted at the Sultan Qaboos University Hospital (SQUH) from August to October 2022. An electronic, self-administered questionnaire was used to gather data from 400 physicians across various SQUH departments. ***Results:*** A total of 89 physicians completed the questionnaire (response rate: 22.3%). Most (96.6%) recognised the need for additional training in the delivery of unpleasant health updates, with 78.7% expressing their willingness to undertake such training. However, 32.6% reported negative experiences due to improper delivery of bad news, with an equal proportion admitting to disclosing unpleasant updates to the patient's family without their consent. The majority (86.5%) demonstrated a high level of overall adherence to the SPIKES protocol, with 59.6–85.4%, 12.4–34.8%, and 1.1–11.2% of physicians reported usually, sometimes, and never following specific steps of the protocol, respectively. Marital status (P =

0.015) and qualifications (P = 0.032) were the only variables to correlate with adherence level, with married physicians and those with board or fellowship certificates reporting significantly better adherence compared to their counterparts. ***Conclusion:*** Physicians in Oman encountered challenges in delivering unpleasant health updates, underscoring the interplay of cultural influences, training, and adherence to protocols. To address these challenges, targeted and frequent training programs are recommended, starting from undergraduate medical education and extending to continuous opportunities for physicians at various career levels.
Keywords: Physician-Patient Relations; Truth Disclosure; Clinical Protocols; Communication; Empathy; Oman.

Advances in Knowledge

- To the authors' best understanding, this study represents the first attempt in Oman to evaluate physician knowledge, experiences, and attitudes regarding the delivery of unpleasant health updates to patients.
- Although most physicians reported prior experience in conveying bad news and receiving education and training in this area, the majority indicated the necessity for additional training to enhance their skills. Moreover, one-third disclosed negative experiences due to the improper delivery of such news, with a similar proportion admitting to having first disclosed confidential information to the patient's families without their consent.

Application to Patient Care

- The findings of this study provide useful information which could inform future educational campaigns and initiatives to improve the delivery of unpleasant health information to patients by physicians. This has the potential to significantly enhance physician-patient communication and trust, potentially improving patients' satisfaction with their care and fostering adherence to treatment and follow-up.
- The authors strongly advocate for the integration of comprehensive communication skills training into undergraduate medical education and postgraduate residency training, as well as the provision of regular refresher courses, so as to ensure that physicians across all medical specialties are able to deliver unpleasant health updates to patients with appropriate sensitivity, accuracy, and empathy.

Introduction

Physicians must acquire a broad range of skills during their studies and training, with communication skills ranking among the most crucial.[1] This skillset becomes especially vital as physicians navigate numerous challenges throughout their careers, including the demanding task of delivering 'bad news' to patients. In the context of healthcare information, bad news refers to "any news that the doctor announces to the patient which [could] have the ability to shock the patient and destroy his [or her] hopes, resulting in changing his lifestyle and thoughts about his future".[2] This encompasses informing the patient or their relatives of the development, recurrence, or spread of various life-altering or even life-threatening diagnoses, such as cancer, degenerative neurological conditions, advanced heart disease, infertility, or HIV infection/AIDS.[2] Other situations may involve conveying unfavourable information regarding the patient's prognosis, treatment failure, test results, adverse complications or side-effects, and engaging in end-of-life discussions.

Delivery of unpleasant health information is a crucial aspect of patient-provider communication, significantly influencing patients' satisfaction with their care and shaping perceptions of their illness and compliance with medical treatment.[3,4] Indeed, research has shown a direct correlation between physicians' communication skills and therapeutic outcomes.[4,5] Improperly delivered bad news can result in negative consequences for patients, families, and physicians alike, adversely impacting patients' level of trust in their healthcare providers.[5] Research has revealed that patients often prioritise perceived physician empathy over their clinical performance.[6,7] In addition, some physicians, particularly those less-experienced, have expressed a need for additional training in delivering unpleasant health information, possibly due to their fear of the patient's emotional reaction, evoking blame, or due to their lack of experience in conveying distressing information with compassion.[8,9]

It is therefore crucial that healthcare professionals approach these conversations with honesty, compassion, and sensitivity, employing clear and concise language while offering appropriate support and resources to help patients cope with the emotional and practical challenges associated with such news. Additionally, involving patients in the decision-making process is

crucial for fostering shared decision-making and patient-centred care. Several protocols, developed by experts, aim to guide physicians in delivering unpleasant health information effectively.[10–12] Notably, the SPIKES protocol, widely adopted in clinical practice, comprises six key steps: (1) **S**etting: choosing a private, comfortable location for the conversation; (2) **P**erception: assessing the patient's readiness to receive the news and existing awareness of their condition or the situation; (3) **I**nvitation: asking the patient how much information they desire or seeking clarification of any doubts; (4) **K**nowledge: providing key information about the diagnosis and treatment options in clear, concise, and simple language; (5) **E**motion; addressing and accepting the patient's reaction with empathy and providing emotional support; and (6) **S**trategy; delivering the diagnosis, outlining the treatment plan or any next steps, and arranging a follow-up appointment.[11]

Limited research has focused on the delivery of unpleasant health information to patients by physicians in the Middle Eastern region; moreover, to the best of the authors' knowledge, no studies have been conducted in Oman regarding utilization of the SPIKES protocol. It remains unclear whether physicians in Oman adhere to the SPIKES protocol or if they employ alternative approaches with similar objectives. Additionally, physicians' adherence to such protocols may be influenced by various sociocultural factors, such as their medical training, cultural background, and the customs and traditions of the patient population they serve. As such, this study aimed to explore knowledge, attitudes, and experiences related to the delivery of unpleasant health updates and assess level of adherence to the SPIKES protocol among physicians working at a tertiary hospital in Muscat, Oman.

Methods

A cross-sectional study was conducted at the Sultan Qaboos University Hospital (SQUH) from August to October 2022. Employing a total population sampling strategy, the study targeted all physicians (including medical officers, specialists, senior specialists, consultants, and senior consultants) practicing in patient-facing specialities at SQUH, encompassing medicine, paediatric, urology, oncology, surgery, nephrology, and orthopaedic specialties. Physicians in fields typically without direct patient contact, such as radiologists and histopathologists, were excluded from the study.

Data were gathered from the participants using an electronic, self-administered questionnaire published online using Google Forms (Google LLC, Mountain View, California, USA). A link to the online questionnaire was disseminated via email to doctors across various departments at SQUH. The questionnaire was composed of four main sections. The first section focused on gathering information regarding the participants' sociodemographic characteristics, including their age, gender, marital status, qualifications, clinical position, medical specialty, and number of years of work experience.

The second section featured a previously reported, 9-item English-language questionnaire related to the participating physicians' level of knowledge, training, and experience in the delivery of unpleasant health updates.[13] Questions covered topics such as previous training in breaking bad news, perceived need for training in skill development, willingness to attend future training, prior experience in breaking bad news to patients or their families, instances of negative experiences from improperly delivering bad news, preference for communicating directly with patients or their family members when breaking bad news, belief regarding the direct delivery of bad news to affected patients, occasions of breaking bad news to patients' families without patient consent, and instances of delivering bad news to patients by telephone rather than in person. In addition, a concise definition of 'bad news' was provided.

The third section consisted of six items designed to assess adherence to the SPIKES protocol for breaking bad news.[11,13] Responses to each item were scored on a 3-point Likert scale based on frequency of adherence to each step of the protocol (usually, sometimes, or never). Total scores ranged from 0 to 12, with a score of 12 indicating perfect adherence.[13] For the purposes of the current study, total scores of <6, 6–8, and ≥9 were considered to indicate low, medium, and high levels of adherence to the protocol. The fourth and final section of the questionnaire consisted of 25 items designed to explore each respondent's opinions concerning the delivery of unpleasant health information. Responses were scored on a 5-point Likert scale based on level of agreement with each statement (strongly disagree, disagree, not sure, agree, or strongly agree).

The Statistical Package for the Social Sciences (SPSS) software, Version 27.0. (IBM Corp. Armonk, New York, USA), was used for all statistical analyses. Sociodemographic characteristics were reported using descriptive statistics. For categorical variables, frequencies and percentages were reported, while continuous variables were reported using means and standard deviations. Associations between independent variables and outcome variables were estimated using an independent samples t-test and Chi-squared test. The two-tailed significance level was set at 0.05.

Ethical approval for this study was obtained in July 2022 from the Medical Research and Ethics Committee of the College of Medicine and Health Sciences, Sultan Qaboos University, Muscat, Oman. Prior to completing the questionnaire, written informed consent was obtained from all participants. Participants were provided with detailed information about the study's main aim and objectives and were informed that participation was entirely voluntary. At the commencement of the questionnaire, all participant rights were clearly stated, including the right to withdraw at any time. Participating physicians were assured that the survey did not intend to provide medical advice, and all collected information would be treated with strict confidentiality. All responses were coded and stored in a secure database accessible only to the researchers.

Results

Sociodemographic features of participants

A total of 89 out of 400 physicians working in patient-facing specialties at SQUH completed the questionnaire and were included in the study (response rate: 22.3%). Among the respondents, 45 (50.6%) were male and 44 (49.4%) were female. The mean age was 38.0 ± 10.0 years (range: 22–60 years), with most participants (n = 54; 60.7%) being ≤40 years old. In terms of clinical position, participants were most frequently house officers (n = 32; 36.0%), followed by specialists (n = 22; 24.7%), senior consultants (n = 18; 20.2%), senior specialists (n = 10; 11.2%), and consultants (n = 7; 7.9%). The most commonly represented specialty was internal medicine (n = 37; 41.6%), followed by surgery (n = 14; 15.7%), paediatrics (n = 12; 13.5%), behavioural medicine (n = 10; 11.2%), family medicine (n = 9; 10.1%), and obstetrics and

gynaecology (n = 7; 7.9%). The mean number of years of work experience was 12.5 ± 9.4 years (range: 1–30 years) [Table 1].

Knowledge, training, and experience in breaking bad news

The majority of participants (n = 77; 86.5%) reported having had prior experience in breaking bad news to patients, with a considerable proportion (n = 72; 80.9%) indicating that they had received education and training in this regard. The vast majority agreed that training was necessary for physicians to develop adequate skills in breaking bad news (n = 86; 96.6%) and expressed a willingness to attend future training for this purpose (n = 70; 78.7%). Approximately one-third of participants (n = 29; 32.6%) reported having had negative experiences with patients as a result of improperly delivering bad news. Similarly, an equal proportion (n = 29; 32.6%) admitted to first disclosing unpleasant health information to the patient's family without their consent, even though the majority (n = 73; 82%) agreed that such news should be delivered directly to the patient. A small proportion of respondents (n = 9; 10.1%) admitted to delivering bad news to patients via telephone rather than in person [Table 2].

Adherence to the SPIKES protocol

Usual adherence to each step of the SPIKES protocol was reported by 59.6–85.4% of respondents; however, 12.4–34.8% and 1.1–11.2% reported sometimes and never adhering to specific steps of the protocol, respectively [Table 3]. The mean adherence score was 10.28 ± 2.07 (range: 0–12; median score: 11). A perfect score was reported by 29 (32.6%) doctors [Table 4]. Overall, low, medium, and high adherence to the SPIKES protocol was reported by 2 (2.2%), 10 (11.2%), and 77 (86.5%) participants, respectively [Table 5]. Significant correlations were observed between level of adherence to the SPIKES protocol and the respondents' marital status (P = 1.015) and qualifications (P = 1.032). Specifically, married physicians and those with board and/or fellowship certificates reported significantly higher adherence scores compared to their respective counterparts. No significant associations with any other sociodemographic or clinical characteristics were found [Table 6].

Discussion

Breaking bad news is a crucial communication skill for doctors working in medical fields with regular patient contact.[14,15] However, a recent meta-synthesis of qualitative studies focusing on healthcare practitioners' experiences of delivering such news highlighted the emotionally distressing nature of this task, often causing discomfort and relational distress.[16] Other research has indicated that delivering bad news can elicit a physiological stress response, along with emotions of anxiety, self-blame, fatigue, a sense of failure, and frustration.[17,18] A global survey of healthcare practitioners working in hospitals across 40 countries and five continents revealed that only 33.4% had received formal training in delivering bad news to patients.[19] Unfortunately, younger practitioners and those with fewer years of work experience were more likely to be involved in delivering bad news to patients, despite being statistically less likely to have received formal training in this area.[19]

In the current study, the vast majority (80.9%) of surveyed physicians admitted to having received prior training in delivering unpleasant health information to patients. These findings align with results from research carried out in Egypt and Brazil, likely reflecting the increased integration of relevant training in this regard into medical school curricula.[20,21] However, it is noteworthy that medical schools often prioritise imparting medical knowledge over training students in the development of practical communication skills. While the responses from participants in the present study indicated an awareness of general guidelines regarding the delivery of unpleasant health updates, a proportion of respondents were unaware that their usual methods of delivering bad news to patients followed a specific protocol.

Incidents of improperly delivering bad news are not uncommon among physicians. In the current study, 32.6% of surveyed doctors at SQUH reported negative experiences as a result of this, mirroring findings from studies conducted in Sudan, Korea, and Nigeria.[13,22,23] This issue often stems from a lack of training and awareness. Communication skills related to breaking bad news have historically been overlooked in global medical school curricula. Only recently has the importance of teaching these skills as an essential component in a doctor's education been recognised.[24] Nonetheless, it is important to acknowledge that education alone is insufficient; accompanying training is essential.[25] Proper training in the delivery of bad news not only reduces

the anxiety associated with this task, but also enhances physician self-confidence and self-efficacy.[26–28] In the present study, an overwhelming majority of respondents (96.6%) agreed that training is necessary for developing adequate skills in breaking bad news. This aligns with results reported from a study conducted in Sudan, in which 94.8% of participating doctors expressed a similar sentiment.[13]

Social and cultural influences play a significant role in the delivery of health information to patients, often outweighing professional considerations.[29,30] Notably, substantial differences exist between Eastern and Western cultures concerning family involvement in medical decision-making.[31] In Western societies, individualism emphasises the importance of personal autonomy, while collectivist cultures in the East prioritise familial relationships and group harmony.[32] Furthermore, cultural and religious beliefs strongly influence healthcare preferences, with family members contributing to decisions based on their shared values and traditions.[33] In Oman, previous studies have affirmed considerable family involvement in healthcare decision-making, even insofar as it comes to withholding disclosure of the diagnosis itself from the patient.[34,35]

This dynamic might elucidate why 18.0% of participants in the current study believed that unpleasant health updates should be disclosed to relatives directly, with 32.6% of respondents admitting to having disclosed confidential information directly to a patient's family without the patient's consent. A study conducted in Saudi Arabia, a neighbouring country to Oman, similarly found that 70% of physicians preferred to discuss information with close relatives rather than patients; moreover, in cases of serious disease, 32% admitted that they would inform the patient's family without consent.[29] Comparatively, studies from Sudan and Egypt have reported higher percentages of participants who prefer sharing bad news with the patient's family (34.4% and 59.2%, respectively).[13,20] In contrast, 82.0% of participants in the present study acknowledged the importance of maintaining the patient's rights to confidentiality and autonomy, advocating for the direct delivery of bad news to patients.

In Omani culture, family cohesion is highly valued, leading some doctors to disclose bad news directly to the family, sometimes overlooking the patient's individual rights as defined in Royal Decree 75/2019, a law which outlines guidelines for practice in various medical professions.[36,37]

Specifically, Article 12 of this decree stipulates that a medical practitioner must disclose to the patient the nature and seriousness of their illness.[37] However, if this is not in the patient's best interest—for instances, in cases wherein the patient is incapacitated or too unwell to comprehend their situation fully—the information may be conveyed to a second-degree relative. Emphasising adherence to medical law is pivotal in upholding the patient's rights to safety, autonomy, and confidentiality, as well as in protecting healthcare practitioners from liability. Notably, in cases concerning child health, the responsibility often falls upon healthcare providers to convey distressing information directly to the family due to the child being considered a minor under law and therefore legally incapable of making their own healthcare decisions.

Overall adherence to the SPIKES protocol in the present study was high, with 59.6–85.4% of respondents reporting that they usually followed each of the six steps of the SPIKES protocol. However, different studies have indicated variables rates of adherence to individual steps of the protocol. For example, a study of Sudanese doctors showed that only 35–79% were usually adherent to each step of the SPIKES protocol.[13] Another study involving Korean doctors indicated that 80% considered themselves to be correctly following the SPIKES protocol when delivering difficult news to their patients.[22] The current study revealed no significant correlations between adherence to the SPIKES protocol and most of the participants' sociodemographic or clinical characteristics, including gender, age, and number of years of work experience. These findings align with results from studies conducted in Sudan, Egypt, and Saudi Arabia, which similarly did not establish significant correlations with these factors.[13,20,29] However, both marital status and qualifications were found to significantly influence level of adherence in the present cohort.

It is possible that married physicians might possess enhanced communication skills, empathy, and emotional intelligence through their experience in maintaining effective interpersonal relationships; this skill set could translate into better communication with patients and their families.[38,39] Moreover, married physicians may draw from their own personal experiences and emotions related to family dynamics, making them more attuned to others' emotional needs. In turn, the process of pursuing advanced qualifications might equip physicians with the necessary tools to navigate sensitive conversations, including additional training in communication skills

development or prior experience with the STEPS protocol itself. However, further research is necessary to corroborate these findings and determine how and why such factors might influence adherence to the SPIKES protocol among physicians in Oman.

A major strength of this study is its distinction as the first in Oman to assess physician practices and adherence to the SPIKES protocol regarding the delivery of unpleasant health updates to patients. However, several important limitations should be acknowledged. First, the low response rate could introduce sampling bias. Second, the self-administrated nature of the questionnaire could potentially impact the results due to social desirability and memory recall biases among the respondents. Third, the cross-sectional study design prevents establishing temporality. Fourth, the SPIKES protocol is intended only to guide doctors in important steps to take when breaking bad news to patients; rigid adherence to the protocol is not always warranted in every clinical situation. Finally, this research was conducted at a single hospital setting in Oman, limiting generalisability of the results to the entire population. Future multi-centre studies are recommended with a larger sample size involving doctors from a variety of hospitals and health centres in Oman.

Conclusion

While the majority of the surveyed physicians had received prior training in breaking bad news, a considerable proportion reported negative experiences resulting from improperly delivering such news. Similarly, a notable number admitted to disclosing health information to the patient's family without consent. These findings highlight the complex interplay between cultural influences, training, and adherence to protocol in the delivery of unpleasant health updates by physicians in Oman. To address these challenges, the authors recommend frequent, targeted training to equip healthcare practitioners with the essential knowledge and skills to effectively and empathetically communicate bad news to patients. Such training should be integrated into undergraduate medical curricula from an early stage. Furthermore, providing opportunities for refresher training to physicians across diverse medical specialties and at all career levels is essential, fostering continuous improvement in this critical aspect of physician-patient communication.

Authors' Contribution

RK and HM conceived of the research idea and conducted the literature review. HM, under the supervision of RK, designed the research methodology and the questionnaire format. HM, AZ, AS and RH were involved in data collection and entry. HM, AZ, AS, RH and RK analyzed and interpreted the results. RK, HM and AZ were major contributors in writing the manuscript, in consultation with AS and RH. RK and AZ were the research supervisors who guided HM, AS and RH throughout the project. All authors read and approved the final version of the manuscript.

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Conflict of Interest

The authors declare no conflicts of interest.

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	Frequency	Percent (%)
Gender		
Male	45	50.6
Female	44	49.4
Age ranged 22 - 60 (mean of 38.00 ± 10.00)		
≤40	54	60.7
>40	35	39.3
Marital status		
Single	21	23.6
Ever been married	68	76.4
Clinical position		
House officer	32	36.0
Specialist	22	24.7
Senior specialist	10	11.2
Consultant	7	7.9
Senior consultant	18	20.2
Specialty		
Family medicine	9	10.1
Internal medicine	37	41.6
Pediatric medicine	12	13.5
Behavioral medicine	10	11.2
Obstetrics and gynecology	7	7.9
Surgery	14	15.7
Years of experience (range 1-30 years, mean of 12.47 ± 9.36)		
1-10	44	49.4
>10	45	50.6
Qualifications		
MD/MBBS	35	39.3
Board/Fellowship	54	60.7

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495 **Table 2:** Percentage distribution of responses to selected questions related to knowledge,
496 training and experience (N = 89)

Item	Yes (%)	No (%)
1. Have you ever received any education/training for breaking bad news?	72 (80.9)	17 (19.1)
2. Do you feel that training is needed for adequate skill development in breaking bad news?	86 (96.6)	3 (3.4)
3. Are you willing to attend training regarding breaking bad news in the future?	70 (78.7)	19 (21.3)
4. Have you ever broken bad news to patients or patients' family?	77 (86.5)	12 (13.5)
5. Did you have any bad experiences due to improperly breaking bad news?	29 (32.6)	60 (67.4)
7. Do you believe that the bad news should be delivered directly to the patients?	73 (82.0)	16 (18.0)
8. Have you ever broken bad news to patients' family without the patient's consent?	29 (32.6)	60 (67.4)
9. Have you ever broken bad news to patients' through phone?	9 (10.1)	80 (89.9)

Table 3: Participant`s adherence to SPIKES protocol (N = 89)

Item	Never (N, %)	Sometimes (N, %)	Usually (N, %)
1. **S.** Do you **set up** (plan) the interview for the patient to feel comfortable and maintain privacy?	10 (11.2%)	26 (29.2%)	53 (59.6%)
2. **P.** Do you assess the patient's **perception** (what he already knows) about the condition?	1 (1.1%)	20 (22.5%)	68 (76.4%)
3. **I.** Do you obtain the patient's **invitation** (ask him what they want to know)?	2 (2.2%)	31 (34.8%)	56 (62.9%)
4. **K.** Do you give information (**knowledge)** to the patient about their condition?	2 (2.2%)	11 (12.4%)	76 (85.4%)
5. **E.** Do you assess the patient's **emotions** with **emphatic** responses?	2 (2.2%)	13 (14.6%)	74 (83.1%)
6. **S.** Do you explain the future **strategies** including treatment options and prognosis?	3 (3.4%)	12 (13.5%)	74 (83.1%)

Table 4: Participant`s SPIKES protocol scores (N = 89)

SPIKES score	Frequency	Percentage (%)
0	1	1.1
4	1	1.1
6	4	4.5
7	2	2.2
8	4	4.5
9	10	11.2
10	15	16.9
11	23	25.8
12	29	32.6

Table 5: Participant`s SPIKES protocol scores categories (N = 89)

SPIKES score category	Frequency	Percent (%)
Low adherence (scores of <6)	2	2.2
Medium adherence (scores of 6–8)	10	11.2
High adherence (scores of ≥ 9)	77	86.5

Table 6: Association of Participant`s SPIKES protocol scores categories and Demographic characteristic (N = 89)

	Low/medium adherence (n=12)	High adherence (n=77)	P value
Gender			
Male	3 (25.0)	42 (54.5)	3.765
Female	9 (75.0)	35 (45.5)	
Age			
≤40	6 (50.0)	48 (62.3)	0.662
>40	6 (50.0)	29 (37.7)	
Marital status			
Single	3 (25.0)	18 (23.4)	**0.015***
Ever been married	9 (75.0)	59 (76.6)	
Clinical position			

House officer	4 (33.3)	28 (36.4)	3.024
Specialist	2 (16.7)	20 (26.0)	
Senior specialist	2 (16.7)	8 (10.4)	
Consultant	0 (0.0)	7 (9.1)	
Senior consultant	4 (33.3)	14 (18.2)	
Specialty			
Family medicine	2 (16.7)	7 (9.1)	2.873
Internal medicine	2 (16.7)	5 (6.5)	
Pediatric medicine	2 (16.7)	10 (13.0)	
Behavioral medicine	4 (33.3)	33 (42.9)	
Obstetrics and gynecology	1 (8.3)	13 (16.9)	
Surgery	1 (8.3)	9 (11.7)	
Years of experience			
1-10	4 (33.3)	40 (51.9)	1.423
>10	8 (66.7)	37 (48.1)	
Qualifications			
MD/MBBS	5 (41.7)	30 (39.0)	**0.032***
Board/Fellowship	7 (58.3)	47 (61.0)	

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