Class Room to Real Life: Medical Students Perception and Barriers regarding Breaking Bad News

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ABSTRACT

The objective of this study was to assess the perception, skills and comfort level of medical students in clinical years regarding breaking bad news and perceived attainment of objectives in communication skills module. This is a survey using quasi-experimental (pre- /post-intervention) study design. All students in the final year at OMC, consented to participate were included in the study. Questionnaires were provided prior and post-workshop. The commonly used 6-point SPIKES protocol for breaking bad news was discussed. Questionnaire was mainly comprised of demographic details, pre and post questions, any previous training in communication skills, whether they had observed bad news being broken by a senior, how stressful they thought BBN was to them and SPIKES protocol, confidence levels among participants in communicating bad new and barriers of breaking bad news. Statistical analysis was performed using SPSS 20.v. Data were expressed in frequencies, mean and percentages, t test and man Whitney U test were used to evaluate the significant differences between pre and post responses. A total of 70 medical students were participated in the study in which 60 (85.7%) were female participants. Significant statistical difference was observed between pre and post response of participants involving communicating bad news (p - 0.025). Similarly, there was a significant difference in the responses of participants aged <25 and ≥ 25 years responses regarding communicating bad news (p < 0.001). This study results revealed that at pre workshop, participants had statistically significantly (p-0.006, 95% CI -15.08-2.63) low pre-workshop score compared to post-workshop responses. Similarly, statistical difference was observed between age > 25 and <25 years old participants (p-0.027, 95% CI -1.19-19.13). No significant difference was found between male and female participant's responses (p-0. 927, 95% CI -9.03-8.22).

Keywords: Medical students, breaking bad news, Perception and Barriers, Oman

INTRODUCTION

Communication is an essential skill for establishing physician-patient relationships and for effective functioning among health care professionals [1]. This skill can be learnt effectively during the training program for undergraduate medical students, thereby helping students to practice efficiently in patient care settings. The patient-centered clinical method, commonly used in family medicine and general practice teaching, is a model for interacting with patients[2].

The UK's General Medical Council emphasizes effective communication as fundamental to good medical practice. When teaching and assessing communication in the context of medical education the primary emphasis is on skills, suggesting that communication can be taught, learned and improved [3].

Bad news can be defined as "Situations where there is either a feeling of no hope, a threat to a person's mental or physical well-being. Delivering bad news is an integral part of our careers. By acknowledging it as an area of weakness, we can work to improve both our abilities and our confidence levels[4]. Physicians face unique challenges when giving bad news. Breaking bad news (BBN) to patients and their relatives is a complex and stressful task. This type of discussion usually is quite difficult and uncomfortable for healthcare professionals to participate in [5].Often they have little preparation and experience in how to support the patient in a constructive, empathetic manner when delivering bad news. Having a prepared plan of action can help support all the participants in this difficult discussion[6].

Reforming existing curriculum to incorporate special communication skills is often faced by many challenges. There is a strong need to incorporate special communication skills into primary health care education. The attitudes and competencies required "Delivering bad news" as a compulsory part of the curriculum in clinical years[7-8].

Breaking bad news is a complex communication task, but following the SPIKES protocol can help ease the distress felt by the patient who is receiving the news and the healthcare professional who is breaking the news[9]. Many protocols have been published with almost similar sequence of events but the most commonly used protocol for BBN is the six-step SPIKES protocol [10]. The SPIKES protocol provides a step-wise framework for difficult discussions such as when cancer recurs or when palliative or hospice care is indicated. Each letter represents a phase in the six-step sequence. S stands for setting, P for perception, I for invitation or information, K for knowledge, E for empathy, and S for summarize or strategize. Key components of the SPIKES strategy include demonstrating empathy, acknowledging and validating the patient's feelings, exploring the patient's understanding and acceptance of the

bad news, and providing information about possible interventions. Having a plan of action provides structure for this difficult discussion and helps support all involved [11].

To strengthen and make it more effective in terms of teaching and experiential learning communication skills in Family Medicine few steps is already being done. The teaching of communication skills is embedded into the curriculum. In the preclinical year's students have structured lectures on principles and theories of communication embedded within courses on Behavioral Medicine and Ethics. They also have some practical exposure to learning about communication in simulated clinical skill classes. This is seen most strongly during clinical rotations in the in the Department of Family, where there are special training sessions are dedicated to communication skills in order to help students communicate effectively with their patients. During these sessions students seek knowledge of the implication of cultural, social contexts for patient care and develop awareness of health care needs. Students participate in tutorial, workshops, role playing in small group with simulator patient and peers. They also experience real scenarios at hospital rotation and primary health care clinics. As part of their clinical rotations students are assessed on their communication skills by way of both continuous assessments of preceptors in the clinical setting and through clinical cases during their Objective Structured Clinical Examinations (OSCE).

The main purpose of this study was to conduct this study in order to assess the perception, skills and comfort level of medical students in clinical years regarding BBN and whether these can be improved with the help of formal structured training and to assess perceived attainment of objectives in communication skills module.

MATERIALS AND METHOD

This is a survey using quasi-experimental (pre- /post-intervention) study design. All students in the final year at OMC, consented to participate were included in the study. Survey instrument was made after literature search reviewed by and agreed on via several brain storming sessions and understanding, so the questionnaire would maximize the response rates.

Pre-workshop data-collection tool had been distributed among all the students at the start of curriculum year.

Questionnaire was designed comprising of following,

- The first section consists of demographic details of students.
- Second section was about any previous training in communication skills, whether they had observed bad news being broken by a senior, how stressful they thought BBN was to them and SPIKES protocol.

- Students' confidence levels among participants in communicating bad news. All questions have responses from not at all confident to highly confident, how confident they felt about BBN before the start of the workshop, and how many times they had broken bad news to patients or their families. This section also includes few case scenarios.

- Medical Students' Barriers of Breaking Bad News. All questions have responses no barrier to maximum barrier

- Post-workshop data-collection completed using same questionnaire among the participants after the Family medicine rotation and conclusion of the workshop. Besides this, questions were used to quantify perceptions and attitudes and any changes in them with feedback on workshop. Questions were asked regarding the effectiveness of the workshop, whether attending the workshop had made them feel more confident than before to properly break bad news, whether the workshop will help reduce their stress levels in future, whether the workshop had changed their perceptions regarding BBN. Anonymous workshop evaluation was distributed among the students after the completion of workshop for overall evaluation of the different aspects of the workshop.

Teaching and Learning Strategies

The following methods were used

1. Small-group discussion/seminars
2. Lectures/presentations
3. Student interviews with simulated patients
4. Student observations of faculty with real patients
5. Role-playing with peers
6. Patient consultation

The commonly used 6-point SPIKES protocol for BBN was discussed in detail point by point. Video presentations over multimedia showing bad news being broken to patients. SPIKES strategy include demonstrating empathy, acknowledging and validating the patient's feelings, exploring the patient's understanding and acceptance of the bad news, and providing information about possible interventions. These sessions were followed by open discussion, critique and feedback from the participants and suggestions by them as to how these can be further improved.

Participants were given few case scenarios in which bad news had to be broken under different circumstances. At the end of the final discussion, students were encouraged to

discuss their own emotional experiences while dealing with patients who had to be broken bad news to, and how they will deal with them after the workshop.

Data Analysis

Statistical analysis was performed using SPSS (IBM SPSS Statistics 20.0). Data was expressed in frequencies for questionnaire responses calculated for all variables in numbers and percentages. Cross tabulation was performed to determine if there is a relationship between subgroups. Chi-square test for categorical data and Mann-Whitney test was used to compare differences between two groups with non-parametric (not normally distributed) and t-test was used for parametric (normally distributed) continuous data.

RESULTS AND DISCUSSION:

A total of 70 medical students were participated in the study in which 10 (14.3%) were male and 60 (85.7%) were female participants. Age ranges from 22 to 27 year, 65 (92.9%) were aged less than 25 years and 5 (7.1%) were aged 25 or more than 25 years.

Participants were asked multiple questions about any previous training in communication skills, whether they had observed bad news being broken by a senior, how stressful they thought BBN was to them and SPIKES protocol. Nearly fifty per cent of participants disclosed that they had no any specific training for breaking bad news and more than a quarter (28.6%) had received formal training. The most frequent responses were less than 3 times in a month (84.3%) about breaking bad news to the patients regarding diagnosis, recurrence and progressive disease. The majority of participants, 34 (48.6%) and 21 (30%) stated they find the most difficult task to discuss end-of-life issues (e.g., do not resuscitate) and to discuss diagnosis respectively. Students were asked about their feeling regarding bad news breaking. More than half (55.7%) of students have selected dealing with the patient's emotion (e.g., crying, anger) and 31.4% have believed being honest but not taking away hope is the most difficult part of discussing bad news. Responses to the question about any training in the techniques of responding to patient's emotions was denied by 64.3%. Only 20% of the study participants received formal training, 7.1 % had opportunity to sat in with practicing clinician and 8.6% received formal training and had an experience to observe practicing clinician.

In the questionnaire, participants were asked if they find SPIKES made sense to them and SPIKES is practical and can be used in clinical practice using options yes and no. More than a half (55.364.3%) suggested that SPIKES made sense to them and 80% replied SPIKES is practical and can be used in clinical practice. Study participants were asked if they have a consistent plan or strategy in mind to break bad news to the patients. More than quarter (28.6%) had a consistent plan or strategy. However, same proportion of participants (28.6%)

uses several techniques/tactics but no overall plan and 42.8% have no consistent approach to task.   More than one third of the participants think patient's perception (40%) and exploring/empathy (37.1%) found most difficult element and nearly one third of the participants think setting (32.9%) and knowledge (31.4%) of the SPIKES protocol found most easier element of the SPIKES protocol (Figure 1).
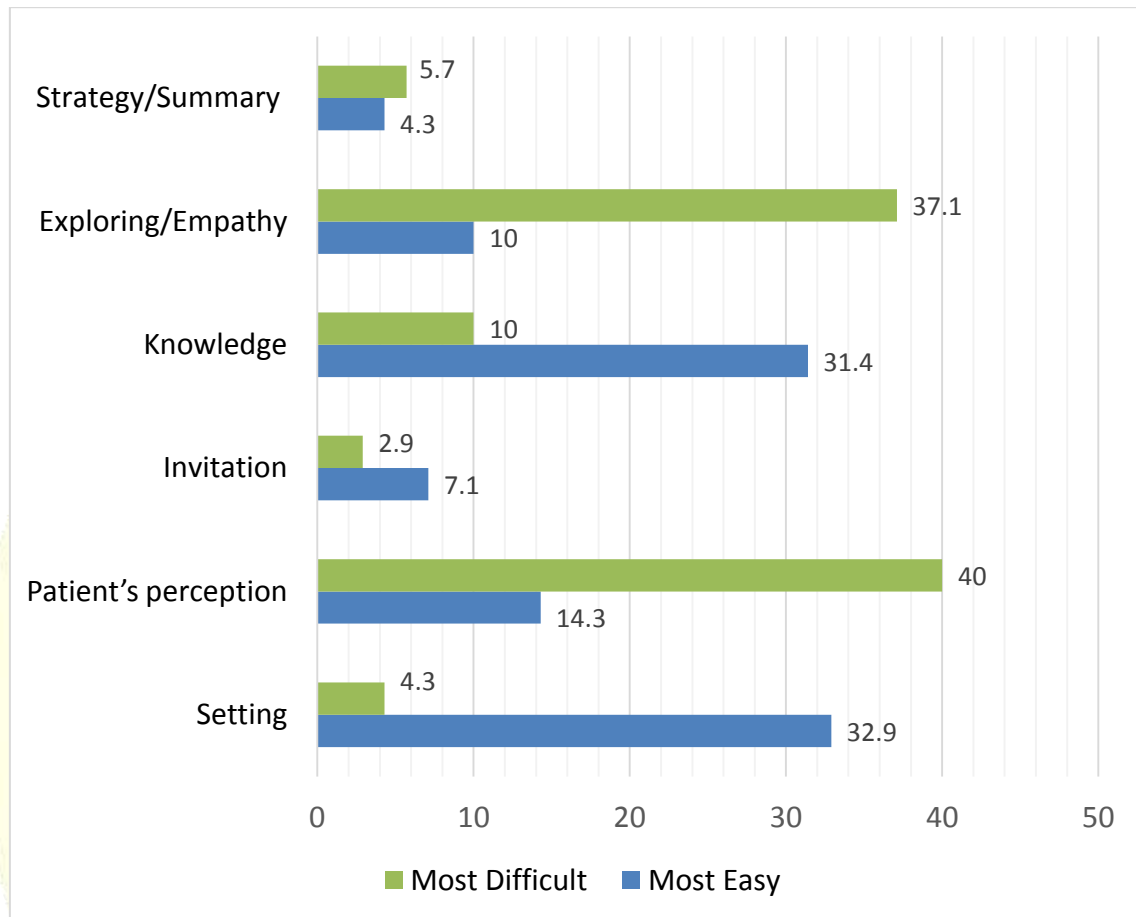

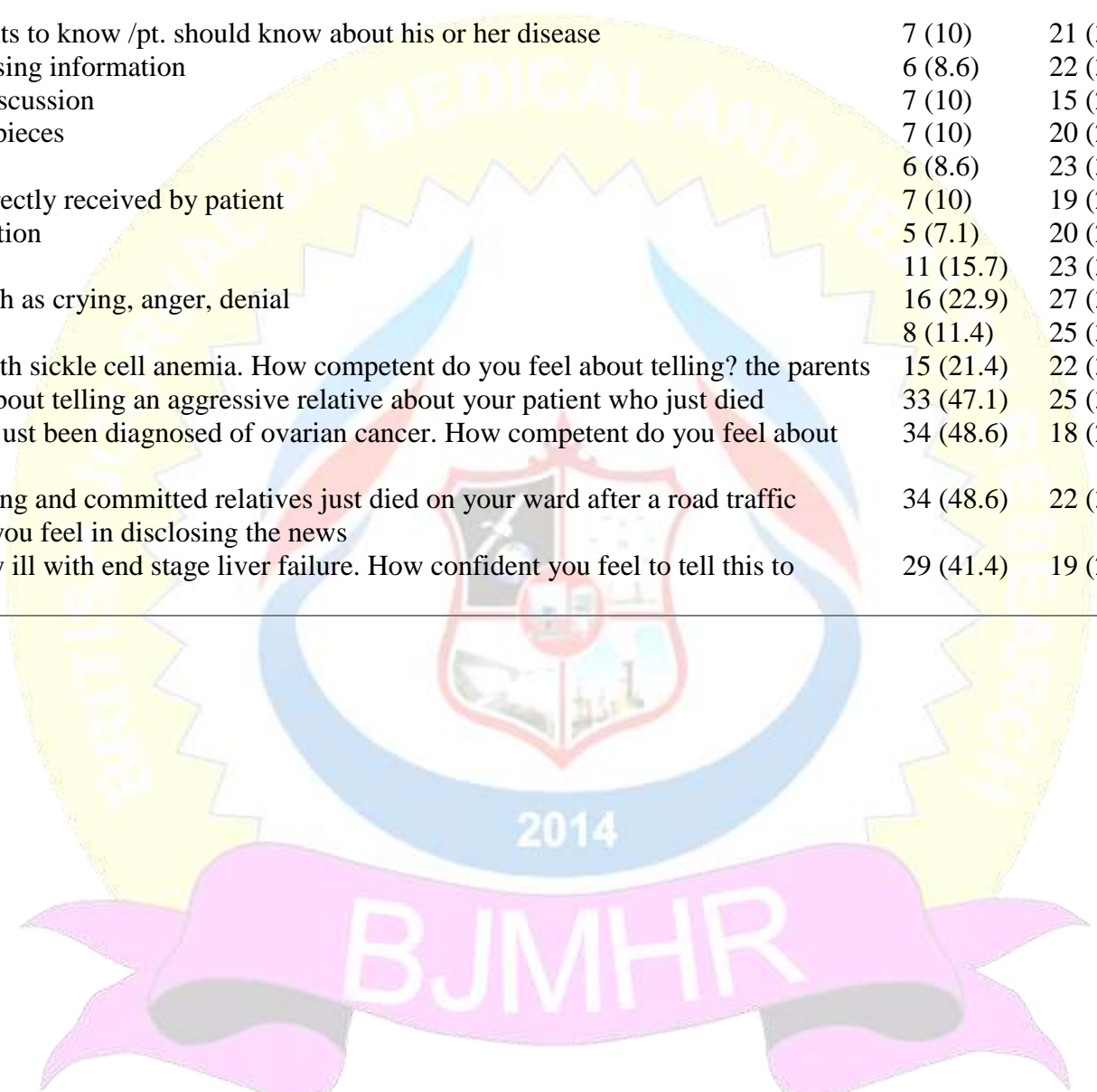**Figure 1: Participant's perception regarding Elements of the SPIKES protocol**

Participants were asked multiple questions pre and post workshop regarding confidence levels in communicating bad news. Their answers were coded into not at all confident, somewhat confident, moderately confident and highly confident (Table 1, 2). Significant statistical difference was observed between pre (mean rank score 62.83) and post workshop (mean rank score 78.17) response of participants involving communicating bad news (p - 0.025). Similarly, there was a significant difference in the responses of participants aged <25 (mean rank score 64.46) and ≥ 25 years (mean rank score 106.73) responses regarding communicating bad news (p < 0.001). However, no significant difference between male (mean rank score 74.41) and female (mean rank score 69.73) gender responses regarding communicating bad news (p < 0.613).

Table 1: Pre-workshop Students' Confidence level in Communicating Bad News - n(%)

Statements	Not at all	Somewhat	Moderately	Highly
Create a comfortable setting	6 (8.6)	30 (42.9)	26 (37.1)	8 (11.4)
Plan the discussion in advance	10 (14.3)	32 (45.7)	24 (34.3)	4 (5.7)
Encourage family/friend presence	10 (14.3)	25 (35.7)	27 (38.6)	8 (11.4)
Assess patient's ability to discuss bad news	17 (24.3)	24 (34.3)	26 (37.1)	3 (4.3)
Confirm patient's understanding	10 (14.3)	25 (35.7)	28 (40)	7 (10)
Assess how much patient wants to know /pt. should know about his or her disease	13 (18.6)	25 (35.7)	25 (35.7)	7 (10)
Organize a strategy for disclosing information	20 (28.6)	26 (37.1)	19 (27.1)	5 (7.1)
Include family/caregiver in discussion	9 (12.9)	33 (47.1)	23 (32.9)	5 (7.10)
Provide information in small pieces	10 (14.3)	30 (42.9)	27 (4.3)	3 (4.3)
Avoid medical jargon	12 (17.1)	34 (48.6)	20 (28.6)	4 (5.7)
Check if information was correctly received by patient	7 (10)	27 (38.6)	34 (48.6)	2 (2.9)
Reinforce and clarify information	8 (11.4)	21 (30)	29 (41.4)	12(17.1)
Detect anxiety / sadness	9 (12.9)	27 (38.6)	26 (37.1)	8 (11.4)
Handle patient's reactions such as crying, anger, denial	28 (400	24 (34.3)	16 (22.9)	2 (2.9)
Respond empathetically	7 (10)	26 (37.1)	32 (45.7)	5 (7.1)
A child was just diagnosed with sickle cell anemia. How competent do you feel about telling? the parents	15 (21.4)	23 (32.9)	24 (34.3)	8 (11.4)
How competent do you feel about telling an aggressive relative about your patient who just died	31 (44.3)	20 (28.6)	17 (24.3)	2 (2.9)
A 50-year-old housewife has just been diagnosed of ovarian cancer. How competent do you feel about telling her the diagnosis	28 (40)	28 (40)	13 (18.6)	1 (1.4)
A 20-year-old female has loving and committed relatives just died on your ward after a road traffic accident. How competent do you feel in disclosing the news	30 (42.9)	27 (38.6)	12 (17.1)	1 (1.4)
A 78-year-old male terminally ill with end stage liver failure. How confident you feel to tell this to patient	25 (35.7)	29 (41.4)	14 (20)	2 (2.9)

Table 2: Post-workshop Students' Confidence level in Communicating Bad News- n(%)

Statements	Not at all	Somewhat	Moderately	Highly
Create a comfortable setting	7 (10)	17 (24.3)	29 (41.4)	17 (24.3)
Plan the discussion in advance	7 (10)	16 (22.9)	37 (52.9)	10 (14.3)
Encourage family/friend presence	7 (10)	16 (22.9)	31 (44.3)	16 (22.9)
Assess patient's ability to discuss bad news	12 (17.1)	23 (32.9)	21 (30)	14 (20)
Confirm patient's understanding	8 (11.4)	21 (300	22 (31.4)	19 (27.1)

Assess how much patient wants to know /pt. should know about his or her disease	7 (10)	21 (30)	24 (34.3)	18 (25.7)
Organize a strategy for disclosing information	6 (8.6)	22 (31.4)	35 (50)	7 (10)
Include family/caregiver in discussion	7 (10)	15 (21.4)	34 (48.6)	14 (20)
Provide information in small pieces	7 (10)	20 (28.6)	32 (45.7)	11 (15.7)
Avoid medical jargon	6 (8.6)	23 (32.9)	25 (35.7)	16 (22.9)
Check if information was correctly received by patient	7 (10)	19 (27.1)	30 (42.9)	14 (20)
Reinforce and clarify information	5 (7.1)	20 (28.6)	33 (47.1)	12 (17.1)
Detect anxiety / sadness	11 (15.7)	23 (32.9)	27 (38.6)	9 (12.9)
Handle patient's reactions such as crying, anger, denial	16 (22.9)	27 (38.6)	22 (31.4)	5 (7.1)
Respond empathetically	8 (11.4)	25 (35.7)	25 (35.7)	12 (17.1)
A child was just diagnosed with sickle cell anemia. How competent do you feel about telling? the parents	15 (21.4)	22 (31.4)	20 (28.6)	13 (18.6)
How competent do you feel about telling an aggressive relative about your patient who just died	33 (47.1)	25 (35.7)	11 (15.7)	1 (1.4)
A 50-year-old housewife has just been diagnosed of ovarian cancer. How competent do you feel about telling her the diagnosis	34 (48.6)	18 (25.7)	16 (22.9)	2 (2.9)
A 20-year-old female has loving and committed relatives just died on your ward after a road traffic accident. How competent do you feel in disclosing the news	34 (48.6)	22 (31.4)	12 (17.1)	2 (2.9)
A 78-year-old male terminally ill with end stage liver failure. How confident you feel to tell this to patient	29 (41.4)	19 (27.1)	16 (22.9)	6 (8.6)

Figure 2 and 3 shows student's responses about question regarding barriers of breaking bad news using options no barrier to maximum barrier (1 -5). This study results revealed that at pre workshop, participants had statistically significantly (p-0.006, 95% CI -15.08-2.63) low pre-workshop score (mean score 74.43±14.9) compared to post-workshop responses (mean score - 83.3±21.7). Similarly, statistical difference was observed between age > 25 (mean score 80.31±19.1) and <25 years (mean score 70.1±17.01) old participants (p-0.027, 95% CI -1.19-19.13). No significant difference was found between male (mean score 78.5±19.5) and female (mean score 78.9±19.04) participant's responses (p-0. 927, 95% CI -9.03-8.22).
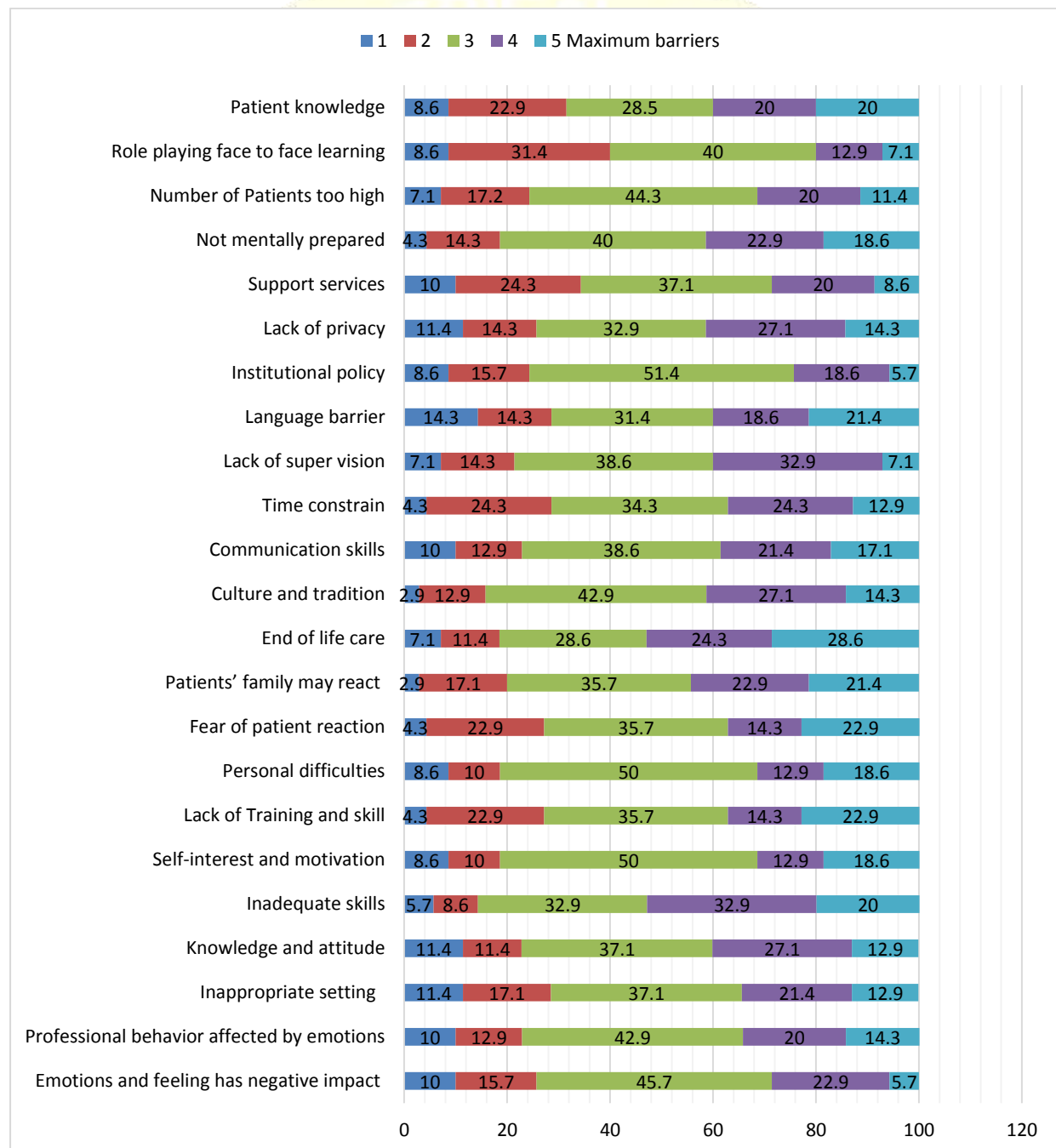

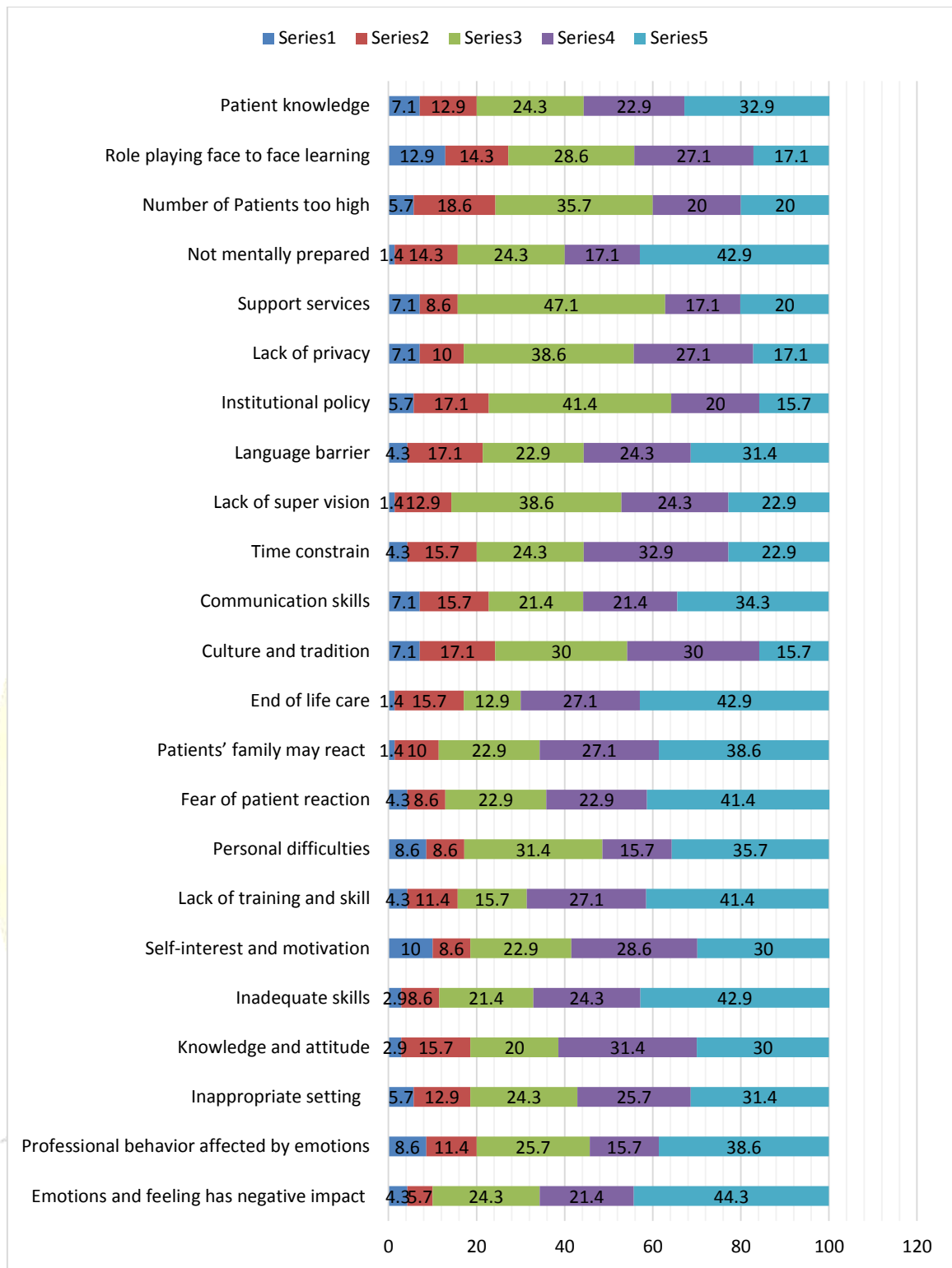**Figure 2: Medical Students' Barriers of Breaking Bad News: Pre-workshop**

Figure 3: Medical Students' Barriers of Breaking Bad News: Post-workshop

Table 3: Post Workshop Feedback

	Strongly Disagree	Disagree	Don't know	Agree	Strongly Agree
Objectives of the workshop was clear and achieved	1 (1.4)	2 (2.9)	8 (11.4)	35 (50)	24 (34.3)
This workshop increased your level of confidence/ competence in BBN	1 (1.4)	1 (1.4)	11 (15.7)	34 (48.6)	23 (32.9)
Facilitation of workshop was appropriately accomplished	1 (1.4)	3 (4.3)	8 (11.4)	33 (47.1)	25 (35.7)
The content and quality of workshop were adequate	1 (1.4)	1 (1.4)	10 (14.3)	39 (55.7)	19 (27.1)
Workshop was constructive	1 (1.4)	2 (2.9)	12 (17.1)	30 (42.9)	25 (35.7)
Workshop will do substantial impact on your clinical practice in the future	1 (1.4)	2 (2.9)	11 (15.7)	29 (41.1)	27 (38.6)
Small group role playing was helpful	1 (1.4)	2 (2.9)	9 (12.9)	31 (44.3)	27 (38.6)
Over all good course organization	1 (1.4)	2 (2.9)	6 (8.6)	33 (47.1)	28 (40)

DISCUSSION

Breaking bad news to a patient is the most difficult part in consultation. This communication requires physicians to be skilled in in relevant information and done in empathetic way. Key components of the SPIKES strategy include demonstrating empathy, acknowledging and validating the patient's feelings, exploring the patient's understanding and acceptance of the bad news, and providing information about possible interventions [12].

Only 20% of the study participants received formal training, few of them had opportunity to sat in with practicing clinician and had an experience to observe. Formal training in the communication skills needed for delivering bad news has received increasing attention in medical education. Poorly communicated bad news can lead to unsatisfied patient and untoward outcome [13-14].

Our study participants find the most difficult task to discuss end-of-life issues (e.g., do not resuscitate) and to discuss diagnosis**.** They also felt inhibition in explaining empathy, however training in a controlled environment made a significant difference. Abdul Hafid reported that the training and novel approach resulted in improvement over baseline as well as have enhanced curricular approach to this vital component of medical education [15-16].

More than half of students have selected dealing with the patient's emotion (e.g., crying, anger) and one third believed being honest but not taking away hope is the most difficult part of discussing bad news. There were low rates of specific training in breaking bad news shown in this study. Literature supports that practical skills can be taught successfully in the preclinical stage of medical education even without an increase in resources [17-18].

More than half of our study participants have mentioned that SPIKES made sense to them and SPIKES is practical and can be used in clinical practice. Meitar reported that (the

Preparatory SPIKES) to facilitate the integration of self-reflection (by identifying personal difficulties) into day-by-day planning and delivery of bad news [19-20].

More than quarter had a consistent plan or strategy. However, same proportion of participants (28.6%) uses several techniques/tactics but no overall plan. More than one third of the participants think patient's perception and exploring/empathy found most difficult element and nearly one third of the participants think setting and knowledge of the SPIKES protocol found most easier element. Medical student's barrier breaking bad news can be resolved by doing some simulation specially the issues involving emotion, anxiety and response to emotion [21-22].

Significant statistical difference was observed between pre (mean rank score 62.83) and post workshop (mean rank score 78.17) response of participants involving communicating bad news (p - 0.025). Similarly, there was a significant difference in the responses of participants aged <25 (mean rank score 64.46) and ≥ 25 years (mean rank score 106.73) responses regarding communicating bad news (p < 0.001). Researchers have reported that the model interpreted may not fully meet the needs of patients or reflect the clinical experience of breaking bad news for some professionals and medical students should practice in real practice also. Student feedback and perception can help to guide and shape medical teaching [23-24]. Inclusion of appropriate teaching in medical school curricula may be the most effective way to ensure all clinicians acquire appropriate training [25-26]. In feedback students were satisfied regarding workshop facilitation, role playing and this workshop has increased their level of confidence.

Medical students and practicing doctors find breaking bad or difficult news to a patient or family member as one of the most challenging communication. Interpersonal and communication skills are a core competency for students' training[27-28].

Study Limitation:

This study is conducted in one medical college so the result cannot be generalized. Further research is required at different medical colleges at different level in a larger sample size.

Disclosure Statement:

Authors declared no conflict of interest and no funding was received for this work.

CONCLUSION

Breaking bad news is a complex and difficult communication task for a physician. SPIKES protocol can help the healthcare professional in formulating successful consultation which can impact the outcome. The intervention and workshop led to an overall increase in students' reported confidence, comfort and competence in BBN. Communication skills workshops for medical students integrates the practice of communication skills and

reflection in a realistic situation, might allow students not only to develop new skills, but also to increase their awareness about the difficulties and challenges raised by a situation of BBN. This is imperative to create a unique communication skills curriculum incorporating the components of existing models may help learning this difficult skills.

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