

ORIGINAL ARTICLE

Patient safety: What are the differences in faculty and medical students' awareness about it?

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ABSTRACT

Background: Patient safety is the part and parcel of effective health care system around the world. It is mandatory for all health care professionals to avoid mistakes and errors while dealing with the patients. Training medical professionals about safety principles is considered equally important at postgraduate and undergraduate levels.

Aim: To explore the difference in awareness level of medical students and faculty about patient safety.

Methods: This qualitative descriptive exploratory research was conducted at Islamic International medical college Rawalpindi, Pakistan. Faculty having clinical as well as teaching experience and students of final year MBBS were included. WHO curriculum guideline on patient safety for undergraduate medical schools was used to prepare questions. Interviews of faculty and focus groups of students were used to collect data. Atlas-ti was used in the process of thematic analysis.

Results: Initially 43 open codes for faculty and 35 for students were made. They were reduced to 6 main themes with several subthemes by axial and selective coding. The themes were 1) Importance of patient safety education, 2) Importance of strong student-patient relationship, 3) Code of conduct, 4) Students and effective team, 5) Students part in management plans 6) Medical errors. The main difference was found in theme 1, where faculty was well aware with the definition and concept of patient safety, but students were not clear about medical errors. Another difference was found in theme 4, where students were only considering doctors as a part of effective team while the faculty had clear knowledge about role of other health professionals in this matter.

Conclusion: Students should be given adequate knowledge about definition, causes and remedy of medical errors, patient safety education and formation of an effective team through inclusion of these concepts in the curriculum. Faculty training is also needed along with curriculum reforms as the faculty is aware of these concepts but not transferring these effectively to students.

Key words: Patient safety, Medical students, Faculty.

Introduction: Patient safety is the part and parcel of effective health care system around the world. It is mandatory for all health care professionals to avoid mistakes and errors while dealing with the patients (Nie et al., 2011). Training medical professionals about safety principles is considered equally important at postgraduate and undergraduate levels (Steven, Wenger, Boshuizen, Scherpbier, & Dornan, 2014). WHO has published curriculum guidelines on patient safety for undergraduate as well as postgraduate levels to provide a basic framework addressing patient safety issue (Walton et al., 2010). Medical students at undergraduate level have limited knowledge about patient safety issue especially in developing countries like Pakistan (Leung & Patil, 2010;

Louis et al., 2016). This raises a question on the educational system, training methodology and curriculum design of health system especially at undergraduate level (Blasiak et al., 2014). Faculty is one of the important factors in this regard as they directly influence the students' perceptions, knowledge and skills (Nabilou, Feizi, & Seyedin, 2015; Nie et al., 2011). This study was planned to explore the difference in awareness level of undergraduate medical students and faculty and to identify the gaps present in our settings.

Methodology: The study was conducted at Islamic International medical college, Rawalpindi from December 2017 to June 2017. This was a descriptive qualitative exploratory research. Approval for the study was taken from the University of Lahore and Islamic International Medical College. Purposive sampling was done. Twelve faculty members with clinical as well as teaching experience and 18 students of final year MBBS were selected. Interviews of faculty and focus group discussions of students were used to collect data. Data was in the form of audio recordings and codes and codes were given to participants before recordings to maintain confidentiality. All the participants signed a consent form before data collection and codes were mentioned on those forms. The questions to be asked were prepared with the help of WHO's curriculum guideline on patient safety for undergraduate medical schools. Prior

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Table 1: Similarities in students and faculty awareness about students' roles with respect to patient safety

S. no:	Theme:	Similarities in students' and Faculty:
1	Patient safety in education	a) Importance of PS and its significance b) Standards and protocols essential for establishing a patient safe environment c) Need to train students in workplace-based environment for better understanding of complexity of system
2	Student patient relationship.	a) Important b) Teaching students professionalism and proper approach towards the patients c) Importance of proper informed consent and respect for the privacy of patients essential for training
3	Code of conduct	a) Students should know how to dress, behave and deal while interacting with patients
4	Team work	a) Importance of an effective team in patient management and patient safety
5	Student's role in Patient management	a) Involvement of students in patient management
6	Medical errors	Need to establish an error reporting system

Table 2: Differences in students and faculty awareness about students' roles with respect to patient safety

S. no:	Theme:	Similarities in students' and Faculty:
1	Patient safety in education	a) Faculty clearly know the definition and components of PS b) Students were including all the complications, mistakes and patient factors like compliance in patient safety
2	Student patient relationship.	No difference
3	Code of conduct	No difference
4	Team work	a) Faculty had a clear concept about effective role of other health professionals in team b) Students were only considered doctors in a patient management team
5	Student's role in Patient management	No difference.
6	Medical errors	a) The students were not clear about the definition of medical errors b) Faculty had clear concepts

to being used, these questions were sent to 5 medical educationists for validation. The interviews were transcribed and sent back to faculty members for confirmation and were used after their approval for analysis. Three focus groups with 6 students each were conducted and a transcript of the audio recording was sent back to one member of each group for member checking.

After data collection and transcription of recordings, thematic analysis was done using Atlas ti software.

Results: Initially open coding generated 43 codes for faculty and 35 for students. Then through axial and selective coding these were condensed to 6 themes with various subthemes. The detail is given in figure 1(Hierarchy of themes and sub-

themes).

Theme 1: Importance of patient safety education for students: Both the faculty members and students knew the importance of teaching patient safety principles to the students, as narrated by one of the faculty member "Patient safety is very important as soon as someone steps into the hospital". Similarly, both faculty and students advocated the need of development of standards and protocols for students so that a safe patient environment should be established in clinical settings. Emphasis was also being given to train and teach students in work-place based environment to let the students understand the complexity of systems, as one

of the students said “Basic issue is of protocols. They are not being followed so we should be taught in the environment where we have to work in future and all the protocols should be followed.” The main difference was in the definition and components of patient safety. On one hand where faculty was fully aware of patient safety, students were confused about its’ definition and the headings which come under the umbrella of patient safety.

Theme 2: Importance of strong student-patient relationship:

The participants consider it very important for students to know the value of patient. They students should be well aware of a strong patient-student relationship. They must know how to deal with the patient, how to take consent and to maintain the privacy of the patient as one of the faculty members said, “The first thing is to know the importance of patient”. Further elaborated by a student “I think by developing professional attitude in students’ things can be made better”

Theme 3: Proper code of conduct for students:

Faculty and students both said that the students must have a very professional attitude in wards, they should behave appropriately and must not show carelessness or casual behavior. They must know their responsibility and must know their limits. As narrated by Students “I think that we should follow all the protocols, all the rules before we go and handle the patient. This includes lab coats and hygienic measures”

Theme 4: Students and importance of an effective team in patient management:

Both the students and faculty members were well aware of the importance of an effective team in patient management and in maintaining patient safe environment. “They must know the importance of team in patient management because a doctor never works alone.”

As the faculty was clear about the role of all the health professionals in patients’ management, students only consider doctors when they talked about role of team in patient care. Although they were aware that patient management is a teamwork and is important to know its working, they were not aware of the position, roles and importance of other health professionals like nurses and paramedics in a health care team providing patient care.

Theme 5: Students part in patient management:

The students and faculty members were of strong view that undergraduate students should be involved in patient management to develop adequate skills and attitude in them

for safe patient environment. The students must master the skill of history taking and examination and at the completion of their studies they should be able to do them even without supervision. Faculty B: “They can take history and do examinations at final year level after taking consent of the patient and with senior’s permission. but they should not start telling the patients about treatment plans or prescribe any drugs as their knowledge is limited. They on one hand are unable to satisfy the patients and on the other hand may become a cause of conflict or error due to limited knowledge and will make things more complicated.”

Theme 6: Students and medical errors:

The difference in faculty and students was in the basic definition of medical errors. Where faculty was fully aware of medical errors, their types and their remedies, students

don’t know the actual boundaries of medical errors. Students were including complications and patient factors along with medical negligence into this. As one student said “I am not really sure what medical errors are”.

Regarding reporting both groups favor the need to develop a reporting system and suitable environment to encourage medical error reporting, as said by a faculty member “These students are very intelligent, and if they point an error they can politely tell the person in private and in a respectable manner that this is not the proper way and we should develop an environment for this. The students should play a role in this matter and must not sit quietly and development of this culture is very important” Table 1 shows similarities while table 2 shows differences between faculty and students’ awareness about students’ roles related to patient safety

Discussion: The main purpose of health care delivery system is to provide safe, timely and high-quality services to the patients. Despite progress in patient safety, the complexity of health care system has resulted in an increase in the risk of accidental harm to patients. Medical students also have limited knowledge about patient safety issues (Nie et al., 2011). This study systematically analyzed the awareness of undergraduate medical students and faculty about patient safety and has important findings regarding similarities and differences.

In our study both the faculty members and students highlighted the importance of teaching patient safety principles to the students. Moreover, emphasis was also given to teaching of patient safety issues to students in

a work- place based environment. Our results are similar to a survey by Claire showing that most medical students feel that they are exposed to PS in their medical school, but less than half said that they had an exposure to quality improvement. The author concluded that by looking on student attitudes and learning preferences it is important to consider Patient Safety and quality improvement when implementing a curriculum change (Teigland et al., 2013). Literature search demonstrated that majority of medical students recognized the importance of PS education, and most of them supported inclusion of PS education in the medical curriculum (Leung & Patil, 2010; Mayer, Klamen, Gunderson, & Barach, 2009; Shah, Jawaid, Shah, & Ali, 2015).

In our study the main difference was in the definition and components of patient safety. Our faculty was fully aware of patient safety but the students didn't know the domains which come under the umbrella of PS. Similarly a noticeable findings in a study published in PLOS one demonstrated inadequate knowledge of medical students on patient safety (Nabilou et al., 2015). A systematic review published in BMC Med Ed revealed that there are barriers which should be overcome by adding PS to an already busy curriculum and can be done by integrating PS in the existing curriculum in every taught domain which does not necessarily need new blocks of time (Nie et al., 2011).

Our results are similar to Claire and colleagues' study in which students were in favor of discussing real life mistakes. In his study students rated the most helpful methods of learning about patient safety were real-life examples of mistakes presented by a teaching physician (Teigland et al., 2013). It is very important to engage undergraduate medical students in these important topics of patient safety and preferably these topics should be taught in a real environment if possible. Ethics and professionalism were previously penetrated passively to the medical students through "the hidden curriculum" leaving a lot of behaviors to chance. However, over time, it has been clearly defined that there is need to formally educate medical students in their concepts of ethics and professionalism (Mahajan, Aruldas, Sharma, Badyal, & Singh, 2016). In our study both faculty and students said that the students must have a very professional attitude in wards, they should behave appropriately.

Team working is an integral part of health care system. Our results showed that both faculty and students knew the importance of teamwork in patient care but the difference was in the deficient knowledge of inclusion of other health

professionals as a part of team by the students. Contradicting to our results a mixed method research published in Adv Med Educ Practice showed quite interesting results in which students in focus group discussion narrated that "It's like an ideal world, having everyone work together, and it just got better and better working as a team, being able to ask questions.... It's made it such a fun experience (Morphet et al., 2014).

In our study, we found difference in faculty and student's perspectives in basic definition of medical errors as the faculty was fully aware of all domains medical errors but students showed gaps in knowledge about medical errors. Similar results are shown in another study in which students admitted their deficient knowledge about medical errors or appropriate action to take when error occurred but they showed positive attitude towards acquiring knowledge to improve patient care in their future practice (Batalden, Leach, Swing, Dreyfus, & Dreyfus, 2002). Both groups favor the need to develop a reporting system and suitable environment to encourage medical error reporting.

The students and faculty members strongly believed that undergraduate students should be involved in patient management to develop adequate skills and attitude in them

for safe patient environment. A study by Seiden concluded that medical students are often ignored as important participants to ensure patient safety and they could be an untapped resource for preventing medical errors. It's the need of time that medical students should be taught and trained to recognize errors and to speak up when errors happen (Seiden, Galvan, & Lamm, 2006).

Conclusion: Students have inadequate knowledge about medical errors, patient safety education and an effective team. For this, faculty training is needed along with curriculum reforms.

Declaration of interest: The authors report no conflict of interest.

Author's contribution:

- Ayesha Ayub: Conception, design of the work and acquisition
- Attia Bari: The analysis, & interpretation of data for the work.
- Rehan Ahmad Khan: Critical Review and final approval of the version to be published

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