THE EFFECTS OF TEACHING PROFESSIONALISM IN A PRIVATE MEDICAL COLLEGE OF PAKISTAN

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ABSTRACT

Objective: To assess the response of medical students towards different elements of professionalism, after its formal teaching and to explore the views of students about the effectiveness of various strategies used to teach professionalism and how to improve them.

Study Design: A two phase explanatory-sequential mixed method study by using a quantitative survey followed by qualitative phenomenological design.

Place and Duration of Study: Islamic International Medical College Rawalpindi, from Sep 2016 to Dec 2016.

Material and Methods: The Penn State College of Medicine Professionalism Questionnaire was used to gather the perceptions of MBBS students about the elements of professionalism after its formal training. Focused group discussions (FGDs) conducted to explore students' understanding of the effectiveness of various strategies used to teach professionalism were audio recorded, transcribed and analyzed by thematic analysis with the software NVivo. Quantitative data was analyzed by SPSS version 21.

Results: There were 300 students. The mean age of students was 20.0 ± 1.55 years. Females were 67%. Eighty eight percent of students had FSc education and 12% had completed A levels. The medical students of all four MBBS classes considered the six attributes of professionalism as important. The Cronbach alpha value for all the elements of professionalism in four classes was above 0.75. Mean scores calculated for the elements of professionalism for the first, second, third and fourth year students was 145.66 (± 21.05), 130.98 (± 24.67), 121.09 (±17.13) and 151.34 (±12.28) respectively. There were significant differences in the mean scores among four classes of MBBS (*p*=0.000). Role modeling was determined to be the most effective and useful method to inculcate professionalism among medical students. In two focused group discussions six major themes were identified by the students including; professionalism training, role modeling, faculty development, mentoring, student to student counseling, and assessment of professionalism.

Conclusion: A robust curriculum with explicit teaching of professionalism does not only uphold and maintain the pre-training values of medical students but also brings about a significant improvement in their attitudes pertaining to professionalism. The students recognize role modelling to be the most effective method in developing professionalism. They perceive that teaching strategies based on role modelling, formal mentoring, faculty development and formal assessment plan can improve the training of professionalism.

Keywords: Curriculum, Medical education, Medical students, Perceptions, Professionalism.

INTRODUCTION

From the earliest times, the Hippocratic Oath has cemented the significance of professionalism in medicine[1]. With time, the Oath has evolved from a promise to protect patients' rights to the "Physician Charter on Professionalism" presented by American Board of Internal Medicine (ABIM), American College of Physicians-American Society of Internal Medicine (ACP-ASIM) and the European Foundation of Internal Medicine in 2002[2]. The charter's essence is rooted in the three primary principles; "primacy of patient welfare, patient autonomy, and social justice". Moreover, the charter strongly emphasizes on the "professional commitments of physicians and health care professionals" through an "ethical, educational and practical framework" of professionalism that outlines the physicians' "relationship with the patients, colleagues and society"[3]. The ABIM has defined professionalism

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by identifying its essential elements; Altruism, Accountability, Excellence, Duty, Honor & Integrity and Respect for others[2].

Today's doctor, although equipped with extensive and up-to-date knowledge and skills of medical science, is criticized for lacking professionalism[4]. But, despite its utmost importance as a key feature of medical education, instead of formal training by experienced mentors and teachers, medical students are expected to develop professionalism within themselves through their observations or perceptions[5]. In addition, the environment and the hidden curriculum of the institution plays an important role in the development and implementation of professional values[6].

Pakistan Medical and Dental Council (PM & DC) has framed its guidelines on the ethical issues related to the medical profession. A Curriculum Committee has been constituted by the PM&DC to ensure the inclusion of adequate information on the Code of Ethics in the undergraduate medical college curriculum. All medical and dental colleges running MBBS and BDS courses have been advised to incorporate medical ethics into their curriculum. So the students in medical colleges should be able to identify, analyse and should attempt to resolve common ethical problems of medical and clinical nature[7]. However, practically the issue of integrating professionalism into the curriculum is merely a discussion on the table. In 2012, Islamic International Medical College (IIMC) introduced a module; PERL, exclusively intended to teach professionalism, ethics, research and law to its students. The module is integrated vertically, continuing over the entire 5 year span of MBBS. Different learning strategies such as didactic and interactive lectures, small group sessions, case based scenarios, role plays, work place teaching sessions and mentoring were employed[8]. So far, students of four classes have undergone this teaching module as a part of their curriculum.

Four years after the implementation of the PERL module, this study was planned to deter-

mine the effectiveness and usefulness of formal training of professionalism. The study was conducted to assess the response of students towards different elements of professionalism, after its formal teaching. Additionally, students' views were explored regarding the effectiveness of the various employed methods used to teach professionalism and how they can be improved.

MATERIAL AND METHODS

A two-phase, explanatory-sequential mixed method study was conducted from September 2016 to December 2016 at Islamic International Medical College, Islamabad. In the first phase, 1st, 2nd, 3rd and 4thyear MBBS students, who had formal education of professionalism, were included in the study by convenience sampling. A target of approximately 75% students from each class was set for data collection. After explaining the objective of the study, informed consent of the students was obtained and their confidentiality was ensured. Approval from the institution's Ethical Review Committee (ERC) was obtained. PSCOM Professionalism Questionnaire was developed to measure attitudes toward professionalism in medical education among students, residents and faculty by Penn State College of Medicine in Hershey, PA, USA. It is a valid and reliable survey tool that highlights seven identifiable factors of professionalism. The questionnaire has a total of 36 items thought to represent the six ABIM elements: (1) Accountability, (2) Altruism, (3) Duty, (4) Excellence, (5) Honesty and Integrity, and (6) Respect, with six items representing each element. Permission to use PSCOM professionalism questionnaire was acquired from the author through an e-mail. Students were asked to assess 36 item statements according to how much each statement reflects their own definition of professionalism. This survey instrument[9] was helpful to identify the difference in perceptions of 1st, 2nd, 3rd, and 4th year MBBS students about professionalism, who all had been formally taught professionalism. Numerical data was collected with the help of predetermined instrument based questions; the demographic data included variables like age,

gender, educational background (FSC or A levels examination), and their native town were also included. Statistical analyses were performed using the Statistical Package for Social Sciences (SPSS) software version 21.0 (SPSS Inc., Chicago, IL, USA). In descriptive analysis, means with standard deviation of the continuous variables like elements of professionalism, and percentages of the categorical variables such as gender, age, type of qualification and native town were

In the second phase, two FGDs of 1st & 2nd year, and 3rd & 4th year students, were conducted to explore their understanding of the effectiveness of various strategies used to teach professionalism and how to improve them. Maximal variation sampling was adopted to select the participants of FGDs. Each Focus group had six participants with qualities of expressiveness and good communication skills, equal gender distribution, and equal number of students from

Table-I: Baseline characteristics of study participants from the class of 2020, 2019, 2018 and 2017 MBBS (n=300).

Variable	Class of 2020 (n=72)	Class of 2019 (n=74)	Class of 2018 (n=79)	Class of 2017 (n=75)	Total number of Students (n=300)
Gender, No. (%)					
Female	47 (65.3%)	60 (81.1%)	56 (70.9%)	58 (80.7%)	221 (67%)
Male	25 (34.7%)	14 (18.9%)	23 (29.1%)	17 (19.3%)	79 (33%)
Age, Mean (SD)	18.11 ± 0.36	19.28 ± 0.40	20.41 ± 0.40	22.21 (0.46)	20.00 (±1.55)
Last Qualification No. (%)					
FSC	66 (91.7%)	63 (85.1%)	70 (88.6%)	65 (86.7%)	264 (88%)
A Levels	6 (8.350	11 (14.9%)	09 (11.4%)	10 (13.3%)	36 (12%)
Native ProvinceNo. (%)					
Punjab	48 (66.7%)	44(59.5%)	50 (63.3%)	47 (62.7%)	189 (63%)
KPK	01 (1.4%)	- (0%)	01 (1.3%)	02 (2.7%)	4 (1.3%)
Sindh	03 (4.2%)	01(1.4%)	03 (3.8%)	01(1.3%)	08 (2.7%)
Federal Capital	15 (20.8%)	19 (25.7%)	19 (24.1%)	21 (28%)	74 (24.7%)
AJK	3 (4.2%)	04 (5.4%)	05 (6.3%)	01(1.3%)	13 (4.3%)
Foreign Citizens	02 (2.8%)	06 (8.1%)	01 (1.3%)	03 (4.0%)	12 (4%)

Table-II: Professionalism elements score (Mean/SD) for the class of 2020, 2019, 2018 & 2017 MBBS.

Professionalism Elements	Class of 2020 (n=72)	Class of 2019 (n=74)	Class of 2018 (n=79)	Class of 2017 (n=75)	F-Test stat	*p*-value
Accountability	24.27 (± 2.92)	21.05 (±2.43)	20.11 (± 3.17)	25.28 (+2.27)	10.60	0.000
Altruism	23.97 (± 2.61)	20.77 (± 2.40)	21.10 (± 3.39)	24.75 (+2.69)	9.53	0.000
Duty	24.32 (± 2.91)	21.32 (± 2.13)	21.51(± 2.82)	25.1 (+2.40)	8.81	0.000
Honour/Integrity	23.98 (± 3.03)	21.22 (± 2.17)	21.87 (± 2.93)	24.60 (± 2.70)	18.92	0.000
Excellence	24.73 (± 2.88)	22.41 (± 2.36)	21.88 (± 3.11)	25.25 (± 2.35)	11.54	0.000
Respect for Others	25.80 (± 3.39)	22.89 (± 2.37)	22.08 (± 3.13)	26.34 (± 2.70)	26.57	0.000
Overall	145.66 (± 21.05)	130.98 (±24.67)	121.09(± 17.13)	151.34(±12.28)	24.80	0.000

computed. To estimate the internal consistency of the elements of professionalism and overall professionalism score, Cronbach alpha values were used. Comparison of the results between four groups of 1st, 2nd, 3rd and 4th year MBBS students was carried out. ANOVA was used to compare the variation in the data of four cohorts. A *p*-value of <0.05 was considered statistically significant.

different educational backgrounds. Basic knowledge about professionalism, ABIM's six essential elements of professionalism, and the literature on different strategies used for teaching medical professionalism were provided to these students. The FGDs were audiotaped and a verbatim transcript of the entire discussion was produced. Once the transcription was done, the next step was coding the data in the transcripts,

which involved sorting the data and assigning them to categories. Thematic analysis was done with software Nvivo.

RESULTS

The overall response rate of the students was 67%. Three hundred students from four MBBS classes participated in this quantitative survey. The mean age of the students of all four classes was 20.0 ± 1.55 years (table-I). A total of 67% were females and 33% were males (table-I). Majority of

and third years i.e. 130.98 (± 24.67) and 121.09 (± 17.13) respectively. But this score improved again for the class of fourth year MBBS i.e. 151.34 (+12.28) (table-III). There was a significant difference in the mean scores of six elements of professionalism and the overall scores of four MBBS classes (p=0.000) (table-III). A significant difference was also noted when the overall scores of professionalism of every MBBS class was compared with every other class (p<0.05) (table-

Table-III: Cronbach's alpha values of professionalism and its elements for the class of 2020, 2019, 2018 & 2017 MBBS at a private medical college (n=300).

Professionalism Element	Class of 2020 (n=72)	Class of 2019 (n=74)	Class of 2018 (n=79)	Class of 2017 (n=75)	Total Students (n=300)
Accountability	0.77	0.65	0.61	0.76	0.70
Altruism	0.81	0.70	0.61	0.73	0.71
Duty	0.78	0.67	0.66	0.71	0.70
Honor/Integrity	0.78	0.65	0.60	0.71	0.71
Excellence	0.78	0.64	0.65	0.73	0.70
Respect for Others	0.81	0.63	0.63	0.70	0.74
Overall	0.812	0.804	0.752	0.781	0.792

Table-IV: Comparison of overall scores of professionalism between 1st, 2nd, 3rd & 4th Year MBBS.

MBBS Class	Overall Professionalism Score Mean/SD	p-value	MBBS Class	Overall Professionalism Score Mean/SD	p-value
1st Year	145.66 ± 21.05	0.000	2nd Year	130.98 ± 24.67	0.007
2nd Year	130.98 ± 24.67		3rd Year	121.09 ± 17.13	
1st Year	145.66 ± 21.05	0.000	2nd Year	130.98 ± 24.67	0.017
3rd Year	121.09 ± 17.13		4th Year	151.34 ± 12.28	
1st Year	145.66 ± 21.05	0.037	3rd Year	121.09 ± 17.13	0.000
4th Year	151.34 ± 12.28		4th Year	151.34 ± 12.28	

the students belonged to Punjab (63%) and had completed FSC from Intermediate Boards (88%) (table-I).

Medical students, irrespective of their year of medical education, rated all the attributes of professionalism as important after having its formal teaching (table-II). The overall Cronbach alpha value for all the elements of professionalism in these classes was 0.79 (table-III). Mean scores calculated for the elements of professionalism for the first year was 145.66 (±21.05). The mean score plummeted for second

IV).

Themes with Verbatim after FGDs

As a result of two focused group discussions among the students, following six major themes were identified

Professionalism Training

This theme reflects the importance of formal teaching of professionalism in medical colleges. Students advocated the use of multiple techniques for the training of professionalism. Examples of representative statements are as follows:

S7: "PERL classes and sessions are very informative and useful to learn professionalism, ethical and medicolegal issues."

S2: "Lectures and motivational talks should be limited for theoretical knowledge of professionalism. Interactive lectures and discussions on case based scenarios are interesting and helpful to understand different situations we may face during our practical life as doctors."

S10: "These classes are very beneficial, otherwise how shall I know about my obligations and privileges as a doctor. But lectures should only be used to discuss the theoretical aspects of professionalism during preclinical years."

S6: "We should have the opportunities to work in the clinics of our inspiring doctors during clinical clerkship rotations."

Role Modelling

This theme describes the importance and effectiveness of role modelling and introduction of the techniques based on role modelling for the training of professionalism:

S5: "The behavior of our teachers with patients, their subordinates and students have a strong impact. We learn more from what they do than what they tell us."

S1: "In think, role modelling is the most effective way to teach professionalism to the students."

S12: "With apprenticeship classes during clerkship rotations, we will have the opportunity to work with our role model doctors in their clinics, wards and operation rooms."

S4: "In my opinion deliberate role modelling can give better results."

Faculty Development

This theme highlights the importance of faculty development and their training programs in playing an effective role in the teaching of professionalism to the students:

S11: "Few teachers, either due to lack of sufficient training or preparation are unable to deliver effectively to the students in their training sessions. I would suggest that awareness and training programs should be arranged for the teachers so that they can understand the importance of the training of professionalism".

S4: "Teachers usually present scenarios which they have copied from the web. But discussions on case based scenarios are useful only if teachers develop these scenarios based on our local problems."

S6: "Senior teachers help us to understand ethical and medicolegal issues in a better way due to a length and breadth of experience.

Mentoring

This theme describes that formal mentoring is a useful and effective method for the enhancement of professionalism among the students:

S10: "The mentoring classes helped me to develop my perspective of medicine and patient care."

S4: "It is always very heartening to sit and discuss problems with our mentor. His guidance during these sessions has always been a source of wisdom and guidance for me to deal with problems."

S1: "Mentoring by the senior students is a good idea because I don't feel hesitant to discuss due to its countless benefits, I believe the initiation of peer to peer mentoring is a good idea"

S9: "I agree to the idea of peer to peer mentoring."

Student to Student Counseling

This theme supports the importance of student counselling for the inculcation of professionalism among the students:

S3: "Senior students are very helpful and they guide us in the ward in a generous manner."

S9: "I have learnt the art of convincing a difficult patient for history and examination by a senior student."

S8: "The concept of counselling by senior students would be a good option for continual growth while we work in the hospital."

S11: "Whenever I am stuck in any problem. I approach the seniors for their help."

S10: "Seniors can guide us in a better way to deal with any problem as they have been through these situationsin recent past."

Assessment of Professionalism

This theme presents the concept of planned assessment of professionalism as follows:

S5: "Students don't try to master a subject if they know they will not be assessed in it."

S3: "A structured assessment plan comprising of different assessment techniques should be introduced."

S6: "You can assess their behaviors from the feedback by teachers and patients."

S2: "Like planned teaching an organized and well constructed assessment of professionalism is required."

S1: "The practice of reflection can be helpful to promote the values of professionalism among students."

DISCUSSION

Our study highlights the significance of explicit teaching of professionalism to the students in a medical college. After its formal training, undergraduate medical students rated all the attributes of professionalism as important. Mean scores calculated for the elements of professionalism was high for first year. This score plummeted for second and third year but improved again for the class of fourth year MBBS. It has been observed that there is an overall improvement in the degree of importance given by medical students to all the elements of professionalism after its formal training. This study portrays that freshly inducted students into the MBBS program rate professionalism as highly important in the field of medicine. In the subsequent years, probably due to more exposure of basic sciences and less clinical experience, their perspective shifts and results in an overall frameshift in their impression of the value of professionalism that this field holds. However, an eventual marked rise in this score, signifies that proper clinical exposure, role modelling, and student-patient interaction realigns their perspective to holding professionalism in high value for the field of Medicine by the time they graduate[10,11,6]. In Pakistan, a couple of studies have been conducted on medical professionalism and its teaching. A study conducted in public sector medical college of Karachi, where professionalism is not taught explicitly, concluded that the students perceive each element of professionalism as defined by ABIM to be fundamental to its teaching[12]. Another study conducted at a private medical college of Karachi, where training in professionalism is given significant importance, determined that the "level of professionalism in students was far below the optimum in graduating medical students" despite considerably encouraged training[13]. Contrary to our results, this study claimed that "the current teaching methods of professionalism were stagnant and ineffective in the sense that they could only maintain the present professional approach of the students, but failed to improve upon it"[9]. From these aforementioned studies, the study conducted in a public sector medical college of Karachi[8], where professionalism is not taught explicitly, was only limited to obtain the opinion of the students about professionalism without highlighting how this viewpoint exists within them. The second study[9] elaborates on the ineffectiveness of the current training methods used for teaching professionalism. The observations in these previous studies have been done in a pre-established professional training curriculum or in the absence of any explicit professional framework[8,9]. Whereas, in the present study the responses of medical students towards different elements of professionalism were assessed after its formal training in the medical college.

Views of the students regarding the usefulness and effectiveness of various methods for professionalism teaching highlights that a robust curriculum comprising of multiple methods to teach professionalism should be employed[14]. Role modelling is perceived as the most accepted and

useful method for inculcating professionalism among the students[15,16]. Therefore, novel methods based on role modelling should be designed to make the training program effective[17]. Faculty development programs should be organized for the training of teaching faculty to make them understand and realize the importance of professionalism training of the students[15]. Moreover, deliberate role modelling by the teachers may give better results[18]. A comprehensive mentoring program with all the stakeholders; including teachers, students and the administration, on board, can give better results in the training of professionalism[19]. Assessment tools such as MCQs, and SAQs should be introduced to assess the knowledge of professionalism[20]. Whereas OSCEs, portfolio writing comprising of reflective practice, followed by feedback by the teachers can be used as formative and summative feedback to the students[10].

Many professional and governing bodies around the world have emphasized the need for explicitly teaching professionalism to undergraduate medical students[21]. In a study conducted in a dental college of Pakistan, the introduction and implementation of a formal curriculum on professionalism has been recommended to promote professionalism among students[22]. However, there is no consensus on what is the optimal method to teach medical professionalism[23]. In an observational study conducted in the United States it was concluded that different strategies used to teach professionalism were not always adequate to inculcate professionalism among medical students[6]. However, role modeling and mentoring have been recommended as the most effective techniques for developing professionalism[11].

CONCLUSION

A robust curriculum with explicit teaching of professionalism does not only uphold and maintain the pre-training values of medical students but also brings about a significant improvement in their attitudes pertaining to professionalism. The students recognize role modeling to be the most effective method in developing professionalism. They perceive that teaching strategies based on role modeling, formal mentoring, faculty development and formal assessment plan can improve the training of professionalism.

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LIMITATION AND RECOMMENDATIONS

- Study was carried out at one private medical institution, where most of the students belong to relatively high socioeconomic group. Furthermore, perceptions of the students of different institutions may be different because of the difference in the hidden curriculum and importance of ethical consideration based on the vision and mission of their institution[24]. Hence, restricting us to generalize the findings of our study to all the medical colleges of Pakistan.

- This was a cross sectional study, in which weightage given by the students of four MBBS classes to various elements of professionalism were assessed at one point of time.

- A prospective, multicenter study, including students of both private and public sector medical colleges, is recommended to determine the true impact of formal teaching of professionalism.

- Qualitative research can be planned to explore the views of senior faculty for the improvement in current practices and methods used for teaching professionalism to the students.

CONFLICT OF INTEREST

This study has no conflict of interest to declare by any author.

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