

How professional are our students? A cross-sectional study of final year medical students at Rehman Medical College, Peshawar

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ABSTRACT

Background: Medical Professionalism (MP) is defined as a set of attributes & the principles that must be followed in the medical workplace, as well as what the public and individual patients should expect from medical professionals. It is believed that MP is not a concept that medical students are interested in; thus, there is a greater emphasis on the importance of explicitly teaching this subject.

Objectives: To assess the level of understanding of professionalism in final year medical students at a private medical college of Pakistan through the Penn State College of Medicine Professionalism Questionnaire (PSCOM-PQ).

Materials & Methods: A cross-sectional study of final year medical students at Rehman Medical College was conducted from March to April 2022 using the PSCOM-PQ after obtaining permission from the Penn State University. The questionnaires were distributed to students in their class after giving instructions and getting informed consents. Data were collected for the six attributes of professionalism namely, Accountability, Altruism, Duty, Excellence, Honour & Integrity, and Respect for others. SPSS version 26 was used for descriptive and comparative statistical analysis, keeping $p \leq 0.05$ as significant.

Results: A total of 86 students (54, 62.8% male and 32, 37.2% female) students responded. Mixed responses were obtained for the Likert scale categories (never to great deal) indicating a non-focused understanding of Professionalism. The total mean score for all professionalism categories was 107.52 ± 48.13 , divided as 116.96 ± 47.38 for males, and 91.59 ± 39.74 for females ($p=0.010$). Least scores were obtained for Respect (17.45 ± 8.18) and Altruism (17.69 ± 7.89) and the highest for Duty (18.17 ± 7.99) and Honor & Integrity (18.17 ± 7.46), with males scoring significantly higher in all categories.

Conclusion: Despite 10 years of inclusion of Professionalism in the taught curriculum at a private medical college, the general understanding of students about the attributes of professionalism was lower than expected.

Keywords: Education, Medical, Undergraduate; Education, Professional; Medical Professionalism; Behavioural Sciences.

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INTRODUCTION

The American Board of Medical Specialties (ABMS) defines Medical Professionalism (MP) as group members declaring to one another and the public the principles they promise to follow in their work, as well as what the public and individual patients should expect from medical professionals.¹ It is also defined by the Royal College of Physicians as, "a set of values, behaviors, and relationships that underpin the trust the public has in doctors".¹

The significance of professionalism has been cemented in medicine from ancient times by the Hippocratic oath.² The Oath has evolved over time from a promise to protect patients' rights to the "Physician Charter on Professionalism" presented by ABIM, European Foundation of Internal Medicine, and the American College of Physicians-American Society of Internal Medicine (ACP-ASIM) in 2002.³ It is now emerging as a fundamental, central theme in both undergraduate and postgraduate education.⁴ MP is a core competency for all healthcare professionals. It can be represented as having the characteristics of accountability, altruism, excellence, duty, honour and integrity, and respect for others.⁵

Recently, it is believed that MP is not a concept that medical students are interested in; thus, there is a greater emphasis on the importance of explicitly teaching this subject.⁶ Professionalism helps develop professional identity in professionals, which needs to be part of the learning environment of the institute, strengthened by positive role modelling.⁶

It is difficult but not impossible to teach professionalism; however, assessing professionalism is even more difficult.⁷ This could be because the elements of professionalism are subjective, and no single assessment tool can capture all of them. Clerkship evaluations, 360° evaluations, peer evaluations, self-assessments, and clinical encounters with actual patients or simulated/standardized patients can all be used to assess medical students' professionalism.⁵

A few medical schools in Pakistan have made behavioural sciences, bioethics, and communication skills a longitudinal theme in their curriculum, and provide a social science experience through electives. However, professionalism as a formal subject with a definite curricular content is lacking in Pakistani medical schools and training programmes.¹

Professionalism was included in the curriculum of Rehman Medical College (RMC) since its inception in 2010. It is now a part of the curriculum of Khyber Medical University, Peshawar, taught at different levels of a spiral curriculum. The present study was to assess the knowledge of medical professionalism and the understanding of the various attributes of professionalism by the final year students at Rehman Medical College, Peshawar.

MATERIALS & METHODS

The final year MBBS students of a private medical college in Peshawar, KP, Pakistan, were the subjects of this cross-sectional study conducted from March to April 2022 after obtaining approval from the Research Ethics Committee, and included as volunteers after informed consent. The Penn State College of Medicine Professionalism Questionnaire (PSCOM-PQ), a reliable and validated survey instrument was used to assess the medical students' attitudes toward professionalism. The Office of Medical Education, Pennsylvania State University College of Medicine, owns the copyright to the PSCOM-PQ. To use the

PSCOM-PQ, a formal consent/permission was obtained via email. The questionnaire measures the six categories of Professionalism (Accountability, Altruism, Duty, Excellence, Honor & Integrity, and Respect) through 36 questions (6 per category). Responses are scored on a 5-point Likert scale; the higher the score on the Likert scale the greater the level of professionalism understood by responders. Additionally, a ranking of the importance given to categories is done by responders through a 6-point scale (1 indicating most important, and 6 indicating least important). Students were instructed in how to answer the questions, and asked to rate the extent to which each item reflected their definition of professionalism. Data were kept strictly confidential and entered for analysis in SPSS 26 for descriptive and comparative analysis, keeping $p \leq 0.05$ as significant.

RESULTS

The 86 final year MBBS students included in this study had a mean age of 23.84 ± 1.05 years; 54 (62.80%) of them were males while 32 (37.20%) were females.

Responses of students to the different components of Professionalism based on the Likert scale of 1-5 are listed in Table 1. Out of the total of 3096 responses for all the categories, most (896, 28.94%) were in the Never scale, followed by the Much (751, 24.26%) and Great Deal (727, 23.48%) scales.

Table 1: Responses of students based on the Likert Scale (n=86).

#	Professionalism Categories	Never (1)	Little (2)	Some (3)	Much (4)	Great Deal (5)	Total
1	Accountability	158	38	66	131	123	516
2	Altruism	141	46	80	120	129	516
3	Duty	151	44	79	129	113	516
4	Excellence	151	39	82	126	118	516
5	Honor & Integrity	150	31	100	130	105	516
6	Respect	145	32	85	115	139	516
	Total	896	230	492	751	727	3096

Table 2 shows the gender distribution of mean total scores on the Likert scale of all the six categories of Professionalism as well as

the overall scores. The males scored better in all categories and showed significant differences from female scores.

Table 2: Mean total scores of Professionalism categories by gender on the Likert scale (n=86).

#	Professionalism categories	Males (n=54)	Females (n=32)	Overall (n=86)	p value
1	Accountability	19.63 ± 7.84	15.28 ± 7.34	18.01 ± 7.90	0.013
2	Altruism	19.39 ± 8.04	14.81 ± 6.82	17.69 ± 7.89	0.006
3	Duty	19.63 ± 8.38	15.72 ± 6.72	18.17 ± 7.99	0.020
4	Excellence	19.52 ± 8.20	15.50 ± 6.81	18.02 ± 7.91	0.017
5	Honor & Integrity	19.78 ± 7.54	15.47 ± 6.59	18.17 ± 7.46	0.007
6	Respect	19.02 ± 8.39	14.81 ± 7.19	17.45 ± 8.18	0.020
7	All Categories	116.96 ± 47.38	91.59 ± 39.74	107.52 ± 48.13	0.010

Table 3 shows the responses of the students in terms of the Rank Importance (on a rank scale of 1-6, with 1 indicating highest importance and 6 least importance) given to each category of Professionalism. Out of the total 3096 responses for all categories, most (835, 26.97%) are in the highest rank importance of category 1, followed by lesser and almost similar scores for the other ranks. Thus, all the categories of Professionalism were ranked as fairly important by students. However, looking at categories 4-6 which indicate lesser importance, it is seen that

they make up 1339 (43.25%) of the total 3096 responses, thereby showing a relative lack of importance given by almost half of the sampled students to the six Professionalism categories. The rank importance responses of scales 1-3 account for 1757 (56.75%) of the total 3096 responses, and represent the majority of students who benefitted from the taught curriculum on Professionalism and were able to understand the importance of the six Professionalism categories.

Table 3: Responses of students for Rank Importance of Categories (n=86).

#	Professionalism Categories	Rank Importance (Increasing >>>>>>>>>>)						Total
		(6)	(5)	(4)	(3)	(2)	(1)	
1	Accountability	121	63	60	58	57	157	516
2	Altruism	87	115	68	57	62	127	516
3	Duty	62	74	105	63	79	133	516
4	Excellence	53	83	70	107	73	130	516
5	Honor & Integrity	45	48	87	100	109	127	516
6	Respect	49	75	74	73	84	161	516
Total		417	458	464	458	464	835	3096

Table 4 shows the distribution of mean Rank Importance ratings by gender and overall scores for all students, with lower scores indicating greater ranking importance. Scores by genders do not

differ significantly, except for the category of Honor & Integrity, where the males scored significantly lower (p=0.017), thereby giving more importance to this category.

Table 4: Mean scores of rank importance of professional categories by gender (n=86). (Lower scores indicate greater professionalism).

#	Professionalism Categories	Male (n=54)	Female (n=32)	Total (n=86)	p value
1	Accountability	19.39 ± 7.57	21.16 ± 5.38	20.05 ± 6.86	0.211
2	Altruism	20.00 ± 7.53	21.50 ± 5.36	20.56 ± 6.74	0.322
3	Duty	18.87 ± 7.19	19.47 ± 4.74	19.09 ± 6.37	0.644
4	Excellence	18.65 ± 8.70	19.69 ± 5.01	19.03 ± 7.52	0.484
5	Honour & Integrity	16.37 ± 5.94	19.56 ± 5.81	17.56 ± 6.06	0.017
6	Respect	16.83 ± 7.14	18.88 ± 5.03	17.59 ± 6.48	0.125
7	All Categories	110.11 ± 36.69	120.25 ± 21.26	113.88 ± 34.18	0.126

DISCUSSION

The present study involves medical students who have been given courses on Professionalism during their college curriculum. The survey of final year medical students revealed a relatively poor grasp of the subject of Professionalism as well as a less than expected understanding of its attributes and categories. This is perhaps a reflection of their lack of interest in the subject with the thinking that professionalism will be learnt by them later on after graduation rather than in the undergraduate years. Similar vagueness of concepts have been described by Badshah A, et al.⁹ The importance and difficulties encountered in teaching professionalism to medical students have been well described by Kirk LM,¹⁰ Altirkawi K,¹¹ and Bashir A, et al,¹² who emphasize the importance of good role models and an appropriately professional clinical environment to impart students with a reasonable understanding of professionalism. Given the difficulties encountered in teaching professionalism, a cardinal article by Al-Eraki MM¹³ provides twelve tips for teaching professionalism at all levels of medical education.

Healthcare education is incomplete without the inclusion of professionalism in mainstream curricula. Society expects doctors to be professionally competent, displaying altruistic activities and having integrity.¹⁴ However, research has identified positive role modelling, computer generated simulations, case generation techniques, etc., as an influencing factor in harnessing professional attributes in undergraduate medical students.^{2,10-12} As the current study was conducted in a school where role modelling is not actively included in the curriculum for teaching professionalism, and only didactic cognition-centered teaching or case scenarios are used as instructional strategies, this absence of real life modelling could be a factor in the low response to other

attributes of professionalism by the students. However, less than expected levels of understanding of Professionalism has been verified by other studies as well.^{15,16}

Research also identifies both explicit and implicit instructional techniques for professionalism, demonstrating consistent behaviors pertaining to a medical professional, mindful practice, experiential learning and reflection on experiences, all constitute integral components in this process.^{6,14} The current study did not dig deeper into the implicit and explicit processes of incorporation of teaching professionalism in RMC undergraduate curriculum. For a college teaching a soft skill would require having a diverse cognitive and behavioral instructional strategy to accomplish its goals, primarily the understanding of attributes and a solid definition of Professionalism.

The findings of this study show that the understanding of professionalism and its attributes is low in the sampled final year students. A previous scoping review⁴ investigated the citing of attributes of medical professionalism based on an extended literature search of relevant databases; the main attributes identified were honesty (54.55%), communication (45.45%), and honesty & integrity (36.36%). These findings are not too different from the ones identified by medical students in the current study.

An insight into the instructional and evaluation strategies of the institute need to be made to identify the gaps in teaching Professionalism to students to improve the current understanding and practice of professional attributes in them.

CONCLUSION

Despite the emphasis on teaching professionalism from the start of their undergraduate medical education, final year students in

Rehman Medical College had inadequate understanding of the attributes of professionalism.

attributes are better understood by medical students and pursued throughout their career.

RECOMMENDATION

The findings of this study call for a review of the instructional and assessment strategies implemented for teaching professionalism to ensure that professional knowledge and

LIMITATIONS

Being a single center study, the findings cannot be generalized. Moreover, the sample size is also too small to allow meaningful inferences for medical students in general.

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