

ATTITUDE TOWARDS PROFESSIONALISM AMONG UNDERGRADUATE AND POSTGRADUATE DENTAL STUDENTS

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ABSTRACT

Objectives: To assess the perceptions and attitude of under and postgraduate dental students toward professionalism in Peshawar.

Materials and Methods: This Descriptive cross sectional was conducted at Khyber College of Dentistry (KCD), Rehman college of Dentistry (RCD) and Sardar Begum Dental College (SBDC) Peshawar. Third year and final year BDS students and postgraduate dental residents were asked to complete a specially designed proforma validated by 32 experts. Likert Scale was used for scoring the different domains of professionalism. The SPSS 23 was used for analyzing the data.

Results: A total number of students participated in the study were 158. The most appreciated and valued domain selected by the student was Honor and Integrity. Duty/Accountability was the least valued domain scored by the participants. A significant difference was noted among the attitude of undergraduate and postgraduate students in the domains of Duty/Accountability, Excellence/Autonomy, Altruism and Respect. The mean score for Excellence/Autonomy domain was significantly higher among public sector institutes as compared to private one ($p=0.008$).

Conclusion: Knowledge of professionalism in most of our study participants is not optimal, reflecting lack of behavioral sciences in the undergraduate and postgraduate curricula, which recommend provision of ethics course in the dental curriculum.

Key words: Dental Students, Medical Professionalism, Attitude

INTRODUCTION

The practice of medicine is an art, not a trade, a calling, not a business: a calling in which your heart will be exercised equally with your head. (William Osler).

Due to cultural and contextual variations, no definition of medical professionalism can be declared

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as standardized one¹, however the American Board of Internal Medicine (ABIM) have described six components of medical professionalism as Altruism, Accountability, Duty, Excellence, Integrity, Honor and Respect. These domains have been included and considered in definition of medical professionalism². According to the Royal College of Physicians, professionalism is “a set of relationship, values, and behaviors, that underpins the trust the public has in doctors”³. It is the judicious use of communication, knowledge, technical skills, emotions and values to benefit the individual as well as community being served. Professionalism involves contractual rela-

tionship between the doctor and the society. It is affected by culture, and religion, therefore it is practiced in the community according to their culture, local customs and beliefs⁴.

Professional attitudes of the health care providers have been a matter of concern since long. In recent years, perception of the society regarding inappropriate behaviors and attitudes of some members of the profession make it necessary to reconsider the definition of professionalism. Student's attitude towards professionalism has been assessed in the western and Arabian context, but few studies have been found in our society. The perception of professionalism by anyone is dependent upon its cultural background⁵. It is affected by cultural, societal values, traditions, and beliefs⁶. In developing countries like Pakistan, it leads to serious erosion of compassion & empathy towards patients during medical school and residency training due to increased workloads, deadlines, and competition. It also causes scuffles with fellows & leads to the attitudes of self-benefit rather than patients interest⁷. The study purpose is to fill some of the deficiency in our knowledge and to increase our understanding of this important area particularly in the field of dentistry by assessing the attitudes and perceptions of under and postgraduate students toward professionalism in our own context and culture. Findings of the study may help us to know that whether the current curriculum and educational activities in our colleges encourages professional values and behaviours, and also it will be in our own context and culture.

MATERIALS AND METHODS

A descriptive cross sectional study on 158 students was conducted of three different institutes of Peshawar including Khyber College of Dentistry (KCD), Rehman college of Dentistry (RCD) and Sardar Begum Dental College (SBDC). These institutes offers undergraduate program in dentistry and post graduate residency training in various disciplines of dentistry including maxillofacial surgery, prosthodontics, orthodontics and operative dentistry.

The study was conducted over the period of six months after approval by advance study and research board (ASRB) of Khyber Medical University Peshawar. The ethical clearance permissions were obtained from the respective Institutional Ethical Review Committees.

A performa that used in our study was comprised of two parts. The part 1 included demographic information particularly age, sex, year and level of the education with informed consent of the students. Second part included the professional assessment scale (PAS) questions. The PAS was developed and validated by Mohamed M. Al-Eraky et al and the completed instrument for assessing the professionalism was known as the Learners' Attitude of Medical Professionalism Scale (LAMPS)⁵. The scale contains 28 items related to professionalism. Out of which, 13 were positively-worded items while 15 were negatively- worded items. The study participants were instructed to select and tick on the appropriate choice response on the 5- point Likert scale. The Likert scale was ranged for positively- worded statements, as from strongly disagree = 1 to strongly Agree = 5, and for negatively- worded items as from strongly disagree = 5 to strongly agree = 1. Thus, final scores ranged between 28 to 140. Students having high score were reflected as having higher professional attitude.

A small pilot study on 20 students was conducted in which the students were educated to express their own opinion on various items of questionnaire, and do not consult other students and teachers, this helped the participants to focus independently on the construct that was required to measure.

The performa was uploaded on Google response forms and sent to 300 students of different colleges, in return 158 students responded. The data was collected on internet and used for statistical analysis.

The IBM SPSS (version 23.0) software was used for statistical analysis. Descriptive analysis of continuous variables was presented as mean/standard deviation while for categorical variables the percentage/frequencies were used. The outcome variable, mean score was compared for different independent variables including gender, type of institution, marital status by using independent samples T-test or one-way ANOVA as appropriate. Categorical group comparisons were made by using Chi-square test. The level of significance was kept at ≤ 0.05 .

RESULT

A total of 158 students participated in the survey. There were 55 (34.8%) males and 103 (65.2%) females in the study group with mean age of 24.84 ± 2.9 years (age range 21 – 35). Out of 158, 97 (61.4%)

participants were single while 61 (38.6%) were married. Around 81 (51.3%) participants were from public institution while remaining 77 (48.7%) were from private dental institute. There were 91 (57.6%) participants studying at undergraduate level among which 37/91 (40.7%) were in third year and 54/91 (59.3%) were in fourth year. Whereas 67 (42.4%) were studying at post-graduate level out of which 17 (25.4%) were in first year, 17 (25.4%) were in second year, 13 (19.4%) in third year and 20 (29.9%) in fourth year of training. Demographic characteristics

Table 1: Demographic characteristics of study group (n=158)

Characteristics	Overall (n=158) n(%)	Level of Education	
		Undergraduate (n=91)	Postgraduate (n=67)
Age clusters (years)			
21 to 25	102 (64.6%)	90 (98.9%)	12 (17.9%)
26 to 30	50 (31.6%)	1 (1.1%)	49 (73.1%)
31 to 35	6 (3.8)	0 (0%)	6 (9.0%)
Gender			
Male	55 (34.8%)	32 (35.1%)	23 (34.3%)
Female	103 (65.2%)	59 (64.9%)	44 (65.7%)
Postgraduate students study year			
1st year	17 (10.8%)	0 (0%)	17 (25.4%)
2nd year	17 (10.8%)	0 (0%)	17 (25.4%)
3rd year	50 (31.6%)	37 (40.7%)	13 (19.4%)
4th year	74 (46.8%)	54 (59.3%)	20 (29.8%)

Table 2: Distribution of attitude of study participants towards professionalism (n=158)

Professional Attitude	Scores	n (%)
Low	28 – 84	19 (12.0%)
Moderate	85 – 112	91 (57.6%)
High	113 – 140	48 (30.4%)

Table 3: Domains mean score for LAMPS questionnaire for study participants (n=158)

Domain	Number of items	Mean score for all items	Average item score
Respect	5	25.97±4.2	3.8±0.6
Excellence/Autonomy	6	22.38±3.7	3.66±0.6
Altruism	5	17.46±3.8	3.62±0.7
Duty/Accountability	7	17.49±3.0	3.41±0.5
Honor/Integrity	5	20.21±3.8	4.04±0.7

are summarized in table 1.

Attitude towards professionalism: On the basis of cumulative score, the attitude of dentistry students was categorized into three classes' i.e. low, moderate and high professional attitude. It was found that

Table 4: Domains score comparison with gender (n=158)

Domain Name	Domain score among Gender (mean±SD)		p-value
	Male (n=55)	Female (n=103)	
Duty / Accountability	25.38±5.0	26.28±3.8	0.28
Excellence / Autonomy	22.09±3.8	22.53±3.6	0.47
Honor / Integrity	17.02±4.0	17.69±3.7	0.30
Altruism	17.18±3.1	17.66±2.9	0.34
Respect	19.8±3.9	20.43±3.8	0.33

Table 5: Comparison of domain scores with level of education (n=158)

Domain Name	Domain score according to level of education (mean±SD)		p-value
	Undergraduate (n=91)	Postgraduate (n=67)	
Duty / Accountability	25.33±4.6	26.84±3.6	0.02*
Excellence / Autonomy	21.66±4.0	23.36±3.0	0.004*
Honor / Integrity	16.97±3.7	18.12±3.9	0.06
Altruism	17.04±3.1	18.10±2.8	0.03*
Respect	19.48±4.1	21.19±3.2	0.005*

*significant values (Independent samples T-test)

Table 6: Comparison of domain scores with type of institute (n=158)

Domain Name	Domain score according to type of institute (mean±SD)		p-value
	Public (n=81)	Private (n=77)	
Duty / Accountability	25.81±3.6	26.13±4.8	0.58
Excellence / Autonomy	23.14±3.4	21.58±3.8	0.008*
Honor / Integrity	17.56±4.0	17.35±3.7	0.74
Altruism	17.48±2.8	17.51±3.2	0.95
Respect	20.21±3.7	20.21±3.9	0.99

*significant values (Independent samples T-test)

48 (30.4%) students achieved high score with high level of attitude toward professionalism, whereas 19 (12.0%) and 91 (57.6%) had low and moderate level of professionalism as shown in table 2.

A significant difference was noted when scores for all five domains was compared with respect to gender, as shown in table 4.

The score for all five domains was compared between undergraduate and postgraduate students as given in table 5. It was observed that mean score for all domains was higher among postgraduate students as compared to undergraduate ones i.e. Duty/accountability domain (22.54 ± 3.2 vs 21.20 ± 4.0 , $p=0.02$), Excellence / Autonomy domain (23.36 ± 3.0 vs 21.66 ± 4.0 , $p=0.004$), Honor / Integrity domain (18.12 ± 3.9 vs 16.97 ± 3.7 , $p=0.06$), Altruism domain (18.10 ± 2.8 vs 17.04 ± 3.1 , $p=0.03$), and Respect domain (21.19 ± 3.2 vs 19.48 ± 4.1 , $p=0.005$).

The score for all five domains was compared between types of dental institutes as given in table 6. It was found that mean score for excellence/autonomy domain was higher among public sector institutes as compared to private one (23.14 ± 3.4 vs 21.58 ± 3.8 , $p=0.008$).

DISCUSSION

Professionalism is the core competency desirable by the dental surgeons for their effective and morally performance also it is considered as the pivotal component of the under graduate as well as post graduate curricula⁸. The medical and dental institutions that are imparting training to the future health care providers are generally agree that the issues of professionalism and skills must be incorporated in the curriculum from beginning. Various institutions and organizations have recognized the fact that all the future dental professionals must be trained in these important aspects. Association for dental education in Europe (ADEE), stressed on this aspect that the future dentist must develop and should possess certain necessary skills with ethical behavior⁹. The General Dental Council of England, put this responsibility on the institute to construct a curricula that ensures to improve both practical knowledge, clinical skills along with development of values, attitude and ethical behavior in the students¹⁰. The American Dental Association ADA and American Dental Education Association (ADEA) have developed a guideline

regarding the professional and ethical aspect of training for the future dentists. According to Masela, the important role and function of dental education is improve the professional traits in the students. He also emphasized that carefulness, altruism, integrity are the central attributes of dental professionalism¹¹.

The present study used a validated questionnaire and was conducted in three different institutes to identify the perceptions of dental students about the various domains of professionalism. Once the relevant values and its context to our society and environment have been found, these can be incorporated into institute's curriculum and achievement of a standardized curriculum for the undergraduate students can be accomplished. Finding of the study will identify the strong and weak areas about various traits of professionalism among the dental students, thereby knowing the areas where teaching of professionalism be focused.

In the present study the most importance was given to the Honor and Integrity, followed by Respect, by the undergraduate and postgraduate dental students. Whereas duty /accountability, was the lowest valued domains by the students. Similar findings have been reported by a study conducted in a private medical and dental college at Lahore, final year students valued honor/integrity more than other attributes of medical professionalism¹². An another study conducted by Vikram Jha, on medical students and faculty, also proved that Integrity is the most desired domain of the medical professionalism¹³. However at the same time there are other studies where respect was labeled as the most valued domain of medical professionalism¹⁴. In another study conducted in Malaysia, 96.3% students showed that showing respect for the patients was very important trait of the professionalism¹⁵. Similar findings have been found in a research performed in Sudanese medical schools by Husain et al, 96.3% students of final year admitted that Respect is the most valued trait of medical professionalism.

Our study revealed on the basis of accumulative score that over 30% respondents possessed high attitude towards professionalism, whereas 12% and 57.6% had low and moderate level of professionalism respectively. In a study conducted at different dental colleges of Bangalore city India, it was revealed that 78.8% participants scored high,

and only 2.3% students achieved low score towards professional traits¹⁶. In another research conducted at King Saud University Saudi Arabia by Al- Suddani et al demonstrated that 59% students reflected high professional attitude and behavior¹⁷. Javadi et al in Iran, showed in their study that more than 78% of the participants had higher attitude and only 0.2% students demonstrated lower attitude¹⁸.

If we compare the summaries of above mentioned studies, it clearly revealed that knowledge of professionalism in most of our study participants is not optimal, reflecting lack of behavioral sciences in the undergraduate and postgraduate curricula. Similarly in another study performed in medical college Rawalpindi, statistically insignificant difference across the second year and final year students was noted because of medical professionalism not being formally taught.

In our study we found that there were statistically significant difference amongst undergraduate and postgraduate students on items related to Accountability, Autonomy, honor/ integrity and respect where senior respondents rated higher than juniors. This can be due to the reason that the postgraduate students have more interaction with patients than juniors. This suggests that senior students or residents learn more and more about the professional values as they progress in their career and showing maturity with progressive years. This also indicates that senior students have passed through different good or bad scenarios during their course of training, resulting in learning a lesson from good or bad examples. Another factor which may contribute in the higher professional level are the college of physician and surgeons of Pakistan (CPSP) mandatory workshops for all the postgraduate residents. Communication skills workshops are the most important one that can contribute in the growth of their professional and behavioral approaches. These findings may also indicate that the development of professionalism occurs with age and maturation, as reported by Lesser and colleagues¹⁹. Nath et al, confirmed that age and level of education have very strong influence on the perception of professionalism²⁰. Wynd, 2003, revealed in their study that professionalism has direct relation with level of experience²¹. According to Peters et al, postgraduate students proved significantly more score than juniors in professional values²².

In a study conducted at Agha Khan University comparing the levels of professionalism at various level showed a significant difference, it was found that the scores for first year was 8.00+- 3.39, 6.85 for 3rd year and 8.40 for final year students. Agha Khan university offers compulsory learning of the professional behavior to all its undergraduate students by introducing a formal curriculum, therefore does not allow to drop the level of professionalism at all levels²³.

Although our study indicates that postgraduate students statistically rated higher in certain attributes of professionalism when compared with undergraduate students, but findings of the other studies also need attention in which clinical students scored less as compared with pre-clinical students. These findings can arise many questions. This may be attributed to increased academic activities, heavy clinical workload, family commitments or it may be due to lack of interest. Whatever may be the reason, this strongly suggests the significance of teaching of medical professionalism at all stages of the medical studies²⁴.

Development of the professional values in institute takes time and is affected by various different factors among which the most important factor is the education process²⁵. Other factors like religion, family values and personal virtues, all play important roles in the development and improvement of professionalism. A road map to teach professionalism to our students in medical and dental colleges is suggested as following. Teaching of the cognitive components can be facilitated in form of lectures, small group discussions, problem based learning and personnel interpretations. All students must be provided with ample opportunities to face the real life or simulated clinical situations and challenges faced by physicians and reflections in a safe environment. The faculty members and fellows must act as role model to foster and shape their professional attitude²⁶.

Assessing professionalism is another important step which, students will place professionalism at high priority only if they are accountable on high-stakes assessment. Stern very precisely described that students only pay attention to what you assess and ask repeatedly²⁷. Expected behavior and desired attributes must be incorporated in the summative and formative evaluation of the trainees. Feedback

is necessary for improving learner's performance and final evaluation²⁸.

Limitations of the study is comparatively small sample size. Multi institutional research work with larger sample size may help us in attaining in-depth insight into knowledge of students of dentistry toward professionalism. Regardless of limitations, this study has much strength. This study has created the empirical evidence with regard to knowledge and attitude towards various domains of professionalism particularly among dental students. Findings of this study are applicable to local context and may be applicable to other regions due to sharing of similar findings. This study also satisfied to fill the knowledge gap for measuring the attitude among dental students toward professionalism.

CONCLUSION

Finding of the study revealed that knowledge of professional obligation in most of our study participants is not optimal, therefore it is need of the hour to include and taught a properly designed behavioral course in the curriculum. To achieve this milestone, it is very important to evaluate and address all obstacles related to clinical, social, economic, personal and environmental aspects. We expect that by recognizing and addressing these factors, and simultaneously integrating these into professional educational curricula, will result in a better grooming of future health care providers to the society.

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