

ORIGINAL ARTICLE

Determining “Professionalism of Dental Students at Various Academic Levels by PSCOM Scale”KHIZER MEHMOOD¹, MUHAMMAD IMTIAZ², HINA ALI³, SALIMA NAVEED MANJI⁴, AYESHA ASHRAF⁵¹BDS (House Officer at Fatima Memorial College of Medicine and Dentistry)²BDS, FCPS, MME (Assistant Professor of Oral and Maxillofacial Surgery, Fatima Memorial College of Medicine and Dentistry)³BDS (House Officer at Fatima Memorial College of Medicine and Dentistry)⁴BDS (Department of Medical Education, Fatima Memorial College of Medicine and Dentistry)⁵BDS, FCPS (Assistant Professor of Orthodontics, University of Child Health Sciences & The Children's Hospital Lahore)Corresponding authors: Khizer Mehmood, Email: khizermehmood3@gmail.com, Cell: +923078754159**ABSTRACT**

Background/Introduction: Professionalism is one critical cornerstone of a successful academic program and considered to be the mainstay of health care provision. It is of great importance in the life of dentists because it plays a significant factor of interpretation and prediction of human behavior in various contexts of social and clinical practice. The purpose of this study was to determine professionalism of dental students at various academic levels by PSCOM scale.

Methods: This is a descriptive cross-sectional study, the participants consisted of undergraduate dental students at various academic levels. The study was conducted between 29th of December 2021 to 10th of June 2022 at various dental colleges of Pakistan. A survey questionnaire was submitted to all participants to collect data to assess their professionalism through a validated PSCOM Scale.

Results: The total number of participants were 403 containing 129 (32%) of men and 236 (58.6%) of women. The minimum age of the respondents in the research sample was 18 and the maximum age was 28 years. The average value of professionalism is 2.934 for BDS1, 3.045 for BDS2, 2.959 for BDS3 and 3.013 for BDS4 respectively. The average value of sub components of professionalism is 3.044 for accountability, 2.945 for altruism, 3.038 for duty, 3.038 for excellence, 2.964 for honesty and integrity and 2.976 for respect.

Conclusion: The results shows that professionalism has neither increased nor decreased significantly over the academic years which tend to overestimate the fact that there is a need to promote personal and professional development throughout the undergraduate dental education course.

Keywords: Professionalism; academic levels; PSCOM scale; dental students; competency; dental care; curriculum

INTRODUCTION

Professionalism is a core competency in dentistry which builds trust in patients, growing societal expectations have drawn public's attention towards dentists' professionalism⁽¹⁾. It also emphasizes key principles of behaviors such as accountability, humanism, altruism, and excellence which encompasses clinical competence, ethical or legal understanding, and communication skills⁽²⁾. Previous literature has focused on how these competencies in the field of technical skills depend on dental students' experiences rather than on the concepts of professionalism, hence there is a need to look into the development of professionalism among undergraduate students⁽²⁾.

Professionalism is critical for dentists to uphold these values within their practices because how patients are treated affects the trust they have in their dentists and whether they return for continued care⁽³⁾. There is a need to check these values in a dental students before they graduate. Teaching professionalism is not a simple task and requires a combination of methods and approaches within the undergraduate curriculum, the domain of professionalism is closely intertwined with communication, as well as leadership⁽³⁾. It can be presumed that students entering dental schools already possess some preconcept towards professionalism gained from previous experiences. The current dental curriculum is traditional and is not spiraled, other methods that bring change in students' behavior are not encouraged^(4,5).

For professionalism to be seen as imperative by dental undergraduates, they have to recognize that it is esteemed by the faculty. Hence, it must be instructed and, most critically, evaluated. Evaluation is significant in dental institutes to evaluate advance and coordinate future learning^(6,17). Dentists are leading their business in providing dental care in their dental clinics and hospitals. However, society expects a certain level of professionalism from dentists, in contrast to the methods and motivations of the marketplace⁽⁶⁾. If dentists lack these professional competencies and harbour biases, they are likely to face conflicts at work and may be considered less than professional or contrary to the standards expected in a particular profession⁽⁷⁾.

Lack of effective dental curriculum has been highlighted in Pakistan despite presence of subjects to address this need and justifying the need for a formal curriculum on professionalism⁽⁹⁾. It is also important to assess the professional outlook of students and what they perceive including the involvement in critical incidents that shape their understanding of such skill and proficient values, the diversity of tasks in dentistry means that each situation is unpredictable, but the dentist must take ultimate responsibility for every outcome^(11,12). Professionalism has been assessed in western countries as an essential part of good professional regulation as it is vital in professional education to assess progress and direct future learning. Hence, there is a need for the assessment of professionalism of dental students based on their accountability, duty, altruism, excellence, honesty and integrity, and respect at an undergraduate level^(10,11).

So far, previous studies have tried to assess the professionalism of healthcare professionals but no such study has been conducted to assess the professionalism of dental students at different academic levels in Pakistan^(12,13). Therefore, the objective of our study is to determine professionalism of undergraduate dental students at various academic levels^(14,15).

MATERIALS AND METHODS

This was a descriptive cross-sectional study, conducted between 29th of December 2021 to 10th of June 2022 at different dental colleges of Pakistan. Ethical approval was obtained from the Institutional Review Board of Fatima Memorial College of Medicine and Dentistry, Lahore (FMH-03-2021-IRB-887-M).

Many survey tools for assessing professionalism in healthcare are present^(4,6,10) but we have selected a validated tool for self assessment of professionalism known as Penn State College of Medicine Professionalism (PSCOM) scale. It is a valid, reliable, feasible and acceptable tool that has been used to assess attitudes of faculty and residents towards professionalism in Pakistan^(6,13,14).

This survey tool has six sections for assessing accountability, altruism, duty, excellence, honesty and integrity, and respect. We have added demographic details that suit our purpose. After we sought approval from the corresponding author

to use this tool, the questionnaire was re validated with a pilot survey conducted on out going house officers at Fatima memorial college of medicine and dentistry, Lahore. The pilot survey data was entered in SPSS 23, and Cronbach Alpha was found to be 0.912, which means that this tool has high validity for this our study.

A total of six dental colleges from Pakistan were included in this study. The participants of this study includes students of Bachelors of dental surgery of Pakistan. They were explained the purpose of the study and a voluntary written informed consent was obtained. The response rate of hard copy survey was 83.8% from the Fatima Memorial College of Medicine and Dentistry, Lahore but due to Covid-19 we conducted E-survey from other institutes from which after cleaning the data and removing the unfilled forms the average response rate was found out to be 33.6% as it varies from institute to institute.

The data from the questionnaires were tabulated and entered in a Microsoft excel sheet. The variables included gender, age, academic year, accommodation and institute's name. The data was analyzed using a Statistical Package for the Social Sciences (SPSS) software version 22.0. Standard descriptive statistics were determined. The descriptive stats were determined after checking the normality of the data. Chi square test was applied to know the association with demographic details and participant's perception of professionalism.

RESULTS

The total number of participants were 403 containing 129 (32%) of men and 236 (58.6%) of women. The respondents were divided structurally into four categories according to their academic levels, this includes 92 respondents of BDS1, 91 respondents of BDS2, 110 respondents of BDS3 and 110 respondents of BDS4. Their average age was 21.6 years. The minimum age of the respondents in the research sample was 18 and the maximum age was 28 years. The number of day scholars were 123 (30.5%) as compared to students living in hostels which were 61 (15.1%). The data about the general socio-demographic characteristics of the respondents, is shown in results table 1.

Table 1: Demographic distribution of participants based on their response to the questions.

Gender	
Male	129
Female	236
Missing	41
Accommodation	
Day scholars	123
Living in hostels	61
Missing	219
Institute	Total Participants
Fatima Memorial College of Medicine and Dentistry, Lahore	178
Akhter Saeed Medical and Dental College, Lahore	94
Liaquat Medical College, Karachi	52
Fatima Jinnah Dental College, Karachi	15
Hamdard Medical and Dental College, Karachi	51
Khyber Medical and Dental College, Peshawar	13

Table 2: Distribution of participants based on their professionalism among four BDS classes

	Pre-Clinical years		Clinical years		Total
	BDS1	BDS2	BDS3	BDS4	
Accountability	3.003 (0.772)*	3.120 (0.696)	3.028 (0.507)	3.028 (0.536)	3.044
Altruism	2.998 (0.8110)	3.029 (0.669)	2.737 (0.486)	3.019 (0.489)	2.945
Duty	2.954 (0.672)	2.989 (0.7344)	2.886 (0.530)	3.012 (0.505)	3.038
Excellence	2.949 (0.651)	3.095 (0.676)	3.127 (0.579)	2.981 (0.516)	3.038
Honesty and Integrity	2.856 (0.7484)	3.071 (0.708)	2.990 (0.520)	2.939 (0.484)	2.964
Respect	2.847 (0.755)	2.970 (0.700)	2.986 (0.480)	3.101 (0.449)	2.976

*Mean (Standard deviation), Result shows Likert score.

The average value of professionalism is 2.934 for BDS1, 3.045 for BDS2, 2.959 for BDS3 and 3.013 for BDS4 respectively. The average value of sub components of professionalism is 3.044 for accountability, 2.945 for altruism, 3.038 for duty, 3.038 for excellence, 2.964 for honesty and integrity and 2.976 for respect. These results shows that professionalism has neither increased nor decreased significantly over the academic years which shows concern. The remaining data about the professionalism of dental students at various academic levels is shown in table 2 and figure 1 respectively.

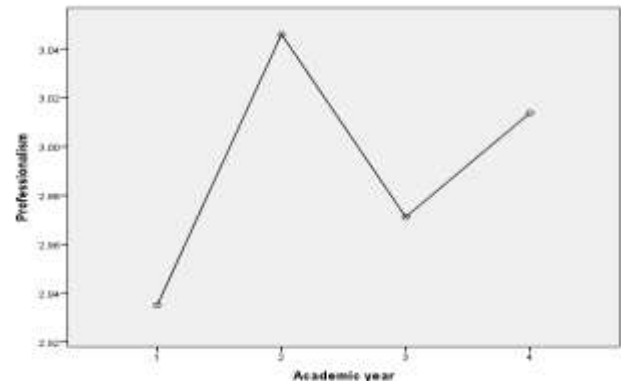


Figure 1: The graphical representation shows that professionalism increases in second academic year from the baseline but overall change in professionalism is insignificant over the academic years.

DISCUSSION

The objectives of this study was to determine professionalism of dental students at various academic levels. The study results depict professionalism minimal growth in first two years, and this actually decrease when they come in contact with patient. The whole proposes of entering into professional study is not only to gain knowledge and skills but also to learn and display professional behavior. Professionalism in healthcare is indeed difficult area where an improvement can occur, it requires a lot of effort and time. The same tool when used in other settings has produced somewhat different results across Pakistan.

In post graduate settings the trainees are committed to the specialty, profession and leadership. So, as a torch bearer they must display professionalism or internalized the professional attributes. In medical side the results are better as there is a professionalism curriculum and a wave change has already swept across the medical fraternity whereas dentistry in Pakistan is lagging behind in this aspect.

In western studies growth of professionalism has been assessed as an independent competence. The expecting growth of professionalism across the academic year is desirable and this phenomenon has been studied in west. It is interesting how they have achieved it^(17,18). Previous literature in Pakistan has highlighted the lack of growth in professionalism in dentistry. This is due to lack of effective professionalism curriculum despite presence of subjects to address this need and justifying the need for a formal curriculum on professionalism^(6,17). It is necessary to assess this competency at an undergraduate level in order for graduates to achieve clinical excellence. The foremost imperative mission of dental education ought to be the improvement of graduates professionalism. It is only within the context of professionalism that specialized knowledge and technical expertise find meaning and this has been highlighted in western literature⁽¹⁹⁾.

Dental graduates should exhibit professionalism in dental settings in order to perceive and interpret practical situations accurately⁽²⁾. Being professional is crucial in dentistry as it is a hallmark of the profession, this includes taking responsibility of your patients, committing to patient confidentiality, and having

patient-centered care for them ⁽⁷⁾. It also entails effective communication, active listening, integrity, responsible and empathy ^(8,13).

The dental curriculum in Pakistan is ossified and is not specifically designed to improve professionalism at academic levels, we need a situated professionalism curriculum which stress on professional attributes and cover a much broader spectrum of this core competency ^(15,17,19). We may require action research in field of dental professionalism to situate and contextualize it for our needs.

Strategies like faculty role models, case-based scenarios and role plays may be utilized to teach professionalism. However, effective role modelling stays the corner stone for professionalism development along with duty and accountability. We recommend a formal curriculum must be made that actually change the professional attributes of dental professionals, and likewise dental education standard and quality should be enhanced.

Strengths/Impact: It is a multi-institutional study for measuring professionalism in dental undergraduate students and it can be generalized as it covers people from various provinces of Pakistan having different backgrounds. We have obtained the need analysis and this may be consider in future for education leadership for stake holders and policy makers as they should take this into account that if these less than professional graduates went abroad for practice then how will they perform according to the modern standards. So, there is a need to include and improve these core competencies in dental undergraduate students formal curricula at every academic level.

Limitations: A lack of previous studies and online survey method can lead to a lack of number of responses or non- biased responses.

CONCLUSIONS

Lack of any substantial growth in professionalism of dental graduates shows concern. These results shows that professionalism has neither increased nor decreased significantly over the academic years which tend to overestimate the fact that there is a need to promote personal and professional advancement throughout the undergraduate dental education course.

Conflicts of interest: The authors have no conflicts of interest.

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