ORIGINAL ARTICLE

Dental graduates' perspective of professionalism competences from a developing country

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Abstract

Objective: To evaluate the perception of fresh dental graduates regarding professional competences essential for a graduating dentist.

Methods: This quantitative, descriptive, cross-sectional study was conducted at four public and four private sector dental colleges in Punjab, Pakistan, from June to December 2014, and comprised dental graduates of the years 2013 and 2014. A comprehensive document containing 32 professionalism competences, divided into 3 sub-domains, was developed based on the competence documents of local and foreign accrediting bodies. Responses were recorded on a five-point Likert scale. The competences were categorised as 'essential' and 'good to have' based on the agreement cut-off of 75%. SPSS 21 was used for data analysis.

Results: Of the 386 participants, 152(39.4%) were from public-sector colleges and 234(60.6%) from private ones. The overall mean age was 23.69±1.06 years. Of the 32 competences, the participants marked 18(56.25%) as 'essential' and 15(46.9%) as 'good to have'. In the latter category, 3(20%) competences were from the domain of professional attitude and behaviour, 7(46.6%) from ethics and jurisprudence and 4(26.7%) from the domain of communication and interpersonal skills.

Conclusion: Pakistani dental graduates had an overall positive attitude regarding professionalism competences.

Keywords: Professionalism, Competences, Dentistry, Attitude, Pakistan. (JPMA 67: 1339; 2017)

Introduction

The word 'professional' comes from Latin 'professio' meaning 'to admit openly with an oath'. Dentistry qualifies as a profession as dental surgeons are a group of essential service providers who have committed among themselves and with the society to provide highest quality of oral health care to people by giving priority to the needs of the public over their self-interest thus entering in a social contract.[1] But do beginning students and fresh dental graduates understand the concept of professional competence and social contract? Can they explain why they are called professionals and what traits they need to be equipped with to become professionals in the field? Are the dental schools passing over these competences systematically to their graduates?

Literature highlights that most of professionalism or professional competence is not taught in as part of formal curriculum in most of the dental schools around the globe, which in turn leads to conceptions of the competence generated by students which is evident by non-professional behaviour of dental students and consequently commercialisation of dental enterprise.[2,3] Therefore, dental associations, organisations and accredited bodies across the world have listed competences of professionalism in their competence statements which has made teaching of professionalism mandatory for all dental institutions.[4-7] The Higher Education Commission (HEC) and Pakistan Medical and Dental Council (PMDC), the local accrediting body, have drafted a Bachelor of Dental Surgery (BDS) curriculum which includes seven outcomes of a graduating dentist, the first of which is professionalism and the second is interpersonal and communication skills.[8] However, the PMDC document is the first draft of the curriculum that still needs to be appraised by experts in the field and validated by all stakeholders. The current study was planned to assess the level of agreement of Pakistani dental graduates with the local and international professionalism competences so as to develop an understanding of the way professionalism as viewed by the future generation of dentists.

Subjects and Methods

This quantitative, descriptive, cross-sectional study was conducted at four public and four private sector dental colleges in Punjab, Pakistan, from June to December 2014, and comprised dental graduates of the years 2013 and

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2014. The colleges offered house jobs as per regulations of the PMDC. Ethical approval for the study was obtained from the institutional review board. Initially, 19 colleges were approached for the study, of which 16 colleges granted permission; of them, four public-sector and four private-sector dental colleges were selected through random sampling by lottery method.

The survey was based on a captive, close-ended questionnaire. The participants had studied the same curriculum and had either completed or were doing house job at dental teaching hospitals. All female and male graduates who were available at the time of data collection and gave their written consent to participate in the study were approached. A survey form containing the cover letter explaining the purpose of the project and assuring them of the confidentiality of their replies was distributed and procedure for answering the questionnaires was explained.

The first section of the questionnaire comprised of questions about each dentist's personal characteristics, i.e. age, gender, year of graduation and type of institution. The second section contained competence questions on a five-point rating scale. The responses were: strongly agree, agree, not sure, disagree and strongly disagree. The competence items were generated from the draft curriculum BDS of the PMDC,[8] American Dental Education Association[4] competences for a new general dentist, profiles and competences of graduating European dentists,[5] Australian Dental Council's (ADC) professional attributes and competences of the newly qualified dentist[6] and competences of a beginning dental practitioner in Canada.[7]

Overlapping competences were excluded to develop a comprehensive document containing three domains of professionalism under which were grouped 32 competences: 1) professional attitude and behaviour, 2) ethics and jurisprudence, and 3) communication and interpersonal skills. Two levels of achievement were highlighted: a) be competent at (meaning that a graduating dentist will be able to do a specified task without supervision), and b) have knowledge of (meaning that the graduating dentist will have a sound knowledge and understanding of the task and will be able to carry it out with the help of expert supervision).

Questionnaire was pretested on 30 graduates of a dental institute for its level of comprehension and time taken to fill in. Average time spent in form filing was noted as 15 minutes. Internal consistency between responses was assessed by average inter-item correlation through Cronbach's alpha, the value of which was 0.82. The final questionnaire was developed grouping the 32 competences making sure that all the questions were concise and clear.

Data was analysed using the SPSS 21. Competence items were computed into frequencies and percentages. For convenience of analysis, the five-point Likert scale was re-coded and re-categorised into three groups: 1- agree (which combined the strongly agree and agree scores), 2- not sure (which was kept as original), and 3- disagree (this combined disagree and strongly disagree scores). Competence items in each domain were grouped in two categories based on the percentage of graduates agreeing to that particular competence. If more than 75% of the graduates agreed, the competences were termed as 'essential'; if the agreement was less than 75%, the competences were categorised as 'good to know'.

Results

Of the 400 questionnaires distributed, 386(96.5%) were returned duly filled in. The number of included questionnaires from public-sector dental colleges were 152(39.4%) while 234(60.6%) of the questionnaires were filled in by dental graduates of private dental colleges. The overall mean age was 23.69±1.06 years, whereas 114(29.5%) participants were males and 272(70.5%) females. Moreover, 189(49%) participants graduated from dental college in 2013 while 197(51%) graduated in 2014.

All 32 professionalism competences were grouped into three domains. In the sub-domain of professional attitude and behaviour, the highest level of agreement was with the competence of "displaying appropriate caring behaviour towards patients and show willingness to help" and the lowest level of agreement with the competence "seeking continuing professional development (CPD) on an annual basis, demonstrated through portfolio/CPD logbook". In the ethics and jurisprudence category, 376(97.4%) of the graduates agreed that they should have the competence of "providing humane and compassionate care to all patients" while less than 231(60%) thought that having "knowledge of the judicial, legislative and administrative processes and policy that impact all aspects of dentistry" was important for a Pakistani dental graduate. In the sub-domain of communication and interpersonal skills, 351(90.9%) of the graduates agreed that "establishing a patient-dentist relationship that allows the effective delivery of dental treatment" was important. However, only 234(60.6%) participants considered "communicating with other doctors and health professionals" as important (Table-1).

Of the 32 competences, 18(56.25%) were categorised as "essential" and 15(46.9%) as "good to have". In the 'good

Table-1: Dental graduates' agreement level with three sub-domains of Professionalism competences defined by local and international accrediting bodies.

	Agree n (%)	Not Sure n (%)	Disagree n (%)
Professional Attitude and Behaviour			
A: Essential Competences			
1. Displaying appropriate caring behaviour towards patients and show willingness to help	383 (99.2)	2 (0.3)	1 (0.5)
2. Displaying professional behaviour towards all members of the dental team	366 (94.8)	10 (2.6)	10 (2.6)
3. Have knowledge of the management of a dental practice	355 (92.0)	20 (5.2)	11 (2.8)
4. Deal with other members of the dental team with regard to health and safety	326 (84.5)	33 (8.5)	27 (7.0)
5. Have knowledge of the importance of health in relation to occupational hazards and its impact	313 (81.1)	44 (11.4)	29 (7.5)
6. Have knowledge of the Social and psychological issues relevant to the care of patients	311 (80.6)	50 (13.0)	25 (6.5)
B: 'Good to Have' Competences			
7. The management of a dental practice, patient communication and able to oversee financial aspects of practice	266 (68.9)	68 (17.6)	52 (13.5)
8. Managing and maintaining a safe working environment	259 (67.1)	54 (14.0)	73 (18.9)
9. Seeking continuing professional development (CPD) on an annual basis, demonstrated through portfolio/CPD Logbook	198 (51.3)	88 (22.8)	100 (25.9)
Ethics and Jurisprudence			
A: Essential Competences			
1. Providing humane and compassionate care to all patients	376 (97.4)	5 (1.3)	5 (1.3)
2. Practicing with personal and professional integrity, honesty and trustworthiness.	370 (95.9)	9 (2.3)	7 (1.8)
3. Respecting patients and colleagues without prejudice concerning gender, diversity of background opportunity, language, culture, disabilities and sexual orientation.	363 (94.0)	11 (2.8)	12 (3.1)
4. Recognising their own limitations	354 (91.7)	26 (6.7)	6 (1.6)
5. Producing and maintaining an accurate patient record and record of patient treatment.	345 (89.4)	25 (6.5)	16 (4.1)
6. Selecting and prioritising treatment options that are sensitive to each patient	306 (79.3)	54 (14.0)	26 (6.7)
7. Recognising patients' rights, particularly with regard to confidentiality, informed consent, and patients' obligations	301 (78.0)	48 (12.4)	37 (9.6)
8. Have knowledge of the ethical principles relevant to dentistry	288 (74.6)	45 (11.7)	53 (13.7)
9. Acknowledging that the patient is the centre of care and that all interactions, including diagnosis, treatment planning and treatment, must focus on the patient's best interests	281 (72.8)	54 (14.0)	51 (13.2)
10. Have knowledge of the fact that dentists should strive to provide the highest possible quality of patient care in variety of circumstances.	277 (71.8)	69 (17.9)	40 (10.4)
11. Taking action that is audit and clinical governance to ensure quality of care	274 (71.0)	72 (18.7)	40 (10.4)
B: 'Good to Have' Competences			
12. Selecting and prioritising patient's individual needs, goals and values, compatible with contemporary methods of treatment, and congruent with an appropriate oral health care philosophy.	267 (69.2)	89 (23.1)	30 (7.8)
13. Have knowledge of the socio-economic inequities and inequalities in oral health.	249 (64.5)	87 (22.5)	50 (13)
14. Taking appropriate action to help the incompetent, impaired or unethical colleague and their patients.	248 (64.2)	88 (22.8)	50 (13.0)
15. Have knowledge of the judicial, legislative and administrative processes and policy that impact all aspects of dentistry	231 (59.8)	107 (27.7)	8 (12.4)
Communication and Interpersonal Skills			
A: Essential Competences			
1. Establishing a patient-dentist relationship that allows the effective delivery of dental treatment including, when appropriate a relationship with a parent or carer	351 (90.9)	29 (7.5)	6 (1.6)
2. Identifying patient expectations, desires and attitudes (needs and demands) when considering treatment planning and during treatment	303 (78.5)	43 (11.1)	40 (10.4)
3. Sharing information and professional knowledge with the patient	302 (78.2)	41 (10.6)	43 (11.1)
4. Identifying the psychological and social factors that initiate and/or perpetuate dental, oral and facial disease and dysfunction and diagnose, treat or refer, as appropriate	291 (75.4)	80 (20.7)	15 (3.9)
5. Have knowledge of the Behavioural sciences including behavioural factors (including factors such as ethnicity and gender) that facilitate the delivery of dental care	270 (69.9)	69 (17.9)	47 (12.2)
B: 'Good to Have' Competences			
6. Have knowledge of the role and the stages of the intellectual, social-emotional and language development of children and adolescence	250 (64.8)	95 (24.6)	41 (10.6)
7. Applying principals of stress management to oneself, to patients and to the dental team as appropriate	249 (64.5)	77 (19.9)	60 (15.5)
8. Communicating with other doctors and health professionals, verbally and in writing including being able to receive and give constructive criticism.	234 (60.6)	88 (22.8)	64 (16.6)

n = Frequency, (%) Percentage.

Table-2: Categorisation of 32 Professionalism Competences as "Essential" and "Good to Have" based on the percentage of agreement.

	Agree n (%)	Not Sure n (%)	Disagree n (%)
PROFESSIONALISM COMPETENCES (combined)			
A: "Essential" Competences			
1. Displaying appropriate caring behaviour towards patients and show willingness to help	383 (99.2)	2 (0.3)	1 (0.5)
2. Providing humane and compassionate care to all patients	376 (97.4)	5 (1.3)	5 (1.3)
3. Practicing with personal and professional integrity, honesty and trustworthiness.	370 (95.9)	9 (2.3)	7 (1.8)
4. Displaying professional behaviour towards all members of the dental team	366 (94.8)	10 (2.6)	10 (2.6)
5. Respecting patients and colleagues without prejudice concerning gender, diversity of background and opportunity, language and culture, disabilities and sexual orientation.	363 (94.0)	11 (2.8)	12 (3.1)
6. Have knowledge of the management of a dental practice	355 (92.0)	20 (5.2)	11 (2.8)
7. Recognising their own limitations.	354 (91.7)	26 (6.7)	6 (1.6)
8. Establishing a patient-dentist relationship that allows the effective delivery of dental treatment including, when appropriate a relationship with a parent or carer	351 (90.9)	29 (7.5)	6 (1.6)
9. Producing and maintaining an accurate patient record and record of patient treatment.	345 (89.4)	25 (6.5)	16 (4.1)
10. Deal with other members of the dental team with regard to health and safety	326 (84.5)	33 (8.5)	27 (7.0)
11. Have knowledge of the importance of health in relation to occupational hazards and its impact	313 (81.1)	44 (11.4)	29 (7.5)
12. Have knowledge of the Social and psychological issues relevant to the care of patients	311 (80.6)	50 (13.0)	25 (6.5)
13. Selecting and prioritising treatment options that are sensitive to each patient	306 (79.3)	54 (14.0)	26 (6.7)
14. Identifying patient expectations, desires and attitudes (needs and demands) when considering treatment planning and during treatment	303 (78.5)	43 (11.1)	40 (10.4)
15. Sharing information and professional knowledge with the patient	302 (78.2)	41 (10.6)	43 (11.1)
16. Recognising patients' rights, particularly with regard to confidentiality, informed consent, and patients' obligations.	301 (78.0)	48 (12.4)	37 (9.6)
17. Identifying the psychological and social factors that initiate and/or perpetuate dental, oral and facial disease and dysfunction and diagnose, treat or refer, as appropriate	291 (75.4)	80 (20.7)	15 (3.9)
18. Have knowledge of the ethical principles relevant to dentistry	288 (74.6)	45 (11.7)	53 (13.7)
B: "Good To Have" Competences			
19. Acknowledging that the patient is the centre of care and that all interactions, including diagnosis, treatment planning and treatment, must focus on the patient's best interests	281 (72.8)	54 (14.0)	51 (13.2)
20. Have knowledge of the fact that dentists should strive to provide the highest possible quality of patient care in variety of circumstances.	277 (71.8)	69 (17.9)	40 (10.4)
21. Taking action that is audit and clinical governance to ensure quality of care	274 (71.0)	72 (18.7)	40 (10.4)
22. Have knowledge of the Behavioural sciences including behavioural factors (including factors such as ethnicity and gender) that facilitate the delivery of dental care	270 (69.9)	69 (17.9)	47 (12.2)
23. Selecting and prioritising patient's individual needs, goals and values, compatible with contemporary methods of treatment, and congruent with an appropriate oral health care philosophy.	267 (69.2)	89 (23.1)	30 (7.8)
24. The management of a dental practice, patient communication and able to oversee financial aspects of practice	266 (68.9)	68 (17.6)	52 (13.5)
25. Managing and maintaining a safe working environment	259 (67.1)	54 (14.0)	73 (18.9)
26. Have knowledge of the role and the stages of the intellectual, social-emotional and language development of children and adolescence	250 (64.8)	95 (24.6)	41 (10.6)
27. Have knowledge of the socio-economic inequities and inequalities in oral health.	249 (64.5)	87 (22.5)	50 (13)
28. Applying principals of stress management to oneself, to patients and to the dental team as appropriate	249 (64.5)	77 (19.9)	60 (15.5)
29. Taking appropriate action to help the incompetent, impaired or unethical colleague and their patients.	248 (64.2)	88 (22.8)	50 (13.0)
30. Communicating with other doctors and health professionals, verbally and in writing including being able to receive and give constructive criticism.	234 (60.6)	88 (22.8)	64 (16.6)
31. Have knowledge of the judicial, legislative and administrative processes and policy that impact all aspects of dentistry	231 (59.8)	107 (27.7)	8 (12.4)
32. Seeking continuing professional development (CPD) on an annual basis, demonstrated through portfolio/CPD Logbook	198 (51.3)	88 (22.8)	100 (25.9)

n = Frequency, (%) Percentage.

to have' category, 3(20%) competences were from the first domain, 7(46.6%) from the second domain and 4(26.7%) from the last domain (Table-2).

Discussion

Most of the competences were agreed by the graduates to be essential for the dentists of the country to have; however, there were a few essential competences that the graduates perceived to be not that important.

In the first sub-domain of "professional attitude and behaviour", two of the competences that should be considered essential but the study participants did not consider them important to have included safe working environment and seeking CPD. Managing a safe working environment implies that all the dental students must

ensure safety for themselves and for their patients during all dental procedures.[9] Due to the working postures, dentists are known to have one of the highest rates of musculoskeletal disorders in Pakistan.[10] The reason for the low agreement in this area of high importance can be a decreased emphasis on the above by the dental faculty. A recent study in Pakistan has highlighted that senior faculty in Pakistani dental institutions have good knowledge but poor infection control practices.[11] It is advocated that this carefree and negative attitude should be managed by systematic education in the undergraduate years to ensure control of infectious diseases, and to improve the quality of life of dentists.

CPD encompasses all academic activities that are recorded and ensure advancement of professional knowledge of dentists relating to their dental practice.[12] Minimum CPD hours required by each dental professional has been defined by most of the countries as mandatory for the renewal of dental licence. In Pakistan, the dental institutions and organisations are doing sporadic CPD activities, most of which are poorly attended. Lack of interest in CPD is not limited to Pakistani dental graduates or the faculty; similar trend has been reported from Australia. Low CPD attendance has been found in activities which are not made mandatory by the institutions or accrediting bodies as these activities require investment of time and money.[13]

In the sub-domain 2 "ethics and jurisprudence", 75% of fresh dental graduates were in agreement with the listed competences defined by local and international accrediting bodies, which is a reflection of the emphasis that is given to these areas by the dental institutions and its importance in the opinion of fresh graduates. The agreement levels are considered low in areas of having adequate knowledge of providing patient care in a variety of circumstances and understanding socio-economic inequities and inequalities in oral health as these competences are important to be attained by dental graduates in a developing country like Pakistan. This can be a result of the curriculum that is designed to completely train the dental graduates within hospital settings. This does not prepare students for work in primary health care settings and they are also unable to meet the health needs of the poor population.[14] The other reason can be lack of interest of dental faculty in teaching and training students about social inequities and inequalities as this competence is not mentioned in the list of developed PMDC competences in the draft curriculum. For providing highest quality of care in a variety of circumstances, there is a responsibility on the dental teachers to make our students knowledgeable about the urban and rural divide in the community by appreciating differences in culture, language and available resources.

Another important competence given less importance by dental graduates in this study was audit or clinical audit (CA) which is a key component of clinical governance (CG). CG revolves around total quality improvement that holds every person associated with the organisation responsible for carrying out their respective roles in line with highest standards of care.[15] It is recommended that CA and thus CG "should be made part of programmes for health care professionals and key stakeholders at all levels of care",[16] but as for the clinicians these terms have been viewed mostly as boring as reported by researchers from countries where these audits have initially advocated.[17] In Pakistan, clinicians are reported to provide clinical care that is not standardised and is being justified on the grounds of economic and local cultural issues.[18] This can be a result of lack of accountability thus leading to a culture where clinicians do not need to strive for highest quality of care.[18] Recently, health care commission has been established in the country which is advocating and monitoring standards of health care in Pakistan.

Less than 60% of the graduates had a notion that knowing about legislative and administrative issues is essential for them to practise dentistry. This is a significant finding as dental practitioners who are unaware of the legal issues pertaining to their practice will never be able to practise ethically and professionally. The response of the study participants was similar to findings of a study conducted in India where only 50% of the dentists were found to be knowledgeable regarding the local legislation.[19] It is highlighted in the curricula of dental schools that the dental students should be knowledgeable about the ethical and legal issues that direct different aspects of health care.[20] Even then there is a lack of importance on part of the faculty that can be attributed to the absence of a separate course that highlights the judicial and legislative issues of dentistry. The same has been reported to be the case in the United Kingdom (UK) where in 1999 it was highlighted that the curriculum of dental schools lacked a structured component of law and ethics as part of the formal curriculum that led to inadequate teaching and assessment of legal and ethical issues to the undergraduates.[21] It is recommended that a proper ethics and law curriculum be designed for dental students and taught by the specialists in the field.

In the sub-domain 3 "communication and interpersonal skills", more than 75% of the graduates agreed with having a good patient-dentist relationship,

understanding the patient needs, informing him/her properly and also have a good relation with the carers. Four of the defined competences got a low agreement rate. Behavioural science is a subject that is being taught in undergraduate dental curriculum for some years now, and it was surprising to see 70% of the graduates agreeing with it. The reason can be that the subject is taught in pre-clinical years where students do not actually apply the knowledge and it is now proved that out of context learning does not bring much fruit. The teaching of subject in clinical years and assessment in those years might increase the interest of the students in the subject.

As for having knowledge of the "stages of the intellectual, social-emotional and language development of children and adolescence", only 65% of the graduates think it is important. The finding is in line with the overall policy of the PMDC as the faculty of dental institutions, while making the draft curriculum, did not include this as an essential competence in the list and therefore low importance given by the dental graduates is justified.

Approximately 65% of the dental graduates agreed that it is important for them to have stress management skills for themselves, for the patients and the dental team. This is surprising as dental education is stressful and depression, stress, anxiety and possible burnout has been reported in students leading to poor academics, physical, mental and psychological health along with social isolation.[22] Stress management strategies have proven effective but even after 20 years the schools across the world are still not uniformly running or encouraging programmes in stress management.[23] The same has been the case in Pakistan and that can be one of the reasons the students think that the stresses are natural and they have to cope with them and there is no need for formal training and skill building for management of one's own stress and those of others. It is recommended that stress management strategies should be discussed with students as part of the formal curriculum, and lectures on awareness of causes and symptoms of stress should also be formally included.[23]

Up to 40% of the fresh dental graduates think that it is not important to be equipped with the competences of inter-professional communication that is collaborating with other healthcare professionals like doctors, nurses or dental hygienists. This is an area of which reasons need to be explored, as in today's world the main focus of healthcare delivery is in the form of multidisciplinary teams. Inter-professional communication of specialists, general practitioners and allied professions is becoming the mainstay of effective patient care.[24] The lack of importance to inter-professional education (IPE) is not only restricted to graduates of Pakistan, but it has been reported around the world. The reasons given are independent colleges for medicine, dentistry and allied health sciences and lack of emphasis by the dental faculty as it is perceived that dental curriculum is already saturated with no room for additional IPE courses.[25] Therefore, IPE should be incorporated in undergraduate years to inculcate multidisciplinary approach towards patient care.

Based on the results of the current survey, it is recommended that the professionalism competences which are globally considered essential for dentists at the time of graduation from dental school and have received a low agreement level from local dental graduates need to be seriously looked into by the dental school faculties and administrations in light of the recommendations given by local and international accrediting bodies.

Conclusion

Pakistani dental graduates had an overall positive attitude towards professionalism competences defined by the PMDC and global accrediting bodies as none of the competences listed had less than 50% of agreement by the study participants. Out of the 32 competences listed, dental graduates considered 18 as 'essential' while the rest are considered as 'good to have'. The low agreement levels in some competences were justified in the local context and in line with the current curriculum.

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