

Perception of BDS students and fresh graduates about significance of professional ethics in dentistry

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Abstract

Objective: To assess the awareness level of undergraduate dentistry students as well as fresh graduates about the significance of professional ethics.

Methods: The cross sectional study was conducted among the 3rd, 4th and final year male and female BDS students as well as fresh graduate Interns from the College of Dentistry, King Saud University from January to June 2011. The students were asked to give their opinion about need for applications of professional ethics in dental practice on a five point Likert Scale varying from 'strongly agree' to 'strongly disagree'. Minitab statistical software was used for data analysis.

Results: Students at all levels considered professional ethics a very important prerequisite for dental practice with overall mean value of 4.42 ± 0.36 . However, the responses from the senior academic levels were significantly on the higher side compared to those from the junior grades. Generally the religious teachings and spirituality was considered as one of the top most motives for practicing professional ethics in dentistry followed by reputation, financial benefits, fear of punishment and self projection, with overall mean values of 3.93 ± 0.58 , 3.81 ± 0.49 , 3.25 ± 0.94 , 3.21 ± 1.07 and 3.16 ± 1.04 , respectively.

Conclusion: The present findings revealed that Professional Ethics is appreciated by the students as a highly significant factor for their success in dental practice as well as acquiring a good name and position in the society.

Keywords: Professional ethics, Religious teachings, Financial and social benefits, Self projection, Fear of punishment, Personal reputation. (JPMA 64: 118; 2014)

Introduction

Professional ethics in dentistry is one of the basic components for achieving success in dental practice because it ensures patients' confidence in adroitness of the practitioners as well as in the dental procedures to which they are subjected. The American Dental Association (ADA) defines dental ethics under five fundamental principles of the ADA Code that focuses patients' autonomy, non-maleficence, beneficence, justice and veracity.¹ Ideally professional ethics should have been made a part of the dental curriculum. But this subject was ignored for many decades and its significance could not be perceived in its true spirit as is realized today due to the advancement and transformation of dentistry to a full-fledged multidisciplinary profession. This is because the dentistry had been merely limited to extractions and providing dentures to the patients up to the 19th century; when the apprenticeship style of

training was very common to fulfill the needs of society.² With the increase in population as well as oral health problems, there arose a significant realization for establishing formal dental schools to meet overwhelming demand for dentists. This consciousness led to establishment of formal dental schools. The Baltimore College of Dental Surgery was the first dental institution, which was chartered in 1840.³ The establishment of dental schools resulted in tremendous progress in the dental profession. The 20th century commenced with many technological changes including the use of X-Ray machine as a diagnostic tool as well as procaine as an injectable local anaesthetic replacing cocaine due to its addictive nature. Likewise a variety of new instruments, dental materials were invented which brought a great revolution in dental practices.

All such revolutionary changes necessitated adherence to professional ethics in dentistry. Accordingly, modifications were made in the dental curricula aiming to include behavioral phenomena, attitude, values and norms which help the dentists in carrying out their daily practice efficiently to meet expectations of their patients.⁴⁻⁶ That is why we have seen an increased focus on professionalism both in medicine and dental

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practices over the last three decades. Both professions are now more organized and have given significant importance to professional ethics both at academic and practice levels. These developments may also be attributed to broadly occurring changes in the society by print and electronic media. Now-a-days more importance is given to oral health care (OHC), particularly to the new diseases and high profile cases, transformation and improvements in the philosophy of patient care and the changes the regulatory bodies has brought about under governmental pressures.⁷⁻⁹ In turn, the emphasis in dental education has been amplified and the professionalism is now a spotlight of undergraduate and postgraduate curricula.^{6,10,11} Now we see a consensus among the experts in dental education that comprehension of knowledge and clinical skills although basic requirements in dentistry, are not sufficient to ensure quality in oral health practices without the application of professional ethics and practice management skills. Due to such reasons dental curricula have been revised across the world to include courses on professional ethics and behavioural sciences to equip the future dentists with knowledge of ethics required for an efficient and successful dental practice. Today most of the dental schools around the world^{12,13} teach dental ethics as a subject which enables fresh graduates to treat their patients with zeal, commitment, and fairness guided by accepted norms and codes of ethics. In a nut shell, teaching of professional ethics in dentistry facilitates personal and professional development of aspiring dentists into socially and professionally responsible human beings.¹⁴

The present study was therefore carried out to evaluate understanding and aspirations of undergraduate dentistry students and fresh graduate Interns towards significance of professional ethics in the practice of dentistry. The findings will help the curriculum specialist of the developing countries to include this subject as a part of BDS training in their respective countries.

Subjects and Methods

The cross sectional survey was conducted from January to June 2011 at Deriyah University Campus (DUC, Male section) and Malaz University Campus (MUC, Female section) of the College of Dentistry situated in Riyadh, Kingdom of Saudi Arabia. Both campuses offer Bachelor of Dental Surgery (BDS) degree and follow the same curriculum. The two campuses are administered by the same Dean, Vice-Deans and Chairpersons of departments.

The study aimed at seeking perception of the future dentists to address the following possible questions in Saudi Arabian perspective: Do the dentists adhere to professional ethics in their practice? Should the professional ethics be followed to maintain a good reputation? Do the dentists employ professional ethics in their practice for self projection? Professional ethics in dentistry is followed for social and financial benefits? To what extent, the fear of punishment from seniors compels the students to follow professional ethics? To what degree the religious teachings play a role in following the professional ethics in dental practice?

In line with the focus of the study, the questionnaire was developed and initially distributed among the 20 BDS Interns to check their validity and practicability. The recommendations of the respondents were considered and the questions were rephrased to ensure clarity, viability and validity of the questionnaire.

All students enrolled in Third, Fourth and Fifth year of BDS Programme at two campuses were eligible to fill the forms. Besides, approximate 125 Interns of the College of Dentistry were also included in the study making the total study population 550 students. The distribution and collection of the form was done through Class Representatives (CRs) in case of students and through the Chief Nurse in case of Interns. The respondents were at liberty to fill these forms according to their personal experiences and independent perceptions. It was made clear to all respondents that their participation in the study was voluntary and filling of the forms would be considered as an indirect informed consent. However, personal identities of the respondents were concealed and anonymity was ensured in the questionnaire except gender, academic level and campus. A total of 550 survey forms were distributed out of which 505 forms were received back. Thus a high response rate of 91.8 percent showed that the students were aware of the significance of the study. The received survey forms were thoroughly examined. Incomplete and partially filled forms were excluded and only the complete forms were used for the statistical analyses.

The questionnaire included 6 questions covering possible reasons for employing professional ethics in dental practice. All questions were closed response questions wherein the students were required to score their opinion on a five point Likert Scale¹⁵ ranging from Strongly Agree to Strongly Disagree with corresponding numerical values

of 5 to 1, respectively.

The data was analysed using the Minitab Statistical Software version 15.1.31.0.¹⁶ Analysis of Variance was computed for each factor to determine the most important factor/s affecting the perception of undergraduate BDS students and fresh graduates regarding the adoption of professional ethics in dental practice. Besides interaction among different factors were calculated. The t-tests were worked out to evaluate variations in the responses of male and female students to each sub-factor. Significance was tested at $P < 0.05$ level of probability.

Results

Analysis of variance (ANOVA) presented in Table-1

exhibited highly significant impact of gender, academic level and types of questions asked on students' responses to significance of professional ethics in dental practice ($p < 0.05$). Statistical analyses further revealed significant interactions between all the factors at $p < 0.05$ level of probability. As is evident from Table-2, the comparison of mean values of responses to the questions asked from the 3rd year and 4th year BDS students exhibited significant differences when T-Test was applied at 95% level of confidence. However results of the T-test were found non-significant in case of 5th year BDS students and Interns/fresh graduates as shown by their corresponding P values of 0.066 and 0.331, respectively.

The mean response pertaining to the first question

Table-1: Analysis of Variance showing significance of different Factors on the Mean Perception of students concerning adoption of Professional Ethics by the dentists in their Practice at $p < 0.05$.

Source of Variations	df	Sum of Square	Mean Square	F-Value	P-value
Type of Question (Characteristics)	5	10.45	2.09	41.59	0.001
Gender	1	3.34	3.34	66.53	0.001
Academic Level	3	1.89	0.63	12.58	0.001
Interaction					
Type of Questions and Gender	5	0.92	0.18	3.69	0.022
Type of Question and Academic Level	15	2.27	0.15	3.02	0.020
Gender and Academic Level	3	0.74	0.24	4.91	0.014
Error	15	0.75	0.05		
Total	47	20.39			

Table-2: T-Test Comparing mean values of responses to the Questions Asked (N) from Undergraduate BDS students as well as Interns at $p < 0.05$.

Academic Level	N	df	T Stat	P(T<=t) two-tail
3rd year BDS Students	6	5	6.55	0.0012
4th year BDS Students	6	5	5.97	0.0018
5th year BDS Students	6	5	2.34	0.0662
Interns and Fresh BDS Graduates	6	5	1.07	0.33142

focusing importance of professional ethics exhibited highest values irrespective of gender viz-a-viz 4.8 ± 0.24 , 4.59 ± 0.25 , 3.83 ± 0.98 and 4.48 ± 0.46 on 5 point Likert scale in respect of Interns, 5th year, 4th year and 3rd year students, respectively (Table-3 and 4). As far as students' responses to other factors influencing practicing of professional ethics such as personal reputation, self projection, financial benefits, fear of punishment and religious obligations are concerned, the students ranked

Table-3: Mean Responses of 3rd year and 4th Year BDS students in relation to Significance of Professional Ethics in Dentistry.

Detail of Survey Questions	Respondents' Academic Level					
	3rd Year BDS Students			4th Year BDS Students		
	Female \pm SD	Male \pm SD	Average of Male and Female Responses Mean \pm SD	Female \pm SD	Male \pm SD	Average of Male and Female Responses Mean \pm SD
1. The dentists should adhere to professional ethics?	4.78 \pm 0.28	4.17 \pm 0.5	4.48 \pm 0.46	4.68 \pm 0.18	2.98 \pm 0.45	3.83 \pm 0.98
2. Should the professional ethics be followed to maintain a good reputation?	3.89 \pm 0.82	2.78 \pm 1.03	3.33 \pm 0.94	4.44 \pm 0.79	3.70 \pm 0.51	4.07 \pm 0.68
3. Do the dentists employ professional ethics for self projection?	3.24 \pm 1.08	2.52 \pm 1.0	2.88 \pm 1.03	3.50 \pm 1.06	3.37 \pm 0.87	3.44 \pm 0.96
4. Professional ethics in dentistry is followed for social and financial benefits?	3.03 \pm 1.0	2.59 \pm 0.99	2.81 \pm 1.00	3.68 \pm 0.93	3.67 \pm 0.60	3.68 \pm 0.78
5. Do you entrust professional ethics due to fear of punishment form seniors?	3.30 \pm 0.95	2.38 \pm 0.94	2.84 \pm 0.94	3.59 \pm 1.05	3.37 \pm 1.21	3.48 \pm 1.13
6. Do you follow professional ethics to obey religious obligations?	4.05 \pm 0.56	2.78 \pm 0.82	3.42 \pm 0.74	4.44 \pm 0.87	3.58 \pm 1.10	4.01 \pm 1.04

Table-4: Mean Responses of 5th year students and Interns/Fresh graduate Interns in relation to Significance of Professional Ethics in Dentistry.

Detail of Survey Questions	Respondents' Academic Level					
	5th Year BDS Students			Interns and Fresh BDS Graduates		
	Average of Male and Female Responses			Average of Male and Female Responses		
	Female±SD	Male±SD	Mean±SD	Female±SD	Male±SD	Mean±SD
1. The dentists should adhere to professional ethics?	4.88±0.00	4.29±0.34	4.59±0.25	4.97±0.18	4.63±0.28	4.80±0.24
2. Should the professional ethics be followed to maintain a good reputation?	4.24±0.62	3.76±0.72	4.00±0.67	4.06±0.77	3.63±0.57	3.85±0.67
3. Do the dentists employ professional ethics for self projection?	3.38±0.92	3.22±0.95	3.30±0.94	2.87±1.22	3.13±1.04	3.0±1.13
4. Professional ethics in dentistry is followed for social and financial benefits?	3.64±0.77	3.12±0.92	3.38±0.84	2.97±1.14	3.29±1.01	3.13±1.09
5. Do you entrust professional ethics due to fear of punishment form seniors?	3.62±1.0	3.16±1.06	3.39±1.13	3.26±1.10	2.98±1.25	3.12±1.18
6. Do you follow professional ethics to obey religious obligations?	4.52±0.50	3.73±0.74	4.12±1.04	4.42±0.57	3.94±0.85	4.18±0.75
	Overall Mean responses from all Years					
	Female	Male	Overall Mean±SD			
	4.83	4.02	4.42±0.36			
	4.16	3.47	3.81±0.49			
	3.25	3.06	3.16±1.04			
	3.33	3.17	3.25±0.94			
	3.44	2.97	3.21±1.07			
	4.36	3.51	3.93±0.58			

religious teaching as one of the prime reasons and motives with mean values of 4.18±0.75, 4.12±1.04, 3.58±1.10 and 3.42±0.74 in case of Interns, 5th year, 4th year and 3rd year students irrespective of gender, respectively. The overall mean values given in the Table 4 revealed that order of factors motivating the students for adhering to the ethical values in dental practice was religious obligations followed by good reputation, social and financial benefits, fear of supervisor and self projection as depicted through their corresponding overall mean values of 3.93±0.58, 3.81±0.49, 3.25±0.94, 3.21±1.07 and 3.16±1.04, respectively.

Discussion

As is evident from the results, the magnitude of students' interaction with patients as well as their advancement with the academic levels significantly affected their responses. For example third year students' mean response to the first question was 4.48±0.46 which increased to 4.59±0.25 and 4.80±0.24 in case of fifth year students and Interns, respectively. Our observation was further strengthened by the results of interactions which also exhibited significant impact of academic levels and gender on responses to the questions asked.¹⁷ Nature of the questions asked, revealed significant differences among perceptions of

the 3rd and 4th year students irrespective of their genders (Table-2). However responses to the questions were found non-significant in case of 5th year students and Interns. This obvious grouping may be attributed to level of their involvement in dental practice. The former are more involved in course work whereas the latter are more involved in clinical training where they directly deal with patients under supervision.

Mean values indicated that all respondents recognized professional ethics as a crucial element in dental practice with an overall score of 4.42±0.36 (Tables-3 and 4). The responses of 5th year students and Interns were however higher as compared to those of the 3rd and 4th year students. Besides, average responses of female students were generally on higher side than those of their male counterparts in all academic levels. This may be due to the fact that females invoke significantly different decision rule than their male counterparts.¹⁷ The results are in line with those of Beltramini et al. who found that female students are more concerned about ethical issues than males.¹⁸

The present findings revealed religious teachings as a chief motive for adhering to the professional ethics with an overall mean score of 3.93±0.58. The literature

reveals that religion and spirituality motivates and compels young peoples to contribute to the greater good through involvement of transcendence and devotion that lead to betterment of humanity.¹⁹ The spiritual development asserts the people to go "beyond the self" which is a required characteristic in the professional ethics, especially in health care sector.²⁰ Erikson stated that religion constitutes an important component for development of personal character. He substantiated that religion is the oldest and long lasting institution that serves as main source of moral codes and values, which encourages fidelity and plays a key role in character building of the youngsters.²¹ This is unexpected here that the 4th year female students attributed highest level of importance equally to both religious teachings and good reputation as a reason for following professional ethics with a score of 4.44 ± 0.87 and 4.44 ± 0.79 , respectively; but the 4th year male students gave more importance to the reputation factor than to religious teachings, with an average score of 3.7 ± 0.51 and 3.58 ± 1.10 , respectively. The financial gains and social benefits were given 3rd priority among the five factors. The results are in conformity to the findings of Bernard (2009) who concluded that modern medical ethics is standing on four pillars i.e. justice, beneficence, autonomy and non-maleficence.²² Today health care sector has evolved into business wherein dentistry is considered as high profit business, so it is natural to consider financial gains as a significant reason for following professional ethics and best practices in dentistry.²³

The fear factor as a justification for adhering to professional ethics was rated at the fourth place with an overall mean score of 3.21 ± 1.07 for all years though female placed this factor at fourth place with overall mean score of 3.44 ± 0.55 . A minute perusal of data showed that this difference was found among 3rd year students as well as female Interns who gave one step higher priority to the fear factor as compared to their male counterparts. This may be due to the fact that the female students generally behave more ethically and have more respect for their supervisors as compared to their male counterparts. So actually this is not a matter of fear but is a matter of conscience and sense of responsibility due to which female students gave this factor more importance than financial or social gains. Similar conclusions were drawn by Jill (2008) who reported that private sector physicians know the fact that their professional ethics are scrutinized by the seniors, due to which they gave more attention to ethics during their practice.²⁴ Perusal of the results

further exhibited that self projection was considered as the least important factor in observance of professional ethics in dentistry with an overall average score of 3.16 ± 1.04 . The same trend was observed in case of 4th year, 5th year students and Interns with an average score of 3.44 ± 0.96 , 3.3 ± 0.94 and 3.0 ± 1.13 , respectively. The third year male students however deviated and placed the fear factor as the least important reason behind pursuance of professional ethics in the practice.

Conclusion

The study suggested Professional Ethics as a highly significant success factor in practicing dentistry. The students have realized that Professional Ethics may be beneficial for earning a good name and establishing their position in the society. Among various factors, the religious teachings have shown significant influence on students' responses to follow moral values, codes and principles of ethics. The studies therefore suggest that a course on Professional Ethics in Dentistry including some religious teachings as a module of this course may be made an integral part of the BDS curriculum.

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