

Original Article

KNOWLEDGE, ATTITUDES, AND PRACTICES REGARDING DENTAL ETHICS AMONG STUDENTS AND RECENT GRADUATES IN A PUBLIC SECTOR DENTAL HOSPITAL

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ABSTRACT

Objectives: The purpose of this study was to examine undergraduates and recent dentistry graduates' ethical knowledge, practices, and views of the ethical atmosphere of the institution.

Materials and Methods: A questionnaire based descriptive cross-sectional study was carried out on a total of 250 students from 2nd year, 3rd year, Final year, House officers and postgraduate students of the institution. There were only closed-ended questions on the 20 self-administered items in the questionnaire. After that, SPSS version 26.0 was used to analyse the returned questionnaires. A total of 250 applicants received questionnaires. For every piece of data that was gathered, descriptive analysis was done, and the Chi squared test was used.

Results: The study population was female dominant (n=135) (54%). The findings showed that merely 78% of the applicants knew of the PMDC's code of ethics, and 10% knew about the global code of ethics. On the other hand, the applicants' views were observed to be favourable 90%, demonstrating that students were typically kind and committed to their jobs. Furthermore, a positive attitude toward dental care ethics procedures was observed.

Conclusion: As students have shown a positive attitude toward their profession and ethical dentistry, more focus should be allocated to support dental students in terms of dental ethics education at educational institutions.

Key words: Dental Ethics, Ethical Practice, KAP, PMDC code of ethics

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INTRODUCTION

Ethics has been described as “the science of moral Responsibilities of a dentist towards his pa-

tients, fellow colleagues and society”¹. In a similar way, dental ethics applies these moral precepts and ideals to the dental profession². Many ethical concerns come up in dental practice, including dentists' interactions with patients and coworkers³. Various dental codes of ethics emphasize that these issues must be managed with sensitivity, discretion, and professionalism⁴. These rules allow a dentist to evaluate and apply moral principles and acts when interacting with patients⁵⁻⁷. To ensure the greatest possible patient treatment and outcome, ethical

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practices should be taken into consideration while evaluating individual morality such as issues of informed consent for novel procedures, overtreatment for financial gain, balancing cosmetic demands with clinical necessity, digital data privacy in electronic records, and ensuring equitable access to advanced dental technologies⁷⁻⁹.

The fast advancement of medical technology is posing several ethical challenges for healthcare practitioners, whether they are aware of it or not¹⁰. As oral health care advances, new moral conundrums also arise concerns regarding overtreatment, cosmetic versus necessary interventions, patient consent for novel technologies, digital data privacy, and equitable access to advanced care. These have exacerbated issues and called on experts to handle them professionally and sensitively⁶. Even with all the laws and guidelines governing professional behaviour, there are still more and more accounts of ethical transgressions by dentists and dental students against patients and other professionals¹¹. The Pakistan Medical and Dental Council (PMDC) possesses a medical and dental ethics code that is tailored to address ethical difficulties that arise in Pakistani settings¹². However, the absence of oversight by authorities and low public knowledge might be contributing to a rise in misbehaviour.

There has been some disagreement concerning the subject matter at the basis of the discussion about the efficacy of dental ethics education¹³. Dental schools teach about informed consent and other agreed-upon topics like what to do if a senior dentist mistreats patients or staff, how to report any crime related to a staff member's practice, and how to notify the appropriate authorities when a staff member engages in unprofessional behaviour. Other than that, our teacher or the hospital depends on us to learn about professional behaviour with coworkers, staff, and patients, as well as the significance of job documentation for patients.

Despite the presence of the PMDC code of ethics, limited emphasis has been placed on structured dental ethics education in Pakistan. Reports suggest frequent ethical lapses in dental practice, yet little is known about the extent of ethical knowledge and practice among dental students and fresh graduates, particularly in Khyber Pakhtunkhwa. Most available studies are either international or from medical

settings, leaving a gap in dental-specific evidence. This study was therefore undertaken to assess the knowledge, attitudes, and practices of undergraduate dental students and house officers toward dental ethics in a public sector dental hospital. The findings are expected to highlight areas of deficiency and provide baseline data for improving ethics education in the undergraduate curriculum. The purpose of this study was to examine undergraduates and recent dentistry graduates' ethical knowledge, practices, and views of the ethical atmosphere of the institution.

MATERIALS AND METHODS

Ethical approval of the study was taken from the Institutional Review Board (IRB) vide number KIDS-IRBB/ECC/23-1/04. The study was carried out between August 2023 and October 2023, a descriptive cross-sectional survey using a validated questionnaire¹⁴ was carried out after calibration between the researchers. The research involved 250 students in all; first-year BDS students were not included, nor were those who declined to take part Every participant received a printed copy of the questionnaire. The questionnaire consisted of twenty self-administered, multiple-choice, closed-ended questions that took three to five minutes to complete. After that, SPSS version 26.0 was used to analyse the returned questionnaires. Every piece of data that was gathered underwent descriptive analysis, and the Chi squared test was used.

RESULT

The study population was female dominant (n=135) (54%) while the number of male participants was 115 (46%). 2nd year students were 54 (21.6%), 3rd year students were 52 (20.8%), final year students were 68 (27.2%), house officers were

Table 1: Characteristics of the participants

Characteristic	n (%)
Gender	
Male	115 (46)
Female	135 (54)
Year of study	
2nd Year	54 (21.6)
3rd Year	52 (20.8)
4th Year	68 (27.2)
House Officers	57 (22.8)
Post Graduate Trainees	19 (7.6)

57 (22.8%) while postgraduate students were 19 (7.6%) as shown in table 1.

Regarding knowledge, almost all 92% undergraduate and graduates were familiar with the term dental ethics. Merely 78% of the applicants knew of the PMDC's code of ethics, and 10% knew about the global code of ethics. The institutional (KMU) ethical norms and the "Hippocratic Oath" were un-

known to many candidates ($n = 97\%$; $r = 43\%$). When questioned about the PMDC's regulations covering interim suspension, warnings, and everlasting expulsion, just 7% of the applicants knew what these meant; the majority, 93%, had no idea. Furthermore, the majority of 69% were found to be ignorant of the consequences for notorious behaviour against patients, and 71% were not aware of moral concepts

Table 2: Knowledge of students regarding dental ethics

Knowledge		2nd Year	3rd Year	Final Year	House Officers	PG Training	P-Value
Meaning of ethics	Yes n(%)	44 (81.5)	45 (86.5)	66 (97.05)	55 (96.5)	19 (100)	0.150
	No n(%)	10 (18.5)	7 (13.5)	2 (2.95)	2 (3.5)	0 (00)	
PMDC code of ethics	Yes N (%)	40 (74.1)	39 (75)	53 (77.9)	46 (80.7)	15 (78.9)	0.067
	No N (%)	14 (25.9)	13 (25)	15 (22.1)	11 (19.3)	4 (21.1)	
International code of ethics	Yes N (%)	3 (5.5)	4 (7.6)	7 (10.2)	7 (12.2)	3 (15.7)	0.005
	No N (%)	51 (94.5)	48 (92.4)	61 (89.8)	50 (87.8)	16 (84.3)	
Hippocratic Oath	Yes N (%)	0 (00)	1 (1.9)	1 (1.4)	3 (5.2)	1 (5.2)	0.142
	No N (%)	54 (100)	51 (99.1)	67 (98.6)	54 (94.8)	18 (94.8)	
KMU ethics policies	Yes N (%)	21 (38.9)	18 (34.6)	48 (70.5)	37 (64.9)	15 (78.9)	0.124
	No N (%)	33 (61.1)	34 (65.4)	20 (29.5)	20 (35.1)	4 (21.1)	
Penalties regarding infamous conduct	Yes N (%)	24 (44.4)	31 (59.6)	52 (76.4)	45 (79)	16 (84.3)	0.104
	No N (%)	42 (54.6)	21 (40.4)	16 (23.6)	12 (21)	3 (15.7)	
Moral principles such as veracity beneficence	Yes N (%)	8 (14.8)	11 (21.1)	16 (23.5)	23 (40.3)	9 (47.3)	0.004
	No N (%)	46 (83.2)	41 (78.9)	52 (76.4)	34 (59.7)	10 (52.7)	
Informed consent	Yes N (%)	49 (90.7)	52(100)	68(100)	57 (100)	19 (100)	0.763
	No N (%)	5 (9.3)	0 (00)	0 (00)	0 (00)	0 (00)	

Table 3: Attitude of students regarding dental ethics

Attitude		2nd Year	3rd Year	Final Year	House Officers	PG Training	P-Value
Do you refer patients to another facility?	Yes N (%)	54 (100)	52(100)	68 (100)	56 (98.2)	19 (100)	0.182
	No N (%)	0 (00)	0 (00)	0 (00)	1 (1.8)	0 (00)	
Do you think dentist has a responsibility to inform patients if the patient has a communicable disease?	Yes N (%)	49 (90.7)	52 (100)	66 (97)	55 (96.5)	19 (100)	0.174
	No N (%)	5 (9.3)	0 (00)	2 (03)	2 (3.5)	0 (00)	
Do you discuss encountered ethical problems with clinical teachers?	Yes N (%)	41 (75.9)	34 (65.3)	55 (80.8)	51 (89.4)	19 (100)	0.383
	No N (%)	13 (24.1)	18 (34.7)	13 (19.2)	6 (10.6)	0 (00)	
Do you learn about ethics in your curriculum?	Yes N (%)	16 (29.6)	13 (25)	16 (23.5)	7 (12.2)	2(10.5)	0.875
	No N (%)	38 (70.4)	39 (75)	52 (76.5)	50 (87.8)	17 (89.5)	

Table 4: Practices of students regarding dental ethics

Practices		2nd Year	3rd Year	Final Year	House Officers	PG Training	P-Value
Do you practice honesty, compassion, integrity and fairness?	Yes N (%)	49 (90.7)	52(100)	54 (79.4)	50 (87.7)	17(91)	0.177
	No N (%)	5 (9.3)	0 (00)	14 (21.6)	7 (12.3)	2 (09)	
Do you practice informed consent before every procedure?	Yes N %	49 (90.7)	52(100)	68 (100)	57 (100)	19(100)	0.337
	No N %	5 (9.3)	0(00)	0 (00)	0 (00)	0 (00)	
Do you have thorough and clear work documentation for all your patients?	Yes N (%)	11(20.3)	27(51.9)	68 (100)	51 (89.5)	19 (100)	0.003
	No N (%)	43 (79.7)	25 (48.1)	0 (00)	6 (10.5)	0 (00)	

including truthfulness, beneficence, non-maleficence, and autonomy. While 98% of respondents were aware with the concept of informed consent in dentistry settings (Table 2).

In terms of attitude, 97% of respondents agreed to notify patients if they had a communicable condition, but almost 99% of respondents sent patients to another department if they lacked expertise in a certain area. 82% talked about moral dilemmas they had with their instructors or seniors. Eighty percent of those polled said they had learnt about dental ethics in their curriculum, while twenty percent said they had not (Table 3).

In terms of practices, over 90% engaged in acts of justice, fairness, kindness, compassion, and integrity. 98% of respondents used informed consent. Of the sample size, 30% had complete and unambiguous work documentation for every patient, whereas the remaining 70% had no patient documentation at all (Table 4).

DISCUSSION

In addition to their professional obligations, dental practitioners are aware of their ethical obligations. When carrying out their professional responsibilities, dentists must act in an appropriate and moral manner¹⁵. Knowledge and practice of the Ethical principles varied substantially between dental graduates in their first employment and post-graduate training in this research. Nonetheless, all students accepted the concept that knowledge of dental ethics is vital.

In Pakistan, hardly much research has been done on ethics in the dental sector^{14,16}. This is most likely the first study done by dentists and dental students at the KPK dentistry institution. The study's findings indicate that knowledge and attitude on ethics differ significantly from one another; knowledge is generally lacking in comparison to attitude. In an Indian study performed by Rani et al.¹⁷ it was shown that dentistry graduates were generally less knowledgeable and did not value bioethics education as highly as medical graduates. Other than that, participants in typical studies had not had formal ethical education and had instead learned their expertise from other sources, such as their postgraduate training. Another research by Yusra et al¹⁶ in Karachi, Pakistan, found that although dental students had less understanding of ethics, they had a positive attitude toward dental

ethics, and their dedication to their profession and goodwill were important findings. Another research at surgical ward in Karachi, by Shiraz¹⁸, indicated that the application of ethical knowledge is particularly weak in surgical wards and the physicians require additional training related health care ethics and its execution. Shiraz also found that, of the 101 applicants, just 11 said they had received ethical instruction as undergraduates. This figure was 70% in the recent research, similar to Shiraz. Our curriculum's absence of dental ethics is the cause of this high percentage.

Another significant conclusion from our study was that survey respondents felt most at ease disclosing ethical concerns or difficulties they encountered while working in the dentistry settings of their organization to the teacher (82%). This finding contrasts with Imran N¹⁹ results, which indicated that research participants (interns and residents) preferred to consult with colleagues when they had ethical questions. Therefore, it is crucial that educators get ongoing training so that students, HO's, and PG's may feel comfortable addressing ethical concerns and seeking their advice. Through their knowledge expertise and understanding, they can guide to deal with the problem according to the greatest possible ethical practices.

CONCLUSION

According to the results of this study it is concluded that general lack of knowledge needs to be improved by designing a curriculum that trains Individuals about dental ethics. As students have shown a positive attitude toward their profession and ethical dentistry, more focus should be placed on strengthening dental ethics education.

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AUTHORS' CONTRIBUTION

The following authors have made substantial contributions to the manuscript as under:

Conception or Design: WS, AK, FW, AM, SH, UN

Acquisition, Analysis or Interpretation of Data: WS, AK, FW, AM, SH, UN

Manuscript Writing & Approval: WS, AK, FW, AM, SH, UN

All the authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.