

# Assessment of Knowledge of Professional Ethics among Medical and Dental Postgraduate Students In Central India - A Cross-Sectional, Questionnaire-based Epidemiological Study

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## ABSTRACT

**Introduction:** Medical and dental post graduate students do not gain much knowledge during their training in resolving the ethical dilemmas related to Healthcare profession. Aim of this study was to assess information, experiences, applications and orientation related to professional ethics among medical and dental postgraduate students in central India

**Material and Methods:** 280 subjects returned the questionnaire. The 35-item questionnaire was reframed to assess the students' information, experiences, applications and orientation.

**Results:** The mean age of the medical and dental students was 31.1±2.6 and 27.2±1.4 years, respectively. Nearly all the medical postgraduates had knowledge of the Hippocratic Oath, but only 20.8% had knowledge of the Indian Council of Medical Research (ICMR) guidelines on ethics for research, the World Medical Association's Helsinki Declaration (18.1%) and the Nuremberg Code (15.9%). 39.0% medical postgraduates and 66.3% dental postgraduates always discussed their daily cases with their colleagues.

**Conclusion:** Both medical and dental postgraduate students lack the information, experience, orientation they to resolve ethical dilemmas. Therefore inclusion of a bioethics curriculum in the initial period of the graduation and post graduation programmes may prove beneficial.

**Keywords:** Professional Ethics, Bioethics, Hippocratic Oath, Indian Council of Medical Research (ICMR), Helsinki Declaration, Nuremberg Code

very little information in resolving the ethical dilemmas. Training in medical ethics has been made mandatory in the undergraduate curriculum by the Medical Council of India (MCI) under forensic medicine.<sup>4</sup>

There are only few medical institutions in I with a standardised ethics syllabus, and with provisions for evaluation and analysis.<sup>5</sup> The dental curriculum regulated by Dental Council of India makes just a passing mention of the principles of ethics.<sup>6</sup> Medical and dental postgraduate students take intensive training in their specialties and their focus remains majorly on speciality treatment. Postgraduate students also need intensive training in biomedical ethics so that they acquire a thorough knowledge of the patient's rights, cultural variations and ethics, and are well trained to resolve ethical dilemmas.

There are different opinions on strategising the teaching of bioethics emphasising the importance of trading the teaching of the topic to the needs of the society concerned.<sup>7</sup> Scarcity of organised human resources and deficiency of specialists in bioethics has led to paucity of appreciation of the urgency to include bioethics in medical and dental education in India. In India, due to the cultural diversities<sup>9</sup>, the training of bioethics must include the various perceptions of morality and ethics from different cultural, socioeconomic and geographical backgrounds.<sup>10</sup> The training of bioethics should be balanced with the local communal, civil and cultural values. Objectives of the present study were to assess the information, experiences, applications and orientation

## INTRODUCTION

In this modern era of information technology and multimedia awareness of patient's right has increased in India that has resulted in frequent assaults to the doctors treating patients in emergency.<sup>1,2,3</sup>

These might be attributed to the paternalistic perspective of the medical profession or lack of understanding, or could only be emotional outbursts exaggerated by social media. Advances in biomedical technologies such as reminiscent of life support and artificial procreative technologies have introduced new ethical and moral dilemmas in their wake and have accentuated the problem. Ethical dilemmas are commonly encountered in cases like abortion, contraception, treating a patient with a complicated life threatening illness, professional mishaps, not maintaining a patient's confidentiality, the doctor's professional relationship with the patient's faith, religion, relatives, typical drugs, and conflict of interests. The standard medical course offers students

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Specialities	Medical		Dental	
	N	%	N	%
Number	182	65	98	35
Gender				
Male	146	80.2	43	43.8
Female	36	19.7	55	56.1
Year of study				
First	71	39	21	21.4
Second	58	31.8	64	65.3
Third	53	29.1	13	13.2
Mean age in years	31.1±2.6		27.2±1.4	

**Table-1: Characteristics of study participants**

Knowledge of following		Medical		Dental	
		N	%	N	%
Hippocratic oath	Yes	182	100	34	34.6
Nuremburg code	Yes	29	15.9	1	1.0
ICMR Guidelines	Yes	38	20.8	1	1.0
Helsinki declaration	Yes	33	18.1	5	5.1
Importance of knowledge of ethics to you in your work?	Very	18	9.8	42	42.8
	Moderately	45	24.7	22	22.4
	A little	119	65.3	34	34.6
	Not at all	0	0	0	0
Do you listen to patient's questions during their visits?	Yes	172	94.5	79	80.6
	No	10	5.4	19	19.3
How often do you come across any ethical issues?	Daily	1	0.5	0	0
	Weekly	25	13.7	2	2.0
	Monthly	86	47.2	29	29.5
	Yearly	67	36.8	60	61.2
	Never	3	1.6	7	7.1
How often do patients ask you about their diagnosis?	Never	0	0	0	0
	Seldom	74	40.6	26	26.5
	Always	108	59.3	72	73.4
How often do you discuss your daily cases with your colleagues?	Seldom	111	60.9	33	33.6
	Always	71	39.0	65	66.3
How did you acquire your knowledge of bioethics?	During training	24	13.1	14	14.2
	Experience at work	44	24.1	41	41.8
	Lectures/Sem-inars	32	17.5	9	9.1
	One's own reading	21	11.5	11	11.2
	Others (internet, court reports, newspapers, etc)	61	33.5	23	23.4
Have you attended training in bioethics?	Yes	63	34.6	14	14.2
	No	119	65.3	84	85.7
Have you taken informed consent?	No	2	1.0	9	9.1
	Verbal	38	20.8	41	41.8
	Signed	144	79.1	48	48.9
Is there any ethics committee in your institution?	Yes	116	63.7	86	87.7
	No	4	2.1	0	0
	Not sure	62	34.0	12	12.2
Does your institute have separate committees for reviewing animal and human research projects?	Yes	39	21.4	0	0
	No	65	35.7	91	92
	Not sure	78	42.8	7	7.1

**Table-2: Participant's information on healthcare ethics**

What do you think an ethics committee's role is?		Medical		Dental	
		N	%	N	%
To ensure standard ethical practices among healthcare Personnel	Yes	173	95.0	81	82.6
	No	0	0	2	2.0
	Not sure	9	4.9	15	15.3
To advise healthcare personnel when they encounter ethical/legal problems	Yes	107	58.7	74	75.5
	No	23	12.6	15	15.3
	Not sure	52	28.5	9	9.1
To advise the administration on ethics and rules in the institution	Yes	39	21.4	21	21.4
	No	88	48.3	31	31.6
	Not sure	55	30.2	46	46.9
To approve and guide Research	Yes	136	74.7	69	70.4
	No	4	2.1	2	2.0
	Not sure	42	23	27	27.5
To settle conflicts between Professionals	Yes	23	12.6	9	9.1
	No	52	28.5	15	15.3
	Not sure	107	58.7	74	75.5
To settle conflicts between professionals and patients' Relatives	Yes	23	12.6	9	9.1
	No	52	28.5	15	15.3
	Not sure	107	58.7	74	75.5
To teach medical ethics to Students	Yes	174	95.6	67	68.3
	No	0	0	5	5.1
	Not sure	8	4.3	26	26.5
To conduct bioethics Conferences	Yes	38	20.8	41	41.8
	No	51	28	23	24.4
	Not sure	93	51	34	34.6

Table-3: Responses regarding ethics committees

		Medical		Dental	
		N	%	N	%
Doctors know the best irrespective of patient's opinion	Agree	98	53.8	77	78.5
	Disagree	84	46.1	21	21.4
Patient should always be informed of wrong doing	Agree	131	71.9	64	65.3
	Disagree	51	28.0	34	34.6
Patients' wishes should always be adhered to	Agree	99	54.3	56	57.1
	Disagree	83	45.6	42	42.8
Confidentiality cannot be maintained in modern care and should be abandoned	Agree	101	55.4	67	68.3
	Disagree	19	10.4	31	31.6
Consent is required only in case of operations and not for tests and medications	Agree	44	24.1	23	23.4
	Disagree	138	75.8	75	76.5
Certain medical practitioners charge more from rich patients to compensate for treating the poor	Agree	96	52.7	49	50
	Disagree	86	47.2	49	50
Ethical conduct is important only for avoiding legal action	Agree	96	52.7	47	47.9
	Disagree	86	47.2	51	52

Table-4: Orientation of participants towards health care ethics

related to professional ethics among medical and dental postgraduate students in central India.

## MATERIAL AND METHODS

Present cross-sectional, questionnaire-based study was conducted in four medical college and six dental colleges in central India offering postgraduate courses in medical, surgical and dental specialties. This study was approved by the institutional ethical committee.

**Study population** Postgraduate students pursuing M.D., M.S., M.D.S. and DNB courses were selected. 346 subjects were invited to participate in the study out of which 280

subjects returned the questionnaire. Out of these 280 subjects 182 were medical students and 98 were dental students.

## Questionnaire

The 35-item questionnaire as presented by Jankiraman and Gardens in their similar study<sup>11</sup> was reframed to assess the student's information, experiences, applications and orientation, in the field of health related ethics. The demographic variables, such as speciality, age, gender and year of study were included in this questionnaire as shown in table 1.<sup>11</sup>

The next part of the questionnaire composed of questions Related to the importance of a information of ethics, the

Responses	Medical	%	Dental	%
When people holding certain religious beliefs refuse to take blood, undergo surgery or accept treatment, what is your stand?				
Respects the patient's decision	88	48.3	36	36.7
Try to perform the procedure forcibly	2	1	0	0
Refer to the doctor who shares the patient's beliefs	79	43.4	57	58.1
Any other specify	13	7.1	5	5.1
If you encounter any ethical problem, who will you approach?				
Colleagues	22	12	15	15.3
Supervisor	10	5.4	5	5.1
Head of the department	94	51.6	52	53
Hospital administrator	20	10.9	4	4
Ethical committee	15	8.2	7	7.1
Professional association	11	6	9	9.1
Priest	1	0.005	0	0
Textbook, Internet	6	3.2	4	4
Close friend/ family	3	1.6	2	2

**Table-5:** Responses regarding the practice of healthcare ethics

source of this information and the source of consultation in case an ethical problem appears as shown in table 2.<sup>11</sup> The subjects were asked whether they were aware of the existence of an ethics committee in their institution, and about their role in bioethics. The questionnaire mentioned eight important roles played by ethical committees and the subjects were asked to choose as per their experience. The responses were marked among "yes", "no" and "not sure" (table 3)

In the last part of this questionnaire, the participants were asked to respond to the questions on ethical issues arises in day to day practice.

They were asked to mark agreed or disagreed with statements concerning ethical conduct such as paternalism, autonomy, confidentiality, wrongdoing, informed consent, and the influence of religious beliefs on their treatment.

**Informed consent** - All the participants were provided with the information sheet, about details of the study, and written informed consent was obtained from each participant of the study.

## RESULTS

280 students returned the completed questionnaire. The mean age of the medical and dental students was 31.1±2.6 and 27.2±1.4 years, respectively. (Table 1)<sup>11</sup> Nearly all the medical postgraduates had knowledge of the Hippocratic Oath, but only 20.8% of them had knowledge of the Indian Council of Medical Research (ICMR) guidelines on ethics for research, the World Medical Association's Helsinki Declaration (18.1%) and the Nuremberg Code (15.9%). Very few dental postgraduate students were aware of these guidelines. The responses of the medical and dental postgraduates to questions on their information on healthcare ethics has been presented in table 2.<sup>11</sup> Importance of bioethics in the daily practice has been well understood by medical postgraduates than their dental counterparts. The medical postgraduates had faced questions related to ethics from their patients more frequently than had the dental postgraduates. Patient's questions regarding the diagnosis

more often have been asked to medical postgraduates. 39.0% medical postgraduates, always discussed their daily cases with their colleagues, where as this percentage was higher among dental counterparts (66.3%). Nearly 65.3% medical participants had not attended any bioethics training during their post graduation. Nearly 63.7% of the medical postgraduates and 87.7% of dental postgraduates knew that their institution had an ethics committee. The student's response regarding the role of ethics committees has been depicted in table 3.<sup>11</sup>

Nearly 53.8% and 78.5% of medical and dental postgraduates, respectively, believed that they knew the best treatment, irrespective of the patient's opinion (Table 4).<sup>11</sup> In case of any mishappening in treatment, 71.9% of medical and 65.3% of dental postgraduates informed their patients. Only 24.1% of the medical postgraduates agreed that informed consent was required for treatment such as surgery, but did not feel it was necessary for investigations. The corresponding rate for the dental postgraduates was 23.4%.

52.7% medical postgraduates agreed that ethical conduct is required to avoid legal issues. The corresponding figure for dental postgraduates was 47.9%.

As shown in Table 5<sup>11</sup>, in case of ethical dilemmas, the heads of department were consulted most first (by 51.6% of medical and 53.0% of dental postgraduates), followed by the students' colleagues. The ethics committee was the later choice.

## DISCUSSION

This is one of the pioneer study to assess information, experiences, applications and orientation related to professional ethics among medical and dental postgraduate students in central India. The responses were categorised on the basis of different subspecialties, i.e. medical and dental, year of study and gender. Medical postgraduates encounter ethical dilemmas more frequently than their dental counterpart which explains the basic difference between the two fraternities as far as appreciation of ethical issues is concerned.

The participants had obtained information about ethics from various sources. Postgraduate curriculum did not found to be the key source of major information. Participants had acquired more knowledge from their experience at work, and by attending seminars. The reason behind this difference could be that perhaps only those who had encountered ethical issues in any manner might have searched other sources of knowledge, such as continuing medical education, continuing dental education or workshops. Ethical training given during undergraduate curriculum is not sufficient to appropriately guide postgraduate students to deal with the complex ethical issues encountered in their daily work.<sup>12</sup> A separate module or course for bioethics, accompanied by orientation and evaluation, needs to be incorporated into the medical and dental curricula for better understanding and implementations of health related bioethics. The evaluation of such training must be done in written or oral examination form. This training must be carried by specialists such as faculties of forensic and community medicine.<sup>4,5</sup> Independent departments must be created for of medical ethics under the supervision of expert panel and bioethicists from different backgrounds, such as the social sciences, philosophy and medical sciences must be recruited in such departments. The medical and dental postgraduates seems to be aware of the difference between animal and human research ethical committees, but they lack in knowledge about the functions of committee in their own institution attributed to committees' limited role. This may be correlated to various previously conducted studies.<sup>7,13,14</sup>

Most of the research carried out in dentistry is by postgraduate students and very few studies are carried out by independent researchers or faculty members.<sup>15-18</sup> Most ethics committees review the research proposals, only when the study is funded. The master's programme in dentistry does not have a mandatory module on bioethics or research ethics.<sup>6</sup> Unlike the dental postgraduates, the medical postgraduates knew more about most of the issues pertaining to the practice of ethics. The variations in their responses such as constancy to the patient's choices, confidentiality, the paternalistic behaviour of doctors and the need to obtain consent for procedures may be outlined to differential training in bioethics.<sup>11</sup>

The majority of the respondents chose to consult their head of department to resolve their ethical dilemmas, while the thesis supervisor was the next preferred choice.

The existence of clinical ethics committees in hospitals is utmost important for moral consideration on clinical cases. This study has the limitation that it does not cover a wider range of postgraduates, as well as the fact that it is only descriptive in nature.

## CONCLUSION

Under the limitation of this prospective study this can be concluded that both medical and dental postgraduate students frequently encounter ethical issues in their training, but lack the information, experience, orientation they to resolve these dilemmas. The dental postgraduate participants have lesser knowledge of healthcare ethics, compared to medical

participants. Therefore inclusion of a bioethics curriculum in the initial period of the graduation and post graduation programmes may prove desirous and beneficial.

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