

Medical Ethics and Professionalism among Medical Students in India

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Abstract

Background: Medical ethics and professionalism have been included in the competencies which an Indian medical graduate should achieve to become globally relevant. This study was done to describe medical ethics and professionalism and explore the factors affecting it, among the medical students in India.

Methods: A cross-sectional study was conducted among undergraduate medical students of India in 2022; data were collected using google documents and analyzed using SPSS v20.0.

Results and Conclusion: Two thirds of the participants were aware of the principles of medical ethics. Medical college lectures/seminars were the source of ethics for majority of the participants. Around 32.2% had conflicts in their medical school. Though 99.6% of the participants opined that the patient deserve respect, only one third (34.3%) opined that medical errors should be shared to the patients. Prevalence of consumption of alcohol, smoking, drugs among medical students were 5.6%, 3.1% and 0.7% respectively.

Keywords: Addictions, Alcohol, Drugs, Ethics, India, Medical Students, Professionalism, Smoking.

Introduction

Medical ethics and professionalism of a doctor develops during the undergraduate days in medical school/college. Practice of medical ethics and inculcating professionalism along with clinical expertise determines the success of a practicing doctor and to strengthen the trust of patient – doctor relationship. Medical ethics deals with those ethical principles that govern professional

conduct in medicine. Medical ethics implies obligations of the physician toward the patient as well as some obligations towards other physicians¹. Professionalism is a belief system in which group members ('professionals') declare ('profess') to each other and to the public, the shared competency standards, and ethical values they uphold in their work and what patients can expect from these professionals².

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Medical ethics and professionalism in India are taught to the medical students through formal curriculum and hidden curriculum. National Medical Commission introduced Attitude, Ethics and Communication module (AETCOM) for Indian Medical Graduates in their formal curriculum³. Hidden curriculum is not 'taught' but 'caught' by the students with observation of interactions between faculty, staff, administrators, patients and their peers, and also with clinical experience^{4,5}. Studies reported that professionalism of doctors were influenced by their behavior in medical school^{6,7}. Altruism, accountability, duty, excellence, honor, integrity, and respect for others were identified as the key elements of professionalism by the American Board of Internal Medicine⁸. Application of principles of medical ethics, viz autonomy, beneficence, non-maleficence, and justice, in medical practice includes respect of the person, informed consent, protection of privacy and confidentiality, facilitation of decision making, giving maximum benefit, and first do no harm. Students were reported to consider the teachers as their role model and it is important for the students to differentiate good and bad role models⁹.

This study was conducted with the objective to describe medical ethics and professionalism and explore the factors affecting it, among medical students in India.

Materials and Methods

This cross-sectional study was conducted among medical students across India, after the ethical clearance from Institutional Human Ethics Committee. Students studying in professional year I,II,III,IV and doing internship were included for this study. The data were collected using google forms during the months of November - December 2022 since the use of google document helps in wider and easy data collection¹⁰. Filling up of the google form

and its submission was taken up as the students' consent. Sample size (n=600) was calculated using the formula $n = \frac{(1-\alpha/2)^2 pq}{d^2}$ with α at 5%, p as 39% from the previous study¹¹, q (100-p) and d, relative precision of 10%. Study questionnaire had questions on age, gender, professional year of studying, Indian state of origin and currently studying M.B.B.S, reason for choosing medical profession, conflicts in medical school and with whom, details on cheating for assessments/examination, attitude and practice towards patients in terms of confidentiality and respect, dressing up professionally for college and punctuality in attending lectures / clinical postings and addictions like alcohol usage, cigarette smoking and other drugs. Non probability sampling technique was used and 763 medical students submitted the completed forms and were included in the analysis.

Statistical Analysis

Data were analyzed using SPSS v 20.0. Quantitative variables were expressed as mean and standard deviation and qualitative variables were expressed as numbers and percentages. Chi-square and Fisher's Exact test were used to find the statistically significant association.

Results

Of the 763 participants, mean age was 20.78 ± 2.19 years. About 2/3rd of the study population (67,1%) were females i.e,512 and 251 were males (32.9%). The study participants belonged to different states/Union territories of India. Majority of them belonged to the native of Tamil Nadu (458, 60%) followed by Kerala (228, 29.9%), Karnataka (18, 2.4%), Maharashtra (17, 2.2%), Andhra Pradesh (12, 1.6%), Bihar (5, 0.7%), UP (4, 0.5%), 3 participants from Rajasthan, Odisha, West Bengal and 1 participant from Pondicherry, Telangana, Chhattisgarh, Uttarakhand, Nagaland, Dadra and Nager Haveli. Table 1 shows the characteristics of the study participants.

Table 1: Characteristics of study participants

| Variables | Frequency (Percentage) |
|-------------------|------------------------|
| Professional year | |
| I M.B.B.S | 359 (47.1%) |
| II M.B.B.S | 117 (15.3%) |
| III M.B.B.S | 119 (15.6%) |
| IV M.B.B.S | 85 (11.1%) |
| Internship (CRMI) | 83 (10.9%) |

| Variables | Frequency (Percentage) |
|--|------------------------|
| Type of college | |
| Government Medical College | 167 (21.9%) |
| Private Medical College | 596 (78.1%) |
| Indian state in which the participants study | |
| Tamilnadu | 553 (72.47%) |
| Kerala | 173 (22.67%) |
| Maharashtra | 9 (11.79%) |
| Karnataka | 23 (3.01%) |
| Others* | 4 (0.52%) |
| Chose medical profession out of compulsion | |
| Yes | 115 (15.1%) |
| No | 648 (84.9%) |
| Reason for choosing medical profession | |
| Self - Passion | 614 (80.5%) |
| Parents' decision | 263 (34.5%) |
| Media / movies / series | 74 (9.7%) |
| Because all school toppers choose this | 57 (7.5%) |
| Family owns a hospital | 11 (1.4%) |
| Regret for choosing (after joining) the medical profession | |
| Yes | 655 (85.8%) |
| No | 108 (14.2%) |

*Includes students studying in Andhra Pradesh, Telangana, and Pondicherry with less than 1% respondents from each state.

It was found that 40.6% of the study participants (283/763) copied (cheated for exams) by any means for formative / summative assessment in their medical college. The difference in percentage of those copied for assessments were not significant between males (41.0%) and females (41.2%) with X^2 0.002 and p value 0.513. Among those who joined the profession out of compulsion, 61 (53%) had copied for assessments when compared to 253 (39%) in others and the difference in proportion was statistically significant with X^2 value 7.905

and p value 0.005. There was no statistically significant difference between Government and private medical college students (38.9% Vs 41.8%, X^2 0.439 and p 0.507). Various methods adopted by the participants to copy was shown in figure 1. About 31.6% (241) strongly agreed that a medical student should become scientifically and clinically competent to become a successful doctor, 44.3% (338) agreed, 17.2% (131) responded neutral, 2.1% (16) disagreed and 4.8% (37) strongly disagreed.

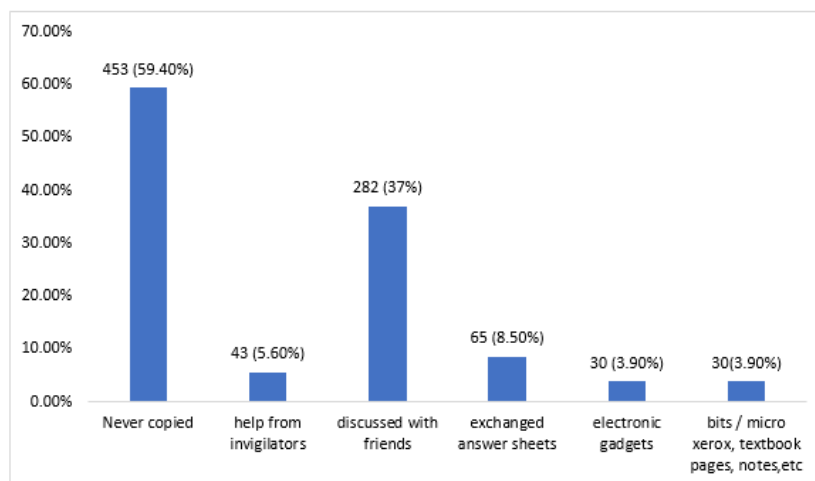


Figure 1: Methods adopted by the study participants to copy for assessments

Conflicts as a medical student

Around 1/3rd of the study participants (246, 32.2%) had conflicts in medical college life, with batchmates (140, 18.3%), hostel warden (108, 14.2%), campus security (78, 10.2%), office staff - college/departments (69, 9%), Senior/junior medical students (59, 7.7%), postgraduate students (20, 2.6%), junior faculty -assistant /associate professor (19, 2.5%), senior faculty - professor (36, 4.7%), nursing staff (25, 3.3%), house-keeping staff (12, 1.6%), patient (6, 0.8%) and patient attender (20, 2.6%). The percentage of students who had conflict was more among those who joined the profession out of compulsion (49, 42.6%) when compared to the others (205, 31.6%) and was statistically significant with X^2 value 5.295 and p value 0.021. Gender was not found to have association with conflicts, females 35.2% vs males 29.5%, p value 0.118. There was no statistically significant difference between Government or private medical college students in the percentage of conflicts (31.7% Vs 33.7%, X^2 0.232 and p 0.630).

Medical Ethics

About 747 (97.9%) participants opined that medical ethics should be taught for medical students in the medical college. 492 (64.5%) were aware of the 4 basic principles of medical ethics and only 275 (36%) knew about the existence of ethics committee in their medical college. 737 (96.6%) opined that patient's consent should be taken always for clinical examination, investigation, or any procedures. Source of knowledge on medical ethics was college lectures/

seminars for majority of the participants (655, 85.8%), medical journals/print media/online lectures (317, 41.5%), movies /series (297, 38.9%), Religious places (80, 10.5%) and parents/relatives and friends (36, 4.7%). Of the participants, 123 (16.1%) had discussed the confidential/personal details of the patients with friends/family.

Professionalism

About 705 (92.4%) responded that they dress up professionally for college. It was found that 484 (94.5%) females and 221 (88%) males dress up professionally and the difference was statistically significant with Chi-square test, X^2 value 10.08 and p value 0.001. Those who took medical profession with compulsion, and the others, were equally dressing up professionally. Government and private medical college students were reported to dress up professionally, without any statistically significant difference. Out of the study participants, 745 (97.6%) opined that medical students need punctuality in life and 617 (80.9%) of the study participants goes to lectures/clinical postings on time. Female gender was found to be statistically associated with punctuality (females 425, 83% Vs males 192, 76.5%, X^2 value 4.618 and p value 0.032). Among those who took the profession out of compulsion, 80 (69.6%) maintained punctuality and this proportion was significantly lower when compared to others 537 (82.9%), X^2 11.174, p =0.001. There was no statistically significant difference found between Government and private medical college students in punctuality.

It was found that 760 (99.6%) of the study participants were of the attitude that the patients deserve respect, 262 (34.3%) opined that medical errors should be disclosed to the patients, 685 (89.8%) believed that the patient should know the correct diagnosis and 481 (63%) told that it is important to disclose all the information regarding the treatment to the patient.

Addictions among medical students

About 58 (7.6%), 106 (13.9%) and 14 (1.8%) study participants tried smoking, alcohol, and drugs

respectively, at least once after joining medical college and 24 (3.1%), 43 (5.6%) and 5 (0.7%) continue smoking, alcohol and drugs respectively. Analysis of addictions with factors such as gender, taking up medical profession out of compulsion and type of medical college (Government /Private) were shown in table 2. Male gender and those who took medical profession out of compulsion were found to be associated with smoking, alcohol, and drug abuse whereas students studying in Government run medical colleges had association with smoking and alcohol usage.

Table 2: Variables associated with addictions among the study participants

| Variables | Gender | | Took medical profession out of compulsion | | Type of Medical College | |
|---|-------------------------------|--------------|---|------------|------------------------------|---------------|
| | Male n (%) | Female n (%) | Yes n (%) | No n (%) | Government n (%) | Private n (%) |
| Tried smoking at least once after joining medical college | 37 (14.7%) | 21 (4.1%) | 19 (16.5%) | 39 (6%) | 19 (11.4%) | 39 (6.5%) |
| | χ^2 27.145, p <0.001* | | χ^2 15.340, p <0.001* | | χ^2 4.339, p =0.037* | |
| Continue smoking | 19 (7.6%) | 5 (1%) | 12 (10.4%) | 12 (1.9%) | 9 (5.4%) | 15 (2.5%) |
| | χ^2 24.033, p <0.001* | | χ^2 23.616, p <0.001* | | χ^2 3.533, p =0.06 | |
| Tried alcohol at least once after joining medical college | 47 (18.7%) | 59 (11.5%) | 30 (26.1%) | 76 (11.7%) | 27 (16.2%) | 79 (13.3%) |
| | χ^2 7.302, p 0.007* | | χ^2 16.832, p <0.001* | | χ^2 0.925, p = 0.336 | |
| Continue alcohol | 25 (10%) | 18 (3.5%) | 14 (12.2%) | 29 (4.5%) | 18 (10.8%) | 25 (4.2%) |
| | χ^2 13.154, p <0.001* | | χ^2 10.885, p = 0.001* | | χ^2 10.633, p =0.001* | |
| Tried drugs at least once after joining medical college | 10 (4%) | 4 (0.8%) | 8 (7%) | 6 (0.9%) | 5 (3%) | 9 (1.5%) |
| | Fisher's Exact Test, p=0.003* | | χ^2 19.720, p <0.001* | | Fisher's Exact Test, p=0.172 | |
| Continue drugs | 5 (2%) | 0 | 4 (3.5%) | 1 (0.2%) | 2 (1.2%) | 3 (0.5%) |
| | Fisher's Exact Test, p=0.004* | | χ^2 16.575, p <0.001* | | Fisher's Exact Test, p=0.302 | |

*Statistically significant with p < 0.05.

Discussion

The prevalence of self-reported cheating in assessments was higher when compared to the report from another study and it reported that males were more likely to cheat for exams/assessments¹². In this study we found that there was no gender difference in cheating and similar result was observed by a previous study¹³.

About one third of the study population had conflicts with any of the staff, from all the levels of a health care system. Interaction between students with different individual from varied backgrounds leads to conflicts and inability to resolve it effectively can affect the team work resulting in medical errors and patient safety concerns¹⁴. Medical ethics is instilled in a medical students' mind and life by various sources ranging from college lectures/peers

to family/religious places. In this study majority reported college lectures/seminars as the source of information and similar result was found in another study¹¹. Literature quotes that medical ethics should be taught to medical students by multiple teachers with multiple perspectives¹⁵. Confidentiality and privacy are important for doctor-patient relationship and divulgence of any kind of medical or personal details of patient is a breach in that relationship¹⁶. The percentage of who discussed the confidential/personal details of the patients with friends/family was lower when compared to a previous study¹¹. Observations of alcohol abuse, smoking and drugs usage from the current study was lower when compared to a previous study, which reported alcohol abuse 19.13%, cigarettes smoking 10% and other drugs 2.17%¹⁷.

Conclusion

Two thirds of the participants, 64.5%, were aware of the principles of medical ethics. Medical college lectures/seminars were the source of ethics for majority (85.8%) of the participants. About 40.6% of the study participants copied by any means for assessments in medical college and the most common method used was by discussing with friends. Students who joined medical profession out of compulsion were significantly associated with the malpractice. Around 32.2% had conflicts in their medical school and majority (18.3%) of them had conflicts with their batchmates. About 92.4% dress up professionally for college and female students had significant associated. Though 99.6% of the participants opined that the patient deserve respect, only one third (34.3%) opined to share medical errors to the patients. Prevalence of consumption of alcohol, smoking, drugs among medical students were 5.6%, 3.1% and 0.7% respectively. Male gender and those medical students who took the profession out of compulsion from others were associated with smoking, alcohol, and drug use. Students studying in Government medical colleges were associated with smoking and alcohol usage.

Limitations: Analysis was done based on the data were self-reported by the study participants.

Conflicts of interest: none

Source of funding: none

Ethical Clearance: Obtained from Institutional Human Ethics Committee

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