



Knowledge and Attitude of Medical Ethics among Under-graduate and Post-graduate Medical Students

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ABSTRACT

Background: Nowadays medical practice is faced with innumerable number of challenges by the general public. The growing awareness about the consumer issues are making the medical practice more difficult and challenging. Awareness about the medical ethics by the practicing doctors is the need of the hour to face such challenges. This study was undertaken to study the knowledge of medical ethics in undergraduates and post graduates.

Methodology: A cross sectional study was undertaken in 250 undergraduates and post graduates in Medical College. The data was collected by using survey questionnaire specially designed by inclusion of various aspects of medical ethics. The data thus obtained was analyzed by using Statistical Package of Social Services (SPSS VER. 20).

Results: This study had shown that, more than half of the undergraduates and post graduates felt that, the ethical issues and its knowledge is important. Clinical training was the main source of knowledge of medical issues. Majority of the post graduates had knowledge about different ethics related issues than the post graduates. Post graduates had significantly higher knowledge scores than the post graduates in this study.

Conclusion: This study had shown that, the post graduates significantly had higher knowledge than the undergraduates.

Keywords: Medical ethics, Undergraduates, Competency based medical education, Knowledge, National Medical Commission.

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INTRODUCTION

The medical ethics often regulates the medical practice and medical persons. The term “Medical Ethics” was first coined by an English physician Thomas Percival who was first to publish the expectations and requirements of a member of Medical Profession. Medical ethics is often based on a set of values for the healthcare professionals where they can refer them in case of conflict or confusion.¹

It is important to know for all medical graduates and healthcare professions but no included in the MBBS curriculum. The number of assaults on doctors attending emergency are increasing in trend nowadays due to increase in awareness about patient’s rights.^{2,3,4} These may be due to the paternalistic attitude of the doctor or a lack of understanding, or may simply be emotional outbursts. Advances in biomedical technologies such as life support and artificial reproductive technologies have emerged with new ethical dilemmas and increased the problem. Contraception, abortion, treatment of a patient with

terminal illness, professional misconduct and maintenance of patient’s confidentiality, doctor patient relationship, traditional medicines, religion and conflict of interests have ethical dilemmas. The conventional medical course offers students little help in resolving the ethical dilemmas they will encounter as healthcare professionals. National Medical Council, medical regulatory body had made teaching of medical ethics in the undergraduate curriculum and has been placed under forensic medicine.⁵ There are very few medical colleges in India with a standardised ethics curriculum, and with provisions for evaluation.⁶ The medical students are often exposed to medical ethics topics especially during clinical postings in all colleges. But the evaluation system for the medical ethics is non-existent with new curriculum. This made the authors to assess the knowledge, awareness, and attitudes of medical ethics among M.B.B.S students and M.D/ M.S postgraduates.

MATERIALS AND METHODS

A cross sectional study was undertaken in the Medical College, IGIMS, Patna, Bihar. A total of 400 students (250 undergraduate and 150 post graduate students) were included as study sample. This study was conducted after approval by institutional ethics committee of IGIMS, Patna (Bihar) for a period of 3 months between January, 2022 to March 2022. The participants were MBBS undergraduates and post graduates perusing their master degree. The



students of allied health sciences, Paramedical staff, PhD scholars were excluded from the study.

The data was collected using a proforma based on questions pertaining to medical ethics. A questionnaire consisting of questions about medical ethics was formed, pretested and administered to the study participants. Every participant included in this study were expected to answer the given questionnaire. Their response were collected and analysed.

Number of correct and incorrect responses and number of responses in favour and against Medical ethics from each student were entered in Microsoft Excel 2016. Based on their responses each students were given a score. The scores were then compared with the undergraduates and post graduates. The categorical variables were presented as frequencies and percentages. Chi square test was used as test of significance. The quantitative variables were presented as mean and standard deviations. Independent sample T test was used as test of significance. A p value of less than 0.05 was considered as statistically significant.

RESULTS

Table 1: Distribution of the study groups according to age group and sex

| | | Post graduates n (%) | Under graduates n (%) |
|-----------|--------------------|-------------------------|--------------------------|
| Age group | Less than 20 years | 0 | 137 (54.8) |
| | 21 – 25 years | 43 (28.7) | 113 (45.2) |
| | 26 – 30 years | 97 (64.7) | 0 |
| | More than 30 years | 10 (6.7) | 0 |
| Sex | Male | 77 (51.3) | 122 (48.8) |
| | Female | 73 (48.7) | 128 (51.2) |
| Total | | 150 (100) | 250 (100) |

This study had shown that, about 64.7% of the post graduates were aged between 26 – 30 years and 54.8% of the undergraduates were aged less than 20 years. About 51.3% of the post graduates were males and 51.2% of the undergraduates were females.

About 50.0% of the post graduates and 55.2% of the undergraduates have felt that, ethical issues are very important in medical profession. There was no statistically significant difference between the importance of ethical issues in medical profession between the undergraduates and post graduates.

Table 2: Distribution of the study group according to importance of ethical issues

| How important are ethical issues in medical profession? | | |
|---|-------------------------|--------------------------|
| | Post graduates n (%) | Under graduates n (%) |
| Not at all | 3 (2.0) | 1 (0.4) |
| Somewhat important | 10 (6.7) | 13 (5.2) |
| Important | 50 (33.3) | 79 (31.6) |
| Very important | 75 (50.0) | 138 (55.2) |
| Extremely important | 12 (8.0) | 19 (7.6) |
| Total | 150 (100) | 250 (100) |

χ^2 value=3.333, df=4, p value, sig=0.504, NS

Table 3: Distribution of the study group according to source of knowledge

| What is the source of your knowledge? | | |
|---------------------------------------|-------------------------|--------------------------|
| | Post graduates n (%) | Under graduates n (%) |
| Lecture class | 9 (6.0) | 17 (6.8) |
| Ethics books | 23 (15.3) | 35 (14.0) |
| Seminars & Workshops | 32 (21.3) | 51 (20.4) |
| Clinical training | 41 (27.3) | 66 (26.4) |
| Journals | 22 (14.7) | 38 (15.2) |
| Newspapers | 16 (10.7) | 30 (12.0) |
| Television | 7 (4.7) | 13 (5.2) |
| Total | 150 (100) | 250 (100) |

χ^2 value=0.493; df=6; p value; sig=0.998, NS

About 27.3% of the post graduates and 26.4% of the undergraduates have felt that, clinical training is the source of knowledge of ethical issues in medical profession.

Post graduates had higher knowledge about the existence of MCI's code of medical ethics, 2002, concealing the signs of domestic abuse from judiciary and police, importance of ethical conduct to avoid legal action, receiving the gifts/ commission/ bonus, displaying his/her registration number, denying the use of pretended discovery, preserving the records and mercy killing were significantly different between the post graduates and undergraduates. The statements regarding opening the pharmacy equally higher response among the undergraduates compared to post graduates which were also significantly different. Statement regarding and written informed consent had no significantly different between post graduates and undergraduates.

Table 4: Distribution of the study group according to responses to ethical issues

| Questions related to medical ethics | Post graduates n (%) | Under graduates n (%) | P value |
|---|-------------------------|--------------------------|---------|
| I am aware of the existence of MCI's Code of Medical Ethics, 2002 for Registered Medical Practitioners | 146 (97.3) | 110 (44.0) | 0.000* |
| A doctor can own an open pharmacy | 145 (96.7) | 210 (84.0) | 0.000* |
| A doctor can conceal the signs of domestic abuse from the judiciary or the police, in order to prevent marital discord between the couple | 142 (94.7) | 95 (38.0) | 0.000* |
| Ethical Conduct important only to avoid legal action | 148 (98.7) | 110 (44.0) | 0.000* |
| A doctor can receive gifts / commission / bonus for referring / recommending / procuring any patient for medical / surgical / other treatment | 144 (96.0) | 110 (44.0) | 0.000* |
| A doctor need not display his/ her registration number in the prescription he/she writes | 143 (95.3) | 164 (65.6) | 0.000* |
| A doctor may deny the use of his patented discovery even if it benefits a large population | 141 (94.0) | 110 (44.0) | 0.000* |
| A doctor must preserve the records of his/her inpatients for 3 years | 143 (95.3) | 154 (61.6) | 0.000* |
| Before performing an operation, which may result in sterility as a complication, the written informed consent of both husband and wife is mandatory | 145 (96.7) | 236 (94.4) | 0.302 |
| A doctor can perform mercy killing/ active euthanasia after discussing the matter with the relatives | 142 (94.7) | 110 (44.0) | 0.000* |

*P-value less than 0.05 considered significant

Table 5: Distribution of the study group according to responses to ethical issues

| Questions related to medical ethics | PG n (%) | UG n (%) | P value |
|--|-------------|-------------|---------|
| When a Registered medical practitioner issues a medical certificate, it is not mandatory to maintain a Register of Medical Certificates | 140 (93.3) | 100 (40.0) | 0.000* |
| A doctor should go ahead with the appropriate treatment or investigation irrespective of patient's opinion/ consent | 145 (96.7) | 210 (84.0) | 0.000* |
| If a medical practitioner wants to publish a photograph of a patient related to a case study in any medical journal, in which their identity can be revealed, he needs to take permission from the patient | 141 (94.0) | 110 (44.0) | 0.000* |
| I am aware of the existence of Nuremberg code and Declaration of Helsinki as a statement of ethical principles for medical research involving human subjects | 141 (94.0) | 174 (69.6) | 0.000* |
| As per the IPC 89, a child under twelve years or an insane person cannot give valid consent to undergo a procedure and parent / guardian consent is mandatory | 145 (96.7) | 174 (69.6) | 0.000* |
| A doctor can prescribe a drug even if he does not know the exact composition | 140 (93.3) | 201 (80.4) | 0.000* |
| If a medical practitioner is found guilty of committing Professional misconduct, the appropriate medical council may award punishment as deemed necessary or may direct removal of name of the delinquent RMP (penal erasure) altogether or for a specified period from the state or national medical register | 139 (92.7) | 219 (87.6) | 0.110 |
| Vicarious liability is when Senior doctor is responsible for the negligence of junior doctor/ resident / intern working under his/her supervision | 140 (93.3) | 110 (44.0) | 0.000* |
| As per the Indian Penal code (IPC), any person doing misbehaviour with healthcare workers including use of abusive language with Duty doctor, Nurse, Ward boy or other medical staff can attract 2 years imprisonment | 115 (76.7) | 39 (15.0) | 0.000* |

*P-value less than 0.05 considered significant



Table 6: Distribution of the study group according to responses to ethical issues

| Questions related to medical ethics | Post graduates n (%) | Under graduates n (%) | P value |
|---|----------------------|-----------------------|---------|
| Medical practice is included under Consumer Protection Act (CPA), 2019 | 140 (93.3) | 154 (61.6) | 0.000* |
| The inclusion of medical practice in Consumer Protection Act has made the practice more defensive | 136 (90.7) | 228 (91.2) | 0.857 |
| The inclusion of Medical ethics and Medico legal issues in the MBBS curriculum as a lecture/workshop/seminar/role play activity etc in all years of undergraduate classes and during internship may be helpful in raising awareness amongst young doctors | 141 (94.0) | 250 (100) | 0.000* |
| Even though the question of negligence against a doctor has been decided in consumer court, the patient can start another proceeding in a different court | 138 (92.0) | 192 (76.8) | 0.000* |
| It is mandatory to have an Institutional Ethics Committee (IEC) in a medical college | 137 (91.3) | 110 (44.0) | 0.000* |

*P-value less than 0.05 considered significant

Maintenance of register of medical certificates, revealing the identity when publishing the photograph, awareness of Nuremberg code and declaration of Helsinki, children giving consent, vicarious liability and misbehaviour of public with health care personnel had significantly good response rate among the post graduates than the undergraduates. The response rates of Importance of patient, prescribing a drug without knowing the composition and professional misconduct were good with undergraduates but were significantly different with the post graduates.

Inclusion of medical practice under COPRA act, inclusion of medical ethics in MBBS curriculum, starting parallel trial in another court and mandate to have Institution Ethics Committee in a medical college were significantly different between the post graduates and undergraduates. But statement regarding the consumer protection making medical practice more defensive was not statistically significant between the two groups.

The total knowledge score of post graduates was 23.4 ± 1.9 (mean \pm SD) and that of under graduates was 14.8 ± 8.8 (mean \pm SD). This difference was statistically significant between the post graduates and undergraduates.

DISCUSSION

This study was mainly undertaken to study the knowledge of ethical issues in medical profession especially among the budding doctors. This study had shown that, almost half of the post graduates and under graduates felt that the ethical issues in medical profession are most important. Clinical training was most important in imparting the knowledge of ethical issues in medical profession which was not significantly different between the post graduates and undergraduates. In a study by Rajput et al, all the interns and residents believed that the knowledge of medical ethics is necessary.⁸

Post graduates comparatively had better knowledge about the existence MCI code of medical ethics, non-conceal of

the domestic abuse from judiciary and police, importance of conduct to avoid legal action, receiving the gifts / commission / bonus, display of registration number, denying the use pretended discovery, preserving the records, mercy killing, maintenance of register for medical certificates, revealing the identity when publishing the photographs, awareness of Nuremberg code and declaration of Helsinki, children giving the consent, vicarious liability and misbehaviour of public with health care personnel, inclusion of medical practice in consumer protection act, inclusion ethics in medical curriculum, starting a parallel trial in another court and mandate to have institution ethics committee in a medical college.

The undergraduates had also shown some important knowledge about owning a pharmacy by doctor, obtaining informed consent, importance of patient consent, prescribing a without knowledge about composition, professional misconduct and consumer protection act making the medical practice more defensive were not significantly different from post graduates. Post graduates had significantly higher knowledge scores than the post graduates in this study.

In a study by Babu et al, the medical students were clear about the facts that acts of self-advertisement and prescription of unknown drug compounds are unethical. Majority of the students also indicated to display their registration numbers on their prescriptions, maintain medical records for three years and refuse gifts or favours from the medical representatives. But majority of the students were unaware about opening a pharmacy and mercy killing on the basis of unilateral decisions.⁷ In a study by Rajput et al also observed similar findings that the knowledge of most of medical ethics was lower in undergraduates than the post graduate residents.⁸ In contrary to the findings of this study, Brogen et al reported majority of doctors had no or less knowledge about the medical ethics.⁹ In a study of medical practitioners, Dash et



al reported 52% of the medical practitioners had the knowledge about medical ethics in contrary to the results of this study.¹⁰ Despite discrepancies in knowledge about the medical ethics in junior and senior doctors in the literature available, this study strongly advocates the strict implementation of medical ethics under competency based medical education enforced by National medical Commission. Conferences, Webinars and CMEs organized by medical associations can refresh the knowledge of medical ethics in doctors out of medical colleges.

CONCLUSION

This study had shown that post graduates had better knowledge on different aspects of medical ethics than the undergraduates. This study urges strict implementation of Medical ethics under competency based medical education enforced by National Medical Commission.

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