

Original Article



Assessment of the implementation of Knowledge about Bioethics in patient care among Students in a Tertiary Care Hospital.

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ABSTRACT

Background

Bioethics is a gray area of medical practice that has been gaining increasing importance in the past years. However the lack of practical guidance during the learning phase has resulted in the inability to apply the knowledge regarding bioethics in clinical practice. The purpose of this study is to assess the same.

Materials and methods

A pre-designed validated questionnaire was used to obtain data from 100 randomly chosen students from various medical faculties of a tertiary care centre. The Likert scale was used to analyse the responses.

Results

Of the 100 participants, 62% of the students were aware of Bioethics as an important aspect of their curriculum while 71% knew of the 4 pillars of Bioethics. 98% of the participants were interested in learning about healthcare ethics. However when posed with various ethical dilemmas, we found varied results for example 42% respondents agreed that during treatment patient wishes must always be adhered to while 10% disagreed. Only 29% participants agreed

that medical practitioners should refuse to treat patients who behave violently. 27% participants strongly disagreed with writing 'Normal' in a case paper without doing the relevant physical examination.

Conclusion

In addition to having fair knowledge and understanding about bioethics, the ability to adhere by the principles of bioethics and make rational calculated choices when faced with certain common ethical dilemmas is equally important and must be focused upon.

Keywords - Bioethics, knowledge, implementation, clinical practice

INTRODUCTION:

The Hippocratic Oath is an oath of ethics historically taken by physicians and requires them to swear to uphold specific ethical standards. The 4 main pillars of Bioethics form the foundation of this oath that was written in the 5th century B.C. and they still hold true. It is the guiding principle for moral musings and we see a symbolic adherence to the codes of conduct regulating the modern medical training curriculum that attempts to inculcate this ethical attitude among future physicians.

However, it is still not uncommon to see or hear cases of unethical practices or conduct by medical students with patients or colleagues.^[1-2] This may be partly due to a lack of practical ethical guidance during the learning phase. In India, the medical profession has been brought under "Consumer Protection Act"^[3], and there have been increasing complaints of poor ethical conduct against healthcare practitioners. This may be due to increased public awareness and inappropriate practices by the healthcare professionals.

Medicine is a holistic profession that rests upon a strong physician-patient relationship and Non-adherence to healthcare ethics and unsatisfactory management and solution of the cases not only threaten this relationship, but may also lead to suboptimal service delivery and potentially trigger incidences of violence and abuse.^[4] This realisation has led to an increased focus on including medical ethics in the curriculum for medical students and early training but when exposed to a clinical setting, taking decisions encompassing the broader aspect of both scientific knowledge and human values is difficult.

Inculcation of Ethical practices and the application of the principles of Bioethics in medical students is the need of the hour to safeguard not only the interests of the patients but also provide the future generation of medical professionals the skill set required to deal with the intricacies and hurdles they are faced with on a regular basis in their line of work. An awareness and keen understanding of the same is essential to allow the integration of bioethics in patient care. Hence, the purpose of this study is to assess the knowledge and attitude of medical students on the various aspects of medical ethics and their implementation of the same in a clinical setting.

MATERIALS AND METHODS:

A Cross-sectional study was carried out in association with the Department of Community Medicine of Krishna Institute of Medical Sciences, Karad.

According to a study conducted by *Chatterjee B.* and *Sarkar J.* ^[5] out of 322 study participants, 68.6% were of the opinion that “During clinical rounds along with clinical aspects of a patient’s care, it is also essential to discuss ethical, social and legal issues of that patient.”

The minimal sample size to be included in our study was calculated by the formula -

$$N = \frac{4pq}{l^2}$$

Where,

p = Proportion of students who agreed with the above mentioned statement (68.6%)

q = Proportion of students who disagree with the above mentioned statement (31.4%)

l = allowable error (10) [95% confidence interval]

Thus the minimal sample size was calculated to be 86.16 ~ **86 students**.

The study was carried out over a period of three months. Among all eligible participants, 100 students were randomly selected and constituted the study population. The purpose and the process of the study was explained. All the participants were assured that the information collected would remain confidential throughout the study. After acquiring informed consent, data was collected using a pre-designed validated questionnaire specially curated for the purpose of assessing their current knowledge and attitude on the topic.

A pre-designed validated proforma was used that consisted of questions related to demographic details and knowledge regarding bioethics. The second part of questionnaire consisted of questions on different ethical issues where the respondents were required to agree or disagree with statements pertaining to adherence to patient will, confidentiality, autonomy, paternalism, abortion, physician-assisted suicide, informed consent etc. The questionnaire was adapted from tools previously used for Bioethics research ^[4-5] and modified to fit the study setting. Thus, the extent of the application of Bioethics knowledge in clinical settings during the course of their medical education was assessed based on the responses.

The collected data was analyzed by proportions, bar diagrams, and Microsoft excel sheets. Attitudinal questions that included a range of response options were graded in accordance with Likert’s 5 point scale (1 = Strongly disagree, 2 = Disagree, 3 = Uncertain, 4 = Agree, 5 = Strongly agree) and the data was statistically analyzed.

Inclusion Criteria: Undergraduate medical students studying in 2nd Professional or higher from all Constituent faculties (MBBS, Dental, Nursing, Physiotherapy and Pharmacy).

Exclusion Criteria: First Professional students will be excluded since they do not have clinical experience. Postgraduate students and faculty members will be excluded in this study.

RESULTS:

The present study was carried out among students of various faculties of Krishna Institute of Medical Sciences. Out of 100 randomly selected students, 70% were females, 23% belonged to the MBBS faculty while majority 52% were studying nursing. 38% were in the first year of their professional course.

| Gender | Number of students | Percentage |
|---------|--------------------|------------|
| Males | 30 | 30 |
| Females | 70 | 70 |

| Faculty | Number of students | Percentage |
|---------------|--------------------|------------|
| Medical | 23 | 23 |
| Dental | 6 | 6 |
| Pharmacy | 10 | 10 |
| Physiotherapy | 9 | 9 |
| Nursing | 52 | 52 |

| Year of Study | Number of students | Percentage |
|---------------|--------------------|------------|
| First Year | 38 | 38 |
| Second Year | 8 | 8 |
| Third Year | 14 | 14 |
| Final Year | 27 | 27 |
| Internship | 13 | 13 |

Knowledge about Bioethics

Of the study participants, 62% were aware of Bioethics as an important aspect of their curriculum while 71% knew of the 4 pillars of Bioethics.

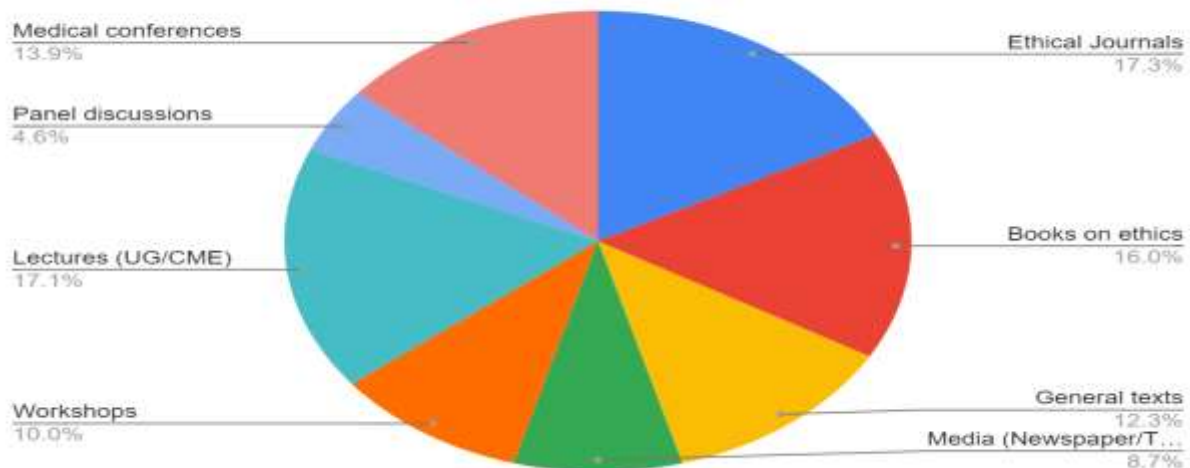
| What is Bioethics | Number of students | Percentage |
|-------------------|--------------------|------------|
| Correct | 62 | 62 |
| Incorrect | 38 | 38 |

| What are the 4 basic principles of Bioethics? | Number of students | Percentage |
|---|--------------------|------------|
| Correct | 71 | 71 |
| Incorrect | 29 | 29 |

Sources of knowledge regarding Bioethics

Among Ethical journals, Books on ethics, General texts, Media (Newspaper/Television/Internet), Workshops, Lectures (UG/CME), Panel discussions, Medical Conferences sources of knowledge regarding Bioethics were found to be as follows -

Number of students



Attitude and Practices regarding Bioethics

98% of the participants were interested in learning about healthcare ethics and also believed it was an integral part of the undergraduate curriculum.

| Do you have interest in learning healthcare ethics? | Number of students | Percentage |
|---|--------------------|------------|
| Yes | 98 | 98 |
| No | 2 | 2 |

| Do you think it is necessary to incorporate medical ethics in undergraduate curriculum? | Number of students | Percentage |
|---|--------------------|------------|
| Yes | 92 | 92 |
| No | 8 | 8 |

Using the Likert scale format students answered the questions regarding practice of Bioethics where 1 = Strongly disagree, 2 = Disagree, 3 = Uncertain, 4 = Agree, 5 = Strongly agree -

| Question | 1 | 2 | 3 | 4 | 5 |
|---|---|----|----|----|----|
| Ethical conduct is important only to avoid legal action | 7 | 23 | 27 | 32 | 11 |
| During clinical rounds along with clinical aspects of a patient's care, it is also essential to discuss ethical, social and legal issues of that patient. | 0 | 10 | 24 | 37 | 29 |
| During treatment, the patients' wishes must always be adhered to. | 0 | 10 | 18 | 42 | 30 |
| Close relatives must always be told about the patients' condition. | 1 | 0 | 21 | 29 | 40 |
| Children (except in emergency) must | 1 | 11 | 29 | 31 | 29 |

| | | | | | |
|---|----|----|----|----|----|
| never be treated without the consent of their parents/guardian. | | | | | |
| Medical practitioners should refuse to treat patients who behave violently. | 13 | 21 | 25 | 29 | 12 |
| Patients who refuse to be treated on religious or other grounds should be told to find another doctor who shares their beliefs or accept the treatment being offered. | 9 | 17 | 37 | 24 | 13 |
| If there is a disagreement between patients/families and health care professionals about treatment decisions, the doctors' decisions should be final. | 4 | 14 | 27 | 35 | 20 |
| If abortion is legal by law, the doctor cannot refuse to do the procedure. | 8 | 12 | 28 | 27 | 25 |
| Writing 'Normal' in a case paper without doing the relevant physical examination is acceptable because it is important for documentation. | 27 | 21 | 22 | 24 | 6 |
| Tie ups with specific pathology labs for tests in return for concessions and gifts is acceptable. | 21 | 22 | 30 | 20 | 7 |
| In order to prevent transmission of TB, disclosure of positive status against the patients' wishes is acceptable. | 5 | 16 | 30 | 34 | 15 |
| In a situation where a male doctor has to examine a female patient in the absence of a female attendant, is it ethical for the doctor to refuse the patient? | 10 | 17 | 30 | 33 | 10 |
| Confidentiality of a single patient can | 13 | 15 | 30 | 28 | 14 |

| | | | | | |
|--|--|--|--|--|--|
| be ignored if it benefits a larger population. | | | | | |
|--|--|--|--|--|--|

DISCUSSION

This study was conducted to assess the knowledge and awareness regarding medical bioethics among undergraduate students in a medical college in Maharashtra. The study population consisted of 100 students who were chosen at random and a pre-designed questionnaire was used as the study tool. In our study 70% of the study participants were female 52% belonging to the nursing faculty, as compared to a study done in West Bengal where 56% of participants were female and 44% were males.^[6] 38% of our study population were in the first year of the undergraduate studies and were focused upon so as to build a foundation for the inculcation of bioethics in their education from an early stage.

62% students were aware of Bioethics as an important aspect of their curriculum while 71% knew of the 4 pillars of Bioethics. A study in Barbados found that 53% of the respondents agreed to the importance of ethical knowledge, although 5% did not think that it is important.^[7]

Very few respondents had obtained their knowledge of ethics and law from a single source. 62.7% of the study population mentioned Ethical journals, Books on ethics, General texts and Lectures (UG/CME) as their source of knowledge regarding Bioethics while the others mentioned the Media (Newspaper/Television/Internet), Workshops, Panel discussions, Medical Conferences. Similarly a study done by Jalal *et al*^[8] found that 64% of the respondents acquired their knowledge of ethics from multiple sources, such as seniors, colleagues and Continuing Medical education (CME) lectures, medical journals and newspapers while 62% responded that they acquired their knowledge of medical ethics while working in the hospital and while dealing with a diverse array of situations during clinics.

When asked to answer some ethics related questions based on their opinions, fairly contrasting opinions were discovered among the study population. While 32% agreed that ethical conduct is important only to avoid legal action, a study conducted among medical postgraduates in Cochin reported that 85% of them disagreed.^[9] 37% thought that ethical aspects related to patients care must be discussed during clinical rounds unlike 68% as reported by Chatterjee *et al*.^[5]

42% respondents agreed that during treatment patient wishes must always be adhered to while 10% disagreed. As per a study conducted in Chennai, 87% of physicians reported they consider patients' opinion before taking any major treatment decisions however 81% of them reported they do best for patients irrespective of their opinion.^[10]

While only 40% of the study population strongly agreed that the patients' close relatives must always be informed about patients' condition, a study in Manipur found that 89% of them agreed.^[11] 29% participants strongly agreed that children should be treated only with parents' consent except in cases of emergency, a study conducted among medical graduates reported 68% agreed.^[12]

We found that only 29% participants agreed that medical practitioners should refuse to treat patients who behave violently whereas a study in Tamil Nadu reported that 56.8% of the study population agreed to refuse treatment.^[13] In case a patient refuses treatment due to beliefs, 37% participants were uncertain, 35% agreed that they should be instructed to find another doctor or accept the treatment being offered. Similarly as per Karthikeyan *et al* 27.7% were uncertain and 28.5% agreed. The ethical and medicolegal reasoning regarding consent to and/or refusal of treatment is based on the principle of autonomy. Autonomy can be ensured only when the individual comprehends the procedure and the consequences and thus, it is informed consent or informed refusal.

Beauchamp and Childress define paternalism as “the intentional overriding of one person's known preferences or actions by another, where the person who overrides justifies the action by the goal of benefiting or avoiding harm to the person whose preferences or actions are overridden”^[14] This paternalistic attitude seemed to prevail in the study population as 35% of them agreed that if there is a disagreement between patients/families and health care professionals about treatment decisions, the doctors' decisions should be final.

28% participants were uncertain while 27% agreed that a doctor cannot refuse to perform an abortion if it is legal by law in contrast to a multi centric study conducted among doctors and nurses from North India which reported 63% of them agreed that doctors can refuse to do the abortion irrespective.^[15]

In our study, 27% participants strongly disagreed with writing ‘Normal’ in a case paper without doing the relevant physical examination only because it is important for documentation while 22% agreed that tie ups with specific pathology labs for tests in return for concessions and gifts is acceptable in contrast to 7% as per the study done in Tamil Nadu.^[13]

Examining patients, especially physical examination without the presence of a chaperone has led to a number of allegations against doctors for professional misconduct. Though the scarcity of staff is a common problem faced, sometimes, it could be mere negligence especially when doing intimate examinations such as breast, genitalia and rectal examinations. The presence of a chaperone could prevent potential allegations of professional misconduct by doctors and potential harm to patients.^[16] Thus, we found that 33% participants agreed that in the absence of a female attendant it is ethical for a male doctor to refuse to examine a female patient.

In case of transmissible diseases, to prevent the spread of the same, 34% participants agreed with abandoning confidentiality, while 30% were uncertain whereas a study done in Kathmandu found that this statement was strongly disagreed with by 34.8% and disagreed with by 60.9%. The remaining 4.3% were 'not sure'.^[17]

CONCLUSION:

Bioethics is an integral part of the medical profession, especially for the upcoming generation of medical professionals and thus their knowledge, attitude and practices of the same are of immense importance.

From this study we have recognised that most of the study population has a fair knowledge and understanding about bioethics and are able to adhere by the principles of bioethics and make rational calculated choices when faced with certain common ethical dilemmas.

Recognising the 4 pillars of bioethics and implementing the same in our daily clinical practice will not only improve the physician-patient relationship but will also make us more competent professionals. However, it is a gray area and one in which there isn't a clear right or wrong in most aspects. The aim is to derive a balance and ensure that our actions not only benefit ourselves or our patients but society as a whole.

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