



ASSESSMENT OF KNOWLEDGE OF MEDICAL STUDENTS IN VARIOUS ASPECTS OF MEDICAL NEGLIGENCE AND HOW IT CAN BE AVOIDED: A STUDY FROM NOIDA INTERNATIONAL INSTITUTE OF MEDICAL SCIENCES, GREATER NOIDA.

Medical Education

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ABSTRACT

Medical negligence is the inability to provide appropriate care resulting in patient harm, is a rising concern in healthcare and modern medicine. This study assessed medical students' knowledge of medical negligence and explores prevention strategies. As future healthcare providers understanding of the issue is crucial for patient safety and improving healthcare systems. This research aims to identify knowledge gaps and inform educational enhancements by creating awareness to reduce medical negligence incidents.

This research project aimed to assess the knowledge of medical students in various aspects of medical negligence and explore their perspectives on prevention strategies. We employed a questionnaire-based approach to collect data from our MBBS students from Noida International Institute of Medical Sciences (NIIMS). The findings of this study have the potential to inform medical curricula and educational strategies to enhance patient safety and reduce medical negligence incidents.

We circulated a pre-structured questionnaire based google form, electronically to our 600 MBBS students comprising of questions related to medical negligence, students knowledge regarding that and measures to prevent such instances. Within a period of 2 months, we collected & analysed the data.

Building upon this existing research, the present study aims to extend our understanding of medical negligence. It seeks to assess the knowledge levels of medical students regarding medical negligence. By evaluating their understanding of legal and ethical aspects, as well as their ability to recognize potential negligence scenarios, this study aims to identify areas where students may require further education and training.

KEYWORDS

INTRODUCTION:

In the era of evolving healthcare, medical negligence poses a significant challenge, leading to patient damage, legal lawsuits, and ethical dilemmas¹⁻³. The foundation of healthcare lies in robust medical education, what students learn is practiced in practicality making it imperative that medical students understand medical negligence and its prevention⁴⁻⁶. This project aims to address knowledge gaps, enhance education, and contribute to patient safety and professional ethics in healthcare.

This study is essential due to the critical impact of medical negligence on patient safety and the integrity of healthcare systems. Ensuring that medical students understand medical negligence is imperative for improving healthcare and reducing legal and ethical challenges in the field.

AIMS & OBJECTIVES:

1. To assess the knowledge levels of medical students regarding medical negligence.
2. To identify specific areas where medical students may have knowledge gaps or misconceptions related to medical negligence.
3. To emphasize the importance of medical negligence prevention as an essential aspect of healthcare education.
4. To gather insights into the strategies and measures proposed by medical students for avoiding medical negligence.

MATERIALS & METHODS:

Study Design:

This research employed a cross-sectional survey design.

Questionnaire Development:

A structured questionnaire was meticulously designed to assess medical students' knowledge of medical negligence and their understanding of preventive measures. The questionnaire consisted of

carefully crafted questions covering various aspects of medical negligence, including legal and ethical considerations, patient communication, adherence to guidelines, and documentation.

Study Population:

The target population for this study will be medical students pursuing their MBBS degree in NIIMS, Greater Noida.

Data Collection:

Data will be collected through the distribution of the structured questionnaire to the selected participants. This can be done via in-person surveys, online surveys, or a combination of both, depending on the logistical feasibility and preferences of the participants.

Data Analysis:

Data analysis will encompass both descriptive statistics and inferential techniques:

Ethical Considerations:

Ethical considerations, including informed consent from participants, data privacy, and adherence to ethical guidelines, will be strictly followed throughout the research process.

RESULT:

We recorded the responses of the questionnaire distributed online to the MBBS students and analyzed the responses. A total of 475 students of 600 students submitted their responses. The age of the MBBS students ranged from 19-25 years of age. Of these 475 students, 50% were males and 54% females [Figure 1].

The questionnaire was divided in different sections. Section one dealt with few questions relating to an overall idea of what they understand by medical negligence and are they able to understand the common causes or scenarios which could lead to medical negligence. These

responses are tabulated as follows in Table 1.

Gender (475 responses)

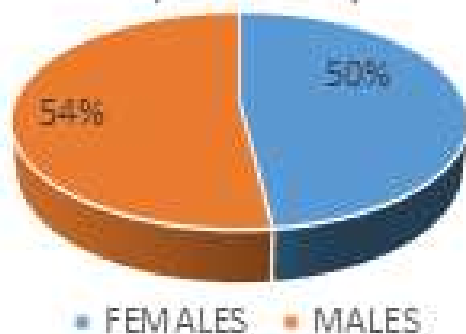


Figure 1: Pie-chart showing the gender distribution in the study.

Table No. 1: Assessment Of Basic Awareness Of MBBS Students About Medical Negligence

Question	Responses	Percentage
1. How would you define medical negligence in your own words?	1. Unintentional medical errors causing patient harm	1.40.4%
	2. Deliberate harm caused by healthcare professionals	2.13.5%
	3. Failure to provide standard care resulting in patient harm	3.44.2%
	4. Not sure	4.1.9%
2. Can you identify common causes or scenarios that could lead to medical negligence?	1. Yes	1.75.2%
	2. No	2.1.2%
	3. Not sure	3.23.6%

An overall knowledge of students about preventive measures for medical negligence was assessed through few questions. The various responses were recorded for the question about the most effective measures to prevent medical negligence. The various response are shown in a pie-chart [Figure No. 2].

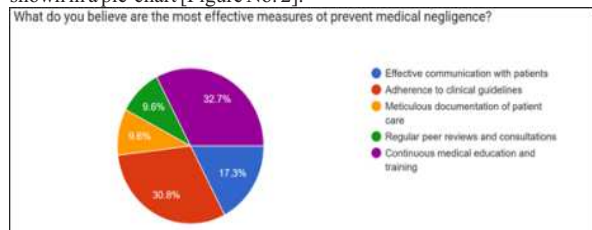


Figure No 2: Pie Chart Showing Knowledge Of Students About Preventive Measure For Medical Negligence.

The students were asked if they had received any formal training or education on prevention of medical negligence during medical studies. Their responses are depicted in a pie-chart [Figure No 3].

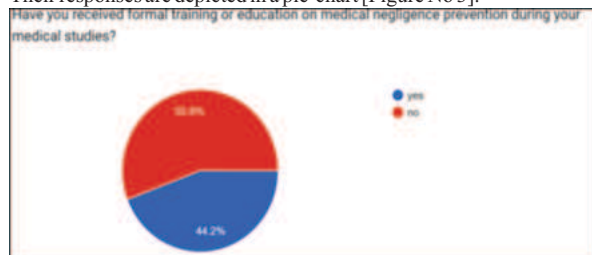


Figure No. 3: Pie chart showing the status of formal training received by the medical students regarding medical negligence.

Section 3 dealt with knowledge of students about informed consent. The following questions were asked to the medical students through pre-formed & validated questionnaire. The following questions were asked in this section:

1. What is the primary purpose of obtaining informed consent from a patients before a medical procedure or treatment?
2. Which of the following is NOT typically considered a key element of

informed consent?

3. How familiar you are with the legal requirements and ethical principles governing informed consent in healthcare?
4. In your opinion, should informed consent discussions should be documented in a patient's medical records?
5. What measures do you believe can help improve the informed consent process to prevent potential cases of medical negligence?

The responses of above mentioned questions are depicted in the following pie-charts [Figure No. 4-8].



Figure No.4: Pie Chart Showing The Students Response Regarding Purpose Of Taking Informed Consent In Cases Of Medical Negligence.

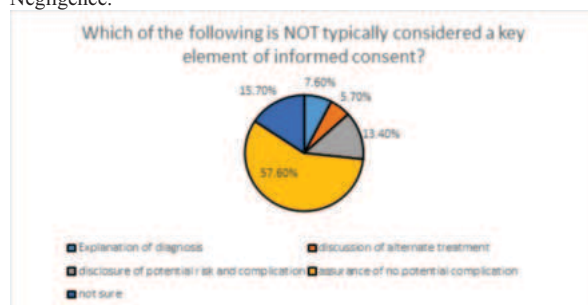


Figure No. 5: Pie Chart Showing The Response Regarding Key Elements To Be Included In Informed Consent

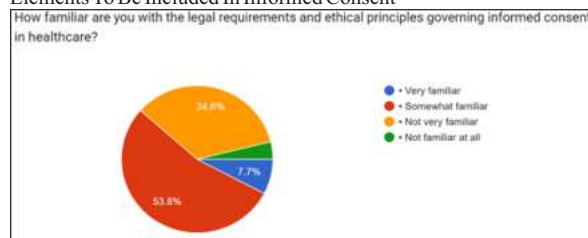


Figure No. 6: Pie chart showing the status of knowledge of students regarding students familiarity with legal requirements & ethical principles related to informed consent.

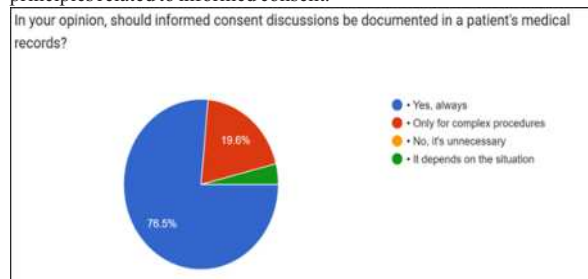


Figure No. 7: Pie chart depicting the ideas of students regarding documentation of informed consent in medical records

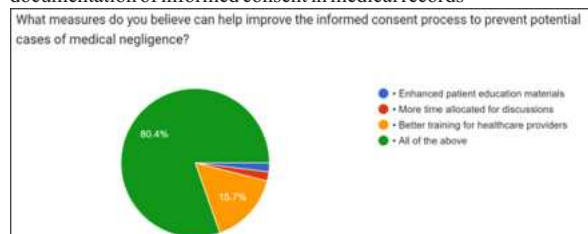


Figure No. 8: Diagram showing the responses from students regarding their opinion whether taking informed consent prevent cases of medical negligence

Section 4 mentioned the knowledge assessment of medical students regarding cases which are not related to medical negligence and how they acquire knowledge about such cases of medical negligence and its prevention. They were also asked if they would be interested in participating in workshops or seminars focused on medical negligence and its prevention. These results are shown below [Figure 9-11].

Which of the following is NOT an example of medical negligence?

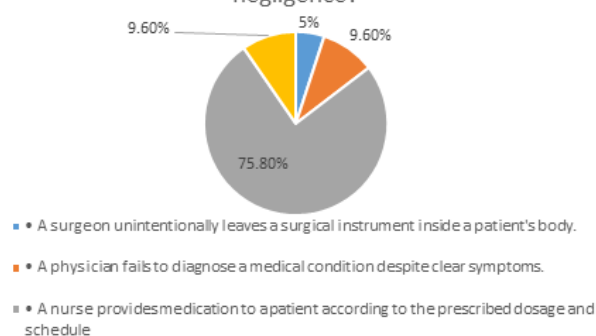


Figure No. 9: Pie Chart Showing Response To Cases Which Are Related Or Not Related To Medical Responses

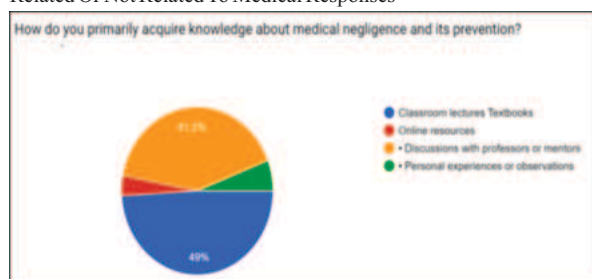


Figure No. 10: Pie Chart Showing Response To Their Way Of Acquiring Knowledge About Negligence.



Figure No. 11: Pie-chart Showing Response To Their Interest In Attending Workshops Related To Medical Negligence

DISCUSSION:

Medical jurisprudence is study of law in the field of medicine covering various medico-legal issues^{2,4}. Professional negligence is lack of reasonable degree of care and skill, or negligence on part of a medical practitioner during his practice, which usually results in bodily harm, ill health or death of the patient^{3,5}. Medical profession has been affected by the commercialization of medical practice and changing doctor-patient relationship. This leads to an increasing trend of medical litigation by unsatisfied patients.

Prior studies, such as Smith et al⁹. (2019) and Jones & Brown³ (2020), have shed light on the widespread issue of medical negligence. They have underscored its prevalence across healthcare systems and its far-reaching impacts on patients. Medical negligence often results in severe harm, prolonged suffering, and sometimes even fatal consequences. Additionally, it frequently leads to legal actions against healthcare providers, imposing substantial financial burdens on both individuals and institutions.

Johnson et al¹. (2018) have explored various preventive strategies to mitigate the occurrence of medical negligence. These strategies encompass adhering to clinical guidelines and best practices, effective documentation of patient records, and fostering clear and transparent communication within healthcare teams.

In addressing medical negligence, education has emerged as a key component. Williams & Clark¹⁰ (2017) highlight the significance of educating healthcare professionals, particularly medical students, as a preventive measure. Effective communication skills have been underscored as a vital aspect of this education, as they can significantly reduce misunderstandings, errors, and potential negligence situations.

In this study we have made an attempt to assess the knowledge of our medical students regarding medical negligence and a basic idea to prevent such negligence on their part. There are numerous ways for avoiding such negligence in our healthcare system. The primary requirement is following up with proper clinical guidelines which will improve the quality care. Giving our best is the second most important step as a treating physician. We should keep a track of everything related to patient's treatment. The protocol of attending conferences and continued medical education should be followed religiously to keep ourselves updated with current concepts of medical education and practices.

In our study, responses of 450 students were recorded based on their answers to pre-formed structured questionnaire. Most of our students could answer the definition of medical negligence with identification of common causes or scenarios leading to such negligence. Various studies have done to assess the knowledge, attitude and practice of students regarding medical negligence and ways to prevent it.

Another important aspect which has to be followed correctly is the concept of informed consent⁶⁻¹¹. Informed consent is a fundamental and ethical concept that lies at the heart of modern medical practice and is a preventive factor for medical negligence. When healthcare providers engage in thorough informed consent discussions, they provide patients with a comprehensive understanding of the risks, benefits, and alternatives associated with a particular treatment or procedure. This transparent communication minimizes the chances of misunderstandings, miscommunications, or uninformed decisions that could lead to medical negligence claims.

The patient must be informed of any risks & consequences which could occur even by chance during the treatment protocol, no matter how slight they may be. Failure to get informed consent can be taken as medical malpractice⁹⁻¹¹. Negligence can very much be avoided by following great risk management which is based on basic four Cs: Compassion, healthy Communication, Complete competence and regular Charting.

What we found is though these students have basic knowledge about negligence and ways to prevent but still much have to be done in this regard. There is growing public awareness regarding ethical conduct of medical practitioners and complaints against physicians appear to be increasing. Hence, the budding doctors should familiarize themselves with regulations and laws that concern their practice. As we all know, doctors have several ethical, moral & legal obligations in their duties.

Hence, it is very important that every doctor understands the nature of these obligations and then fulfills these obligations to the best of their ability. Few studies have also published the awareness of informed consent among medical students. In study by Radhika et al¹¹, in Chennai, Tamil Nadu, it was found that 56.5% of participants had correct knowledge about consent in medical practice. Our study also showed similar results.

The point which can be considered here is to include the medico-legal education in the undergraduate medical curriculum to improve the knowledge, attitude and practice of future doctors. This education will include knowledge of students about consent, preservation of medical records, awareness about confidentiality with patient information, etc. Various interventions can be done to address the gaps in their understanding of legal and ethical issues related to medical practice.

CONCLUSION:

In summary, previous researches have provided valuable insights into the prevalence and impact of medical negligence, preventive strategies, and the importance of education, especially in enhancing communication skills among medical students. This study intends to contribute to this body of knowledge by specifically examining the knowledge of medical students in relation to medical negligence. By doing so, it aspires to pinpoint areas where educational interventions

can be targeted to improve patient safety and reduce instances of medical negligence in the future.

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