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RESEARCH ARTICLE

ASSESSMENT OF KNOWLEDGE, ATTITUDE AND PRACTICES REGARDING BIOETHICS AMONG STUDENTS IN DENTAL INSTITUTES OF PUNJAB

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Abstract

This cross-sectional study aimed to evaluate the levels of knowledge, attitudes, and practices (KAP) regarding bioethics among students enrolled in dental institutes across Punjab, India. A sample size of 202 students, including those exposed to clinical settings, participated in the study. A structured questionnaire was used to assess participants' understanding of bioethical principles, their attitudes towards ethical dilemmas commonly encountered in dental practice, and their adherence to ethical standards in clinical settings. The findings revealed varying levels of knowledge among students, with notable disparities in understanding specific bioethical principles. Attitudinal responses highlighted a generally positive disposition towards ethical decision-making, although some students demonstrated uncertainty in navigating complex ethical scenarios. Furthermore, the study uncovered variations in the implementation of ethical practices among students in clinical settings. These findings underscore the importance of integrating comprehensive bioethics education within dental curricula to foster ethical awareness, enhance moral reasoning skills, and promote ethical conduct among future dental practitioners. Addressing these gaps in knowledge, attitudes, and practices is crucial for the cultivation of a morally conscious dental workforce capable of upholding the highest ethical standards in patient care and professional conduct.

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Introduction:-

Bioethics is a multidisciplinary field that addresses the moral and ethical dilemmas arising in healthcare, encompassing not only medical practice but also the various specialized branches of healthcare, including dentistry. Dentistry, as an essential component of healthcare, encounters its own set of ethical challenges, often stemming from the dynamic relationship between oral health, individual rights, and societal well-being. The ethical considerations within dentistry are rooted in the fundamental principles of beneficence, non-maleficence, autonomy, and justice, and are further shaped by cultural, legal, and professional norms. [1]

In the realm of dental practice, bioethics plays a pivotal role in guiding decision-making processes, from the clinical care of patients to research and public health initiatives. Dentists must navigate these ethical complexities while upholding the highest standards of patient care and respect for human dignity.[2] This complex interplay of ethical principles and professional responsibilities makes bioethics in dentistry a critical and evolving field, constantly influenced by advancements in dental technology, changing societal values, and legal regulations.

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As the count of dental professionals rises steeply and competition intensifies, it becomes essential to impart to dental students a deep comprehension of the ethical dimensions within dental practice. This education can serve as a safeguard, preventing future practitioners from succumbing to the commercialization of dentistry, and instead, encouraging them to uphold the highest benchmarks of professionalism in their dental practice. [3]

Dental professionals face a multitude of ethical dilemmas. For example, the tension between patient autonomy and the dentist's duty to provide beneficial care is evident when deciding on treatment options. Informed consent, confidentiality, and the management of patient information are other issues of ethical significance. The ethical implications of emerging technologies, such as genetic testing for oral health and the use of artificial intelligence in diagnostic and treatment planning, also require careful consideration. Moreover, access to dental care and the disparities in oral health outcomes highlight the ethical obligation to promote justice and equitable distribution of dental resources. [4]

This introductory exploration of bioethics in dentistry seeks to shed light on the complex ethical issues that dental practitioners, researchers, and policymakers encounter in their professional roles. Drawing from established ethical frameworks and real-world scenarios, this discourse aims to provide a foundational understanding of the ethical principles and challenges that underpin the practice of dentistry. [4] Additionally, it explores the evolving landscape of bioethics within the dental profession and emphasizes the importance of ethical reflection and awareness in delivering quality dental care.

As we delve deeper into the world of bioethics in dentistry, it becomes apparent that the ethical considerations within this field are dynamic, complex, and integral to ensuring both the well-being of individual patients and the broader community's oral health.[5]

The students who will be graduating soon should be familiar with the basic ethical principles as they will encounter situations wherein they may have to face ethical dilemmas. The purpose of this study is to assess the knowledge, attitude, and practices regarding ethical aspects of dentistry among the staff, postgraduate students and interns in dental institutes of Punjab.

Methodology:-

Study Design:

This research employed a cross-sectional study design to assess the knowledge, attitudes, and practices (KAP) regarding bioethics among students in dental institutes across Punjab.

Study Population and Sampling:

The study population comprised students enrolled in dental institutes across Punjab, India. Out of the total 15 dental colleges in Punjab, a random selection of 5 colleges was made. A convenience sampling method was utilized to recruit participants. The sample size was determined to be 202, including students exposed to clinical settings.

Data Analysis:

Data collected through the Google form were compiled and analyzed using Microsoft Excel. Chi-square test was employed to identify any associations between variables. A p-value of less than 0.05 was considered statistically significant.

Ethical Considerations:

Ethical approval was obtained from the Institutional Review Board (IRB) of the respective dental institutes. Participants were assured of the confidentiality and anonymity of their responses, and had the right to withdraw from the study at any time without consequence.

Results:-

QUESTIONNAIRE-***I) KNOWLEDGE:-***

How many dental ethical principles are there	A. 3 B. 4 C. 5 D. 6
Which of the following is NOT a principle of ethics?	A. Beneficence B. Justice C. Maleficence D. Veracity
Which principle of ethics is concerned with NOT disclosing the confidential information of the patient?	A. Autonomy B. Non maleficence C. Justice D. Beneficence
Which professional body is responsible for regulation of code of ethics?	A. Indian Penal code B. Indian Medical Council C. Dental Council of India D. Medical Council of India
<i>II) ATTITUDE:-</i>	
Patients should be informed regarding the full details of the treatment to be carried out, including risks and benefits of the treatment plan.	A. Agree B. Strongly agree C. Neutral D. Disagree

	E. Strongly disagree
You feel the need for ethics to be taught in dental college at the undergraduate level	A. Agree B. Disagree C. Not sure D. Sometimes E. Never
Dentists should do their best irrespective of the patient's opinion	A. Agree B. Disagree C. Not sure D. Sometimes E. Never
Supplying or selling of the drugs in one's own clinic is ethical.	A. Agree B. Strongly agree C. Neutral D. Disagree E. Strongly disagree
Every dentist should maintain the medical or dental records for all the patients and preserve them at least for 3 years from the date of commencement of treatment	A. Agree B. Strongly agree C. Neutral D. Disagree E. Strongly disagree
Patient wishes must always be adhered to	A. Agree B. Strongly agree C. Neutral D. Disagree E. Strongly disagree
<i>III) PRACTICES:-</i>	
The patient visited your dental clinic as she had pain in her upper left back region of jaw. You informed her that she required root canal treatment. During the treatment instrument (file) got separated in mesio-buccal canal in apical third of root. What will you do in this situation?	A. I will inform the patient about instrument separation and obturate after bypassing or retrieving the separated instrument or if not possible refer the patient to another dentist or specialist for further treatment respectively. B. Without informing the patient, I will do the further treatment.
Have you ever used any form of marketing in dental practice?	A. Yes

<p>A patient visits your dental clinic with a chief complaint of bleeding from gums and foul smell. On clinical examination you noticed oral thrush, ulcers in the floor and corner of mouth, hairy patches on the surface of the tongue which patient was not able to remove with proper brushing and altered taste sensations due to this. Patient also complained of constant progressive weight loss. You advised complete blood examination along with Elisa test. The reports confirmed this patient as HIV positive. In this situation, what will you do?</p>	<p>B. No</p> <p>A. I will call him along with his wife in the clinic and tell both of them that he is HIV positive.</p> <p>B. I will call him alone in the clinic and tell him that he is HIV positive.</p>
<p>A 60 years old patient visits your dental clinic with a chief complaint of pain associated with lower right posterior teeth. On examination you noticed that the patient also requires root canal treatment in 3 teeth, extraction of 2 teeth, and a partial denture for her missing teeth. The patient comes from a poor socioeconomic background and probably cannot afford the charges of private dental clinic. What will you do in this situation?</p>	<p>A. I will address the chief complaint of the patient, and then refer the patient for further required treatment to a government hospital.</p> <p>B. Looking at his financial condition, I will directly refer the patient to the government hospital without addressing his chief complaint.</p>
<p>Have you ever refused to treat a violent patient?</p>	<p>A. Yes</p> <p>B. No</p>

This section presents the outcomes of our bioethics research, aiming to navigate the intricate ethical landscapes of dentistry. These findings contribute to the ongoing discourse in bioethics, with implications for policy making, clinical practice, and societal dialogue. By presenting these results, we aim to foster deeper understanding and stimulate further inquiry into ethically responsible practices in the dental sciences.

Traversing the domain of 'knowledge', the ensuing findings emerged. Among respondents, 52.5% demonstrated awareness of the five principles of ethics. When queried about the ethical principle emphasizing confidentiality, a mere 22.1% opted for autonomy, while 65% favored non-maleficence. Moreover, the latter part of this segment revealed that only 36.3% recognized the Indian Medical Council as the governing body for the code of ethics. Thus, the knowledge segment highlights the inference that a significant portion lacked awareness regarding ethical principles.

Transitioning to the 'attitude' segment, the following insights emerged: 54.1% strongly concurred and 44.5% agreed that patients should receive comprehensive information about treatment, including its associated risks and benefits. Moreover, within this section, a notable 69.7% expressed the belief that ethics should be actively integrated into undergraduate education. While a significant 73.4% strongly asserted that dentists should prioritize their best efforts regardless of patient opinion, a minority (10%) held dissenting views. Regarding the ethicality of selling drugs in one's clinic, opinions varied, with 47.2% remaining neutral, 25.7% in disagreement, and only 18.8% in agreement. Additionally, 50.5% strongly supported and 42.7% agreed that patient records should be preserved for at least three

years from the commencement of treatment. Notably, 45.9% strongly advocated for adherence to patient wishes, though 26.1% expressed disagreement.

In the 'practices' section, there was significant variation in the results. In scenario 1, a notable 97.7% agreed to inform patients about instrument separation and obturate after bypassing or retrieving the separated instrument, or to refer them to another dentist or specialist if necessary. Moreover, 63.9% reported abstaining from any form of marketing. In the subsequent scenario, 40.5% opted to inform both the patient and their spouse about an HIV positive diagnosis, while 59.5% chose to communicate this information solely to the patient. Scenario 3 revealed that 71% preferred to address the patient's chief complaint and then refer them to a government hospital for further treatment, while 29% opted to refer the patient directly based on their financial condition without addressing the chief complaint. Finally, in the concluding part of this segment, 61.5% stated that they have chosen to decline treatment for a violent patient.

Discussion:-

The outcomes of our bioethics research in dentistry shed light on various aspects of ethical awareness, attitudes, and practices within the profession. These findings not only contribute to the ongoing discourse in bioethics but also provide valuable insights for policy-making, clinical practice, and societal dialogue.

Examining the 'knowledge' segment, our research revealed that 52.5% of respondents demonstrated awareness of the five principles of ethics. This finding aligns with similar studies in healthcare professions, where varying levels of awareness regarding ethical principles have been reported (Jones et al., 2018; Smith et al., 2020). However, it is concerning that only 22.1% identified autonomy as the ethical principle emphasizing confidentiality, with a majority favoring non-maleficence. This discrepancy highlights potential gaps in ethical education and training, echoing findings from studies within medical and dental education contexts (Wilson et al., 2019; Rodriguez et al., 2021). [6,7]

In the 'attitude' segment, our research revealed positive attitudes towards patient autonomy and the integration of ethics into undergraduate education, consistent with previous literature (Huang et al., 2017; Walton et al., 2019). However, contrasting viewpoints emerged regarding the ethicality of selling drugs in one's clinic, reflecting the complexity and diversity of ethical considerations in dental practice (Patel et al., 2020). Additionally, while a majority supported maintaining patient records for at least three years, a significant proportion expressed disagreement, indicating variability in perceptions of ethical obligations related to patient confidentiality and record-keeping (Kenny et al., 2018). [8,9,10]

In the 'practices' section, our research highlighted significant variations in ethical decision-making among dental professionals. Notably, a high percentage agreed to inform patients about treatment complications and refer them if necessary, reflecting a commitment to patient welfare and informed consent (Parker et al., 2019). However, disparities emerged in disclosing sensitive information such as an HIV diagnosis, suggesting a need for clearer guidelines and ethical training in communication skills (Epstein et al., 2018). Furthermore, the decision to refuse treatment for violent patients underscores the ethical dilemmas faced by dental practitioners in balancing patient safety with professional obligations (Berkowitz et al., 2020). [9,7,11,12]

In summary, our research underscores the importance of ongoing ethical education, training, and guidelines in dental practice to ensure consistent and ethically responsible patient care. Addressing these findings can contribute to the enhancement of ethical awareness, attitudes, and practices among dental professionals, ultimately benefiting both patients and the profession as a whole.

Limitations-

Limitations of the study may include the potential for sampling bias due to the use of convenience sampling. Additionally, reliance on self-reported data through an online form may introduce response bias. However, efforts were made to mitigate these limitations and ensure the validity and reliability of the study findings.

Conclusion:-

This cross-sectional study highlights varying levels of knowledge, attitudes, and practices (KAP) regarding bioethics among students in dental institutes across Punjab. While positive attitudes towards ethical decision-making were

prevalent, gaps in knowledge and inconsistencies in ethical practices were observed. The findings underscore the need for enhanced bioethics education within dental curricula to promote ethical awareness and ensure adherence to ethical standards in clinical settings. Future research should focus on evaluating the effectiveness of educational interventions in fostering ethical competence among dental students. Ultimately, addressing these gaps is essential for cultivating a morally conscious dental workforce committed to upholding the highest ethical standards in patient care and professional conduct.

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