

A Closer Look at Bioethics in the Curriculum: A Study on the Knowledge, Attitude, and Perception of Bioethical Principles Among Nursing Students

Buddy Jeson L. Tuquib^{1*}, Evan P. Taja-on²

¹School of Arts and Sciences, San Isidro College, Philippines

²College of Science and Technology Education, University of Science and Technology of Southern Philippines, Philippines

Corresponding Author: Buddy Jeson L. Tuquib, bjtuquib@sic.edu.ph

ARTICLE INFO

Keywords: Bioethics, Bioethical Principles, Nursing, Nursing Curriculum, Nursing Education

Received : 1, October

Revised : 15, October

Accepted: 19, November

©2025 Tuquib, Taja-on: This is an open-access article distributed under the terms of the [Creative Commons Attribution 4.0 International](https://creativecommons.org/licenses/by/4.0/).



ABSTRACT

Understanding how nursing students learn and respond to ethical principles in healthcare helps reveal how well they are being prepared for real-life clinical decisions. Responses were gathered through an online survey completed over a three-week period involving 72 nursing students enrolled in the course Bioethics. The results show that nursing students possess a strong understanding of bioethical principles, hold a generally positive attitude, and recognize the real-life relevance of ethics in nursing practice. These findings suggest that integrating bioethics into the curriculum effectively supports the development of ethical awareness and decision-making among future healthcare professionals. The results underscore the importance of strengthening ethics education to ensure that nursing students are equipped to respond ethically and responsibly in diverse clinical settings.

INTRODUCTION

Bioethics is a branch of applied ethics that deals with moral questions in healthcare, including patient rights, informed consent, confidentiality, and professional integrity. The course is a vital part of nursing education because it helps students develop critical thinking and moral reasoning that guide their decisions and actions in real clinical settings (Ten Have & Patrão Neves, 2021). Through bioethics, students gain a deeper understanding of ethical issues they may face while caring for patients, allowing them to respond with compassion, respect, and responsibility. The way students understand, feel about, and interpret bioethical principles—through their knowledge, attitude, and perception—shapes how effectively they learn and apply ethical reasoning in practice (Johnstone, 2022). These components are crucial in preparing future nurses to navigate the complexities of patient care while upholding professional and ethical standards.

Despite the inclusion of bioethics in nursing curricula, there are concerns about whether students fully grasp and value its significance in actual practice. Some nursing students may memorize concepts without truly reflecting on their ethical importance, while others may struggle to connect classroom discussions with real-life patient scenarios (Martins et al., 2022). This disconnect can lead to poor ethical judgment and decreased confidence when making decisions that impact patient safety and dignity (Lee, 2023). The challenge lies not only in teaching bioethics but in making sure that students engage with the subject meaningfully (Martins et al., 2020). Understanding what students know, how they feel about the subject, and how they interpret its importance can shed light on potential weaknesses in the current teaching approach.

There is a lack of localized research that explores how nursing students in certain regions understand bioethics, particularly in provinces like Bukidnon, where many institutions offer medical-related programs. Most existing studies focus on urban settings, leaving a gap in information about students from rural areas who may face different social and educational influences (Mertz et al., 2020; Tanaka & Tezuka, 2022; Rivas Flores et al., 2024). This gap in knowledge highlights the need to explore how nursing students approach bioethics in terms of what they know, how they feel, and how they understand its role in their education and future profession.

The study aims to explore students' levels of knowledge, attitudes toward bioethical concepts, and perceptions of their role in practice. Student insights can be gathered that may help strengthen the teaching and learning of this subject. These insights can guide improvements in instructional strategies and help align the curriculum with the realities students face in clinical settings. A better understanding of these factors will help educators shape more effective and relevant approaches that engage students and encourage ethical awareness in their development as professionals.

Statement of the Problem

This study is guided by the need to understand how nursing students approach bioethics through the lens of three key components: knowledge, attitude, and perception. Specifically, it seeks to answer the following:

1. What is the level of knowledge of nursing students on bioethical principles?
2. What is the attitude of nursing students toward bioethical principles?
3. What is the perception of nursing students toward bioethical principles?

LITERATURE REVIEW

Bioethical Principles

Bioethical principles serve as a moral guide in healthcare, helping professionals make decisions that respect human dignity and uphold professional standards. These principles typically include autonomy, beneficence, non-maleficence, and justice (Johnstone, 2022). Autonomy emphasizes the right of patients to make decisions about their care, while beneficence encourages actions that promote the well-being of others. Non-maleficence focuses on the obligation to avoid causing harm, and justice refers to fairness in the distribution of resources and treatment (Pilkington & Giuliante, 2023). Together, these principles provide a strong ethical foundation for addressing complex issues in healthcare settings, such as end-of-life decisions, informed consent, and patient confidentiality. Understanding these principles is essential for all healthcare providers, as they help ensure that care is not only clinically effective but also morally responsible (Martins et al., 2020; Ten Have & Patrão Neves, 2021; Martins et al., 2022; Lee, 2023).

Bioethics and Nursing Education

The integration of bioethics into nursing education is crucial in shaping students' professional values and ethical thinking. Bioethics is often taught through classroom discussions, case studies, and reflection exercises that encourage students to analyze real-life situations from an ethical perspective (Choi, 2019; Martins et al. 2022; Pereira et al., 2023). Through this process, students develop an awareness of how personal values, cultural beliefs, and professional responsibilities intersect in healthcare settings. However, the way bioethics is taught can vary widely, and in some cases, it may be treated as a supplementary subject rather than a core component of the nursing curriculum (Avci, 2022; Tanaka & Tezuka, 2022; Jahangasht Ghoozlu et al., 2023). This difference in emphasis can affect how well students internalize ethical concepts and how prepared they are to apply them in real practice.

As students transition from the classroom to clinical settings, the importance of bioethics becomes even more apparent. Nurses are frequently faced with ethical dilemmas, such as balancing patient autonomy with medical advice or ensuring fair treatment across diverse patient groups (Fowler, 2020; Lee et al., 2020; Johnstone, 2022). In these situations, a solid understanding of ethical

principles helps guide decision-making and supports professional accountability. Moreover, ethical competence strengthens patient trust, enhances communication, and contributes to the overall quality of care (Martins et al., 2020; Stokes & Iskander, 2021; Seo, 2023). Without proper grounding in bioethics, nurses may find it difficult to navigate these challenges or may rely on intuition rather than informed ethical reasoning. Bioethics must be more than theoretical knowledge—it must be seen as an essential skill that supports safe, respectful, and compassionate nursing care (Zhang et al., 2019; Papastavrou et al., 2025).

METHODOLOGY

Research Design

This research employed a descriptive, cross-sectional survey design (Wang & Cheng, 2020) to gather data on nursing students' knowledge, attitudes, and perceptions regarding bioethical principles. The design allowed the researchers to describe current conditions without manipulating any variables. The survey was administered during a specific timeframe within the academic year, and data were collected systematically to ensure consistency in the process. This approach provided a clear snapshot of how nursing students currently engage with bioethics as part of their education, offering relevant insights based on actual classroom experiences.

Sample and Sampling Procedure

The study used total population sampling (Lohr, 2021), surveying all nursing students enrolled in the bioethics course at San Isidro College during the academic year 2024–2025 were included as participants. This sampling method was chosen to avoid bias and to allow the inclusion of the entire group of learners exposed to the same curriculum and instruction.

Table 1. *Demographic profile of the nursing students (N=72).*

Demographic Profile		N	%
Sex	Male	20	27.8
	Female	52	72.2
Age	18-19	7	9.7
	20-21	60	83.3
	22-23	4	5.6
	24 and Older	1	1.4

Table 1 presents the demographic profile of the nursing students, revealing that the majority of the respondents were female (72.2%) and within the age range of 20 to 21 years old (83.3%). These figures reflect a common trend in nursing education, where female enrollment is typically higher, and students often fall within the early adulthood age range. The age and gender distribution suggest that most participants are likely in the middle of their undergraduate journey, which may influence their exposure to and understanding of bioethical principles.

Research Instrument

A researcher-made questionnaire was used as the main data-gathering tool. The instrument was reviewed by five experts in the field to ensure its content validity, resulting in a high content validity index (CVI) of 0.995. The result confirmed that the questionnaire items were relevant and well-aligned with the objectives of the research. Additionally, a pilot test was conducted with a similar group of respondents to assess the reliability of the tool, yielding a Cronbach's alpha of 0.906. The result indicated a high level of internal consistency, confirming that the instrument was both valid and reliable for gathering the needed data on students' knowledge, attitudes, and perceptions (Yusoff, 2019).

Research Procedure

To collect the necessary data, the study implemented an online survey targeting students enrolled in the Biostatistics course. The survey remained accessible for three weeks, providing students ample time to respond while maintaining the momentum of data collection. To ensure ethical standards, participation was strictly voluntary, and anonymity was maintained throughout the process. Prior to data collection, informed consent was secured digitally, and participants were assured of the confidentiality of their responses. These measures reflected the researchers' commitment to protecting student privacy and ensuring the responsible handling of data throughout the research process.

Data Treatment

The study employed descriptive statistical methods to analyze the gathered data. The method was used to summarize and present the data in a clear and organized manner, allowing for a better understanding of the students' levels of knowledge, attitudes, and perceptions regarding bioethical principles. Measures such as mean and standard deviation were applied to interpret the results and highlight common patterns or trends among the respondents.

RESEARCH RESULT

The analysis of the gathered data provides valuable insights into how nursing students understand and respond to bioethical principles. The results are presented according to the three main areas explored in the survey: knowledge, attitude, and perception. Each aspect reflects how well the students have absorbed the lessons of bioethics, their perception of its importance, and how they view its relevance to their future professional roles – the findings provide a clearer understanding of the students' overall engagement with bioethics throughout their academic journey.

Knowledge on Bioethical Principles

Table 2 presents the mean score, standard deviation, and qualitative interpretation of the knowledge of the nursing students towards their knowledge on bioethical principles.

Table 2. Summary of the nursing student's knowledge on bioethical principles.

Knowledge Items	\bar{x}	σ_x	Q.I.
I can explain the four major principles of bioethics: autonomy, beneficence, non-maleficence, and justice.	3.83	0.979	HK
I understand how ethical principles apply to end-of-life care.	3.93	0.924	HK
I am familiar with the ethical guidelines regarding informed consent.	3.97	1.007	HK
I understand the concept of patient autonomy and its implications in care.	3.96	1.061	HK
I can identify ethical issues in clinical scenarios.	3.76	1.081	HK
I am knowledgeable about the nurse's role in upholding bioethical standards.	3.88	1.020	HK
I am aware of how cultural beliefs may influence ethical decision-making.	4.03	1.048	HK
I understand the importance of confidentiality in nursing ethics.	4.28	1.091	VHK
I can differentiate between legal issues and ethical dilemmas in healthcare.	3.67	1.048	HK
I feel confident applying bioethical principles in clinical practice.	3.86	1.039	HK
Knowledge on Bioethical Principles	3.92	0.890	HK

- Legend:**
- VHK - Very High Knowledge on Bioethical Principles
 - HK - High Knowledge on Bioethical Principles
 - MK - Moderate Knowledge on Bioethical Principles
 - LK - Low Knowledge on Bioethical Principles
 - VLK - Very Low Knowledge on Bioethical Principles

The results in Table 2 shows that nursing students demonstrated a high level of knowledge regarding bioethical principles, with an overall mean score of 3.92 (± 0.890). Students scored highly on items related to confidentiality ($\bar{x} = 4.28$, $\sigma_x = \pm 1.091$), cultural influences ($\bar{x} = 4.03$, $\sigma_x = \pm 1.048$), and understanding informed consent ($\bar{x} = 3.97$, $\sigma_x = \pm 1.007$), indicating a strong awareness of ethical concepts often encountered in healthcare. Most knowledge items received mean scores within the "High Knowledge" range, indicating that students are well-informed about core bioethical concepts, such as autonomy, beneficence, non-maleficence, and justice. This high level of knowledge reflects effective instruction and curriculum delivery, which has allowed students to retain and comprehend key ideas necessary for ethical decision-making in clinical practice.

Attitude on Bioethical Principles

Table 3 presents the mean score, standard deviation, and qualitative interpretation of the knowledge of the nursing students towards their attitude on bioethical principles.

Table 3. Summary of the nursing student's attitude on bioethical principles.

Attitude Items	\bar{x}	σ_x	Q.I.
I believe that bioethics is an essential part of nursing education.	4.29	0.956	EA
I feel confident in expressing my views on ethical issues in healthcare.	3.79	0.934	GA
I am open to discussing controversial topics such as euthanasia and abortion in class.	4.04	0.999	GA
I respect patients' right to make their own healthcare decisions, even if I personally disagree.	4.24	1.028	EA
I believe nurses should always act in accordance with ethical principles, even under pressure.	4.22	0.982	EA
Ethical decision-making should involve collaboration among healthcare professionals.	4.15	1.070	GA
My personal values and beliefs influence how I view bioethical issues.	3.86	1.025	GA
Cultural and religious backgrounds should be considered in ethical decision-making.	3.94	0.977	GA
I find it difficult to apply ethical theories to real-life clinical situations.	3.26	0.979	GA
Learning about bioethics has changed how I view the role of nurses in patient advocacy.	4.04	0.941	GA
Attitude on Bioethical Principles	3.98	0.818	GA

Legend: EA - Excellent Attitude on Bioethical Principles
 GA - Good Attitude on Bioethical Principles
 NA - Neutral Attitude on Bioethical Principles
 PA - Poor Attitude on Bioethical Principles
 VPA - Very Poor Attitude on Bioethical Principles

Table 3 shows that students generally hold a positive attitude toward bioethical principles, with an overall mean of 3.98 (± 0.818). The highest-rated attitude item indicated strong agreement that bioethics is an essential part of nursing education ($\bar{x} = 4.29$, $\sigma_x = \pm 0.956$), followed closely by respect for patient autonomy ($\bar{x} = 4.24$, $\sigma_x = \pm 1.028$) and ethical integrity under pressure ($\bar{x} = 4.22$, $\sigma_x = \pm 0.982$). These results show that students value ethical standards and recognize their importance in healthcare, even in challenging situations. Although one item ("*difficulty applying ethical theories to real-life situations*") received a lower mean ($\bar{x} = 3.26$, $\sigma_x = \pm 0.979$), the overall trend suggests that students approach ethical issues with a respectful and thoughtful mindset, indicating a generally positive attitude towards learning and applying bioethics.

Perception on Bioethical Principles

Table 4 presents the mean score, standard deviation, and qualitative interpretation of the knowledge of the nursing students towards their perception on bioethical principles.

Table 4. Summary of the nursing student's perception on bioethical principles.

Perception Items	\bar{x}	σ_x	Q.I.
Bioethics is a relevant and important subject for nursing students.	4.26	0.993	VPP
I believe Bioethics helps prepare me for real-life clinical dilemmas.	4.22	1.064	VPP
The Bioethics course enhances my understanding of professional responsibilities.	4.13	0.978	PP
Bioethics is applicable to all areas of nursing practice.	3.97	1.034	PP
I perceive ethical principles as essential components of quality patient care.	4.04	1.027	PP
The Bioethics course encourages critical thinking and moral reasoning.	4.13	0.992	PP
I am able to relate what I learn in Bioethics to situations in clinical settings.	3.96	0.941	PP
The teaching methods used in the Bioethics course are engaging and effective.	3.85	0.914	PP
The scenarios and case studies discussed in class are realistic and helpful.	3.99	0.911	PP
I would recommend the inclusion of more ethical case discussions in nursing education.	4.06	0.918	PP
Perception on Bioethical Principles	4.06	0.871	PP

Legend: VPP - Very Positive Perception on Bioethical Principles
 PP - Positive Perception on Bioethical Principles
 NP - Neutral Perception on Bioethical Principles
 NP - Negative Perception on Bioethical Principles
 VNP - Very Negative Perception on Bioethical Principles

As shown in Table 4, students expressed a positive perception of bioethical principles, with an overall mean of 4.06 (\pm 0.781). The highest-rated item emphasized the relevance of bioethics to nursing education (\bar{x} = 4.26, σ_x = \pm 0.993), while other items also showed strong agreement with the course's value in preparing students for real-life dilemmas and enhancing their critical thinking. The consistently high mean scores across most perception items indicate that students view bioethics as not just an academic subject but a practical and meaningful component of their professional development. This perception supports the view that bioethics is deeply connected to quality nursing care, advocacy, and ethical awareness in clinical practice.

The collective findings on knowledge, attitude, and perception reveal a promising level of engagement among nursing students with the core principles of bioethics. The data suggest that students not only demonstrate a strong understanding of ethical concepts but also carry a positive disposition toward ethical learning and practice. Their high scores in knowledge, particularly in areas such as confidentiality, informed consent, and cultural sensitivity, are complemented by their appreciation of bioethics as an essential component of nursing education. Likewise, their favorable perceptions indicate that students recognize the practical relevance of bioethics in real-world clinical situations. This combination of cognitive understanding, emotional receptiveness, and

practical insight forms a strong foundation for ethical competence in nursing. These results prompt a deeper reflection on how the current curriculum fosters the development of ethical awareness and whether it effectively translates into professional readiness. The following discussion examines these findings in more detail and considers their implications for shaping the ethical formation of future healthcare professionals.

DISCUSSION

The survey results present a clear picture of how nursing students engage with bioethical principles across three key areas: what they know, how they feel, and how they perceive the value of ethics in their professional journey. Each dimension offers insight into the strengths and areas for growth in the students' ethical development. With the high levels of knowledge, supportive attitudes, and positive perceptions demonstrated in the data, the discussion now turns to what these results mean for nursing education, particularly in reinforcing the role of bioethics in both academic learning and clinical application.

Knowledge on Bioethical Principles of the Nursing Students

The results indicate that nursing students generally possess a strong grasp of bioethical principles, suggesting that learners effectively understand the content and delivery of the subject. Their ability to identify and explain key ethical concepts shows that foundational knowledge has been successfully instilled through their coursework. This understanding is crucial, especially in nursing, where ethical decisions are often made in fast-paced and emotionally charged environments. The findings support the idea that students are not only aware of the definitions of these principles but also capable of recognizing their relevance in healthcare settings.

The data further show consistency across the various aspects of ethical knowledge, from patient rights to cultural sensitivity and legal awareness. The results suggest that the students are engaging with the course material in a meaningful way, enabling them to connect theoretical concepts with practical scenarios. It can be inferred that the instructional strategies being used – such as the inclusion of real-life cases or scenario-based learning – may be contributing to this positive outcome. Moreover, the breadth of topics the students are knowledgeable about highlights the comprehensive nature of their bioethics education, which seems to reinforce critical thinking and moral awareness (Choi, 2019; Lee et al., 2020; Martins et al., 2020; Avci, 2022; Rivas Flores et al., 2024).

The results have a favorable implication for nursing education, particularly in preparing students for the ethical challenges they will face in clinical practice. With a strong knowledge base, students are more likely to approach complex patient situations with confidence and sensitivity, ensuring that care is not only technically sound but also ethically guided. This foundational knowledge can also serve as a stepping stone for deeper ethical reasoning as students' progress in their training. Strengthening and maintaining this level of understanding will be important in continuing to support ethical

competence as an integral part of professional nursing identity (Fowler, 2020; Martins et al., 2022; Jahangasht Ghoozlu et al., 2023; Seo, 2023).

Attitude towards Bioethical Principles of the Nursing Students

The results reveal that nursing students hold a generally positive attitude toward bioethical principles, reflecting a sense of respect for ethical standards and their importance in nursing practice. This favorable attitude suggests that students not only learn about ethics but also internalize its values, which is essential for professional growth. Their openness to discussing ethical issues and their willingness to uphold ethical conduct, even under pressure, indicate a strong sense of responsibility and moral awareness. These attitudes demonstrate the student's readiness to engage with ethical challenges thoughtfully and compassionately.

A closer examination of the responses reveals that students recognize the importance of ethics in patient care and acknowledge its relevance in decision-making processes. Their attitudes appear to be shaped by both academic exposure and personal reflection, as evident in their responses to questions that involve personal values, cultural considerations, and collaborative decision-making. While there are indications of occasional uncertainty in applying abstract theories to real situations, this does not diminish the overall trend of ethical awareness. Instead, it highlights the need for continued support in bridging theoretical understanding with practical application through more real-life examples and ethical dialogues in the classroom (Choi, 2019; Lee et al., 2020; Martins et al., 2020; Avci, 2022; Rivas Flores et al., 2024).

The students' positive attitudes toward bioethics carry important implications for nursing education and practice. A respectful and ethically grounded mindset encourages future nurses to advocate for patients, respect diverse beliefs, and act with integrity in complex situations. Cultivating this kind of attitude early in their training helps shape a more patient-centered, culturally sensitive, and ethically responsible healthcare environment. As students' progress in their education and enter clinical settings, this positive attitude will serve as a guide in making decisions that uphold both professional standards and human dignity (Fowler, 2020; Martins et al., 2022; Jahangasht Ghoozlu et al., 2023; Seo, 2023).

Perception on Bioethical Principles of the Nursing Students

The results indicate that nursing students have a positive perception of bioethical principles, suggesting that they recognize the value of ethics in both their academic training and future professional practice. This perception reflects an understanding that bioethics is not just a subject to be learned but a vital part of the nursing profession. Students see ethical principles as relevant tools that help guide their thinking, decision-making, and interactions in healthcare environments. Such perceptions are essential as they show that students are aware of the importance of ethics in promoting safe, respectful, and patient-centered care.

Further analysis reveals that students appreciate the practical applications of bioethics, particularly in areas such as clinical decision-making, patient

advocacy, and professional responsibility. They view the course as effective in enhancing their critical thinking and moral reasoning, and they find value in its teaching methods and real-life case discussions. These responses suggest that the course content is engaging and meaningful, encouraging students to connect what they learn with actual scenarios they may encounter in clinical practice. Overall, the students' perception shows that they are not only learning about ethics but also understanding its role in shaping how they act and respond as future healthcare providers (Choi, 2019; Lee et al., 2020; Martins et al., 2020; Avci, 2022; Rivas Flores et al., 2024).

These findings have important implications for both nursing education and clinical preparation. A positive perception of bioethics means that students are more likely to carry ethical principles into their professional roles, promoting a culture of integrity and accountability in healthcare settings. It also points to the success of the current curriculum in making ethics education relevant and relatable. Nursing programs can better prepare students to make thoughtful, ethical decisions that prioritize the dignity and well-being of their patients by continuing to strengthen these perceptions through reflective discussions and real-life examples (Fowler, 2020; Martins et al., 2022; Jahangasht Ghoozlu et al., 2023; Seo, 2023).

Bioethical Principles of the Nursing Students

The results of the study reveal that nursing students exhibit a strong level of engagement with bioethical principles across knowledge, attitude, and perception. Their responses suggest that they not only understand ethical concepts but also value them as part of their professional identity. This overall outcome indicates that students are both cognitively and emotionally prepared to handle ethical concerns in healthcare. Their combined awareness, willingness to uphold ethical standards, and recognition of the relevance of bioethics reflect a comprehensive and meaningful learning experience within the course.

An in-depth examination of the findings reveals consistency in how students respond across all three areas. They demonstrate familiarity with key ethical topics, express thoughtful attitudes toward ethical responsibilities, and perceive bioethics as a practical guide for clinical practice. This alignment between what they know, how they feel, and how they view the subject shows that the bioethics curriculum has successfully integrated theoretical and practical elements. The students' learning experiences appear to have created a solid foundation that supports not only ethical awareness but also critical thinking, sensitivity to patient needs, and professional reflection (Martins et al., 2020; Ten Have & Patrão Neves, 2021; Martins et al., 2022; Lee, 2023).

These results have important implications for nursing education. When students possess a strong understanding of bioethical principles, hold respectful attitudes, and recognize the real-world importance of ethics, they are more likely to carry these values into practice. The development can lead to more ethical decision-making, better patient advocacy, and stronger adherence to professional standards in clinical settings. The findings suggest that continuing to enhance ethics education through reflective activities, case-based learning, and open

dialogue can help sustain and further strengthen this foundation as students transition into their roles as future nurses (Johnstone, 2022; Tanaka & Tezuka, 2022; Pilkington & Giuliante, 2023; Papastavrou et al., 2025).

CONCLUSION

The study's results reveal that nursing students demonstrate a high level of knowledge, a positive attitude, and a favorable perception of bioethical principles. Their responses suggest that they possess a clear understanding of ethical concepts, including patient autonomy, confidentiality, informed consent, and cultural sensitivity. This foundation in ethical knowledge is further supported by their belief in the importance of bioethics in nursing education and practice, demonstrating that the subject is well-integrated into their academic and personal development.

Additionally, students show a willingness to engage with ethical issues and apply bioethical principles in real-life scenarios. Their perception of bioethics as a relevant and practical subject suggests that the current curriculum is effective in bridging theory with clinical application. The alignment across their knowledge, attitude, and perception presents a strong case for the continued enhancement of ethics education in nursing. The results highlight the importance of reflective learning and ethically grounded instruction in preparing future nurses for the moral complexities of healthcare.

The findings show that students are not only informed about bioethical principles but also value and apply them in the context of their education and anticipated professional practice. The results highlight the effectiveness of ethics education in shaping both the cognitive and emotional readiness of nursing students to address ethical challenges. It confirms that when students are exposed to meaningful, relevant, and practical ethical instruction, they are more likely to develop a strong ethical identity that supports compassionate and morally responsible care.

Limitations of the Study

While the study provides valuable insights into students' understanding and views on bioethical principles, several limitations must be acknowledged. The small sample size may constrain the extent to which the findings can be generalized to the broader student population. The study was also conducted in a single institution, which limits the implication of the findings to other nursing programs with different curricular structures or student populations. Additionally, self-reported data may be influenced by social desirability bias, where students may provide responses, they believe are expected rather than their true thoughts or experiences.

RECOMMENDATION

Based on the findings, it is recommended that bioethics education be further strengthened by incorporating more interactive and case-based learning methods to help students better connect ethical theory with real clinical experiences. Regular classroom discussions, ethical simulations, and interdisciplinary dialogues could enhance students' confidence in applying

ethical principles in practice. Educators could also assess students' attitudes and perceptions periodically to ensure that ethics education remains responsive to their needs and the evolving nature of healthcare. Reinforcing these ethical foundations throughout the curriculum may further support students' professional and moral development.

ADVANCED RESEARCH

Future research can expand by including multiple nursing schools across different regions to compare how students from diverse academic and cultural backgrounds engage with bioethics. Longitudinal studies can also be conducted to track how students' knowledge, attitudes, and perceptions develop from the beginning of their program to their clinical exposure.

REFERENCES

- Avci, E. (2022). Evaluating the effectiveness of bioethics education through quality standards and indicators. *International Journal of Ethics Education*, 7(1), 5-19. <https://doi.org/10.1007/s40889-021-00132-4>
- Choi, M. (2019). A study on the design of the consciousness of bioethics' training for nurses. *Journal of the Korean Bioethics Association*, 20(2), 59-73. <https://doi.org/10.37305/JKBA.2019.12.20.2.59>
- Fowler, M. (2020). Toward reclaiming our ethical heritage: Nursing ethics before bioethics. *OJIN: The Online Journal of Issues in Nursing*, 25(2), 1-9. <https://doi.org/10.3912/OJIN.Vol25No02Man04>
- Jahangasht Ghoozlu, K., Vanaki, Z., & Mohammad Khan Kermanshahi, S. (2023). Ethics education: Nurse educators' main concern and their teaching strategies. *Nursing Ethics*, 30(7-8), 1083-1094. <https://doi.org/10.1177/09697330231153685>
- Johnstone, M. J. (2022). *Bioethics: A nursing perspective* (8th ed). Elsevier Health Sciences.
- Lee, K. (2023). The Effects of a Blended Learning Based Bioethics Program on Perceived Ethical Confidence, Critical Thinking Disposition, Moral Sensitivity, and Academic Self-efficacy for the Nursing Students. *Journal of Korean Academy of Rural Health Nursing*, 18(1), 19-26. <https://doi.org/10.22715/jkarhn.2023.18.1.19>
- Lee, W., Choi, S., Kim, S., & Min, A. (2020). A case-centered approach to nursing ethics education: a qualitative study. *International Journal of Environmental Research and Public Health*, 17(21), 7748. <https://doi.org/10.3390/ijerph17217748>
- Lohr, S. L. (2021). *Sampling: Design and Analysis*. New York: Chapman and Hall/CRC. <https://doi.org/10.1201/9780429298899>
- Martins, V., Santos, C., & Duarte, I. (2020). Bioethics education and the development of nursing students' moral competence. *Nurse Education Today*, 95, 104601. <https://doi.org/10.1016/j.nedt.2020.104601>
- Martins, V., Santos, C., & Duarte, I. (2022). Educating for bioethics: a challenge in nursing. *Revista Bioética*, 30, 498-504. <https://doi.org/10.1590/1983-80422022303543EN>

- Mertz, M., Nobile, H., & Kahrass, H. (2020). Systematic reviews of empirical literature on bioethical topics: Results from a meta-review. *Nursing Ethics*, 27(4), 960-978. <https://doi.org/10.1177/0969733020907935>
- Papastavrou, E., Chiappinotto, S., Gastmans, C., Igoumenidis, M., McCabe, C., Suhonen, R., ... & Promocon Consortium. (2025). Ethics in undergraduate nursing degrees: an international comparative education study. *Nursing Ethics*, 32(2), 472-485. <https://doi.org/10.1177/09697330241247322>
- Pereira, M. D. S., Spagnol, C. A., Guimarães, E. M. P., Godoy, S. C. B., Silva, S. F. D., & Silva, J. G. R. (2023). Active methodology in continuing education to address ethics and bioethics. *Revista Bioética*, 30, 725-733. <https://doi.org/10.1590/1983-80422022304564EN>
- Pilkington, B., & Giuliani, M. (2023). Nursing ethics as a distinct entity within bioethics: Implications for clinical ethics practice. *Nursing Ethics*, 30(5), 671-679. <https://doi.org/10.1177/09697330231174535>
- Rivas Flores, F. J., Alonso Fernández, M., Busquets Alibés, E., Domingo Moratalla, T., Júdez Gutiérrez, F. J., Triviño Caballero, R., & Feito Grande, L. (2024). Deliberation in bioethics education: A literature scoping review. *International Journal of Ethics Education*, 1-28. <https://doi.org/10.1007/s40889-024-00198-w>
- Seo, K. (2023). The effect of bioethics awareness and patient-centered care on attitude of terminal care of hospice nurses. *Journal of Practical Engineering Education*, 15(2), 475-484. <https://doi.org/10.14702/JPEE.2023.475>
- Stokes, F., & Iskander, R. (2021). Human rights and bioethical considerations of global nurse migration. *Journal of Bioethical Inquiry*, 18(3), 429-439. <https://doi.org/10.1007/s11673-021-10110-6>
- Tanaka, M., & Tezuka, S. (2022). A scoping review of alternative methods of delivering ethics education in nursing. *Nursing Open*, 9(6), 2572-2585. <https://doi.org/10.1002/nop2.987>
- Ten Have, H., & Patrão Neves, M. D. C. (2021). Bioethics, Education. In: *Dictionary of Global Bioethics* (pp. 171-172). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-54161-3_82
- Wang, X., & Cheng, Z. (2020). Cross-sectional studies: Strengths, weaknesses, and recommendations. *Chest*, 158(1), S65-S71. <https://doi.org/10.1016/j.chest.2020.03.012>
- Yusoff, M. S. B. (2019). ABC of content validation and content validity index calculation. *Education in Medicine Journal*, 11(2), 49-54. <https://doi.org/10.21315/eimj2019.11.2.6>
- Zhang, F., Zhao, L., Zeng, Y., Xu, K., & Wen, X. (2019). A comparison of inquiry-oriented teaching and lecture-based approach in nursing ethics education. *Nurse Education Today*, 79, 86-91. <https://doi.org/10.1016/j.nedt.2019.05.006>