

Perceived Training Needs, Preferences, and Associated Factors in Medical Ethics Education among Medical Undergraduates at a Tertiary University in Edo State, Nigeria

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Abstract

Evidence on the adequacy and delivery of medical ethics education in Nigerian universities remains limited. This study assessed perceived training needs, teaching preferences, and associated sociodemographic factors among medical students in Edo State, Nigeria. A cross-sectional design was employed involving 144 students in the clinical phase of training. Data were collected using a structured questionnaire and analysed using descriptive statistics and chi-square tests. Although 72.3% of respondents recognised the importance of medical ethics education, 55.6% felt prepared to address ethical dilemmas in clinical practice. Preferred teaching methods included role-playing (61.1%) and group discussions (50.7%). Perceived deficiencies included insufficient curriculum time (64.6%) and inadequate resources (70.8%). Faculty role modelling was considered important by 66.7% of respondents, while 41.1% preferred ethics education during the preclinical years. No statistically significant associations were identified between sociodemographic characteristics and students' perceptions of medical ethics education ($p > .05$). The findings highlight a discrepancy between recognising the importance of ethics education and perceived preparedness for clinical ethical dilemmas,

alongside reported curricular and resource constraints. This study provides evidence from students' perspectives to inform curriculum development, supporting consideration of adequate instructional time and resources, stronger faculty role modelling, and structured, participatory ethics education earlier in medical training.

Keywords: Medical Ethics Education; Medical Students; Perceived Training Needs; Teaching Preferences; Nigeria

INTRODUCTION

Medical ethics education is a foundational component of medical training, equipping future physicians to navigate complex ethical and professional challenges (Jonsen, 2018). It fosters integrity, respect for patient autonomy, and adherence to professional standards (Snyder & Boyd, 2021). Through ethics training, students learn to manage real-world dilemmas such as confidentiality, informed consent, and resource allocation, which are essential to maintaining public trust in healthcare (Beauchamp & Childress, 2019).

Beyond clinical skills, ethics education bridges moral responsibility and professional identity formation, promoting accountability, empathy, and patient-centred care (Papadakis & Hodgson, 2022). In an era of rapid technological advancement, ethical literacy is increasingly required to address end-of-life decisions, equitable healthcare delivery, and research ethics (Williams, 2020). Recognising students' preferences for teaching methods case discussions, workshops, or lectures can enhance engagement and clinical applicability (AlMahmoud et al., 2017).

Despite growing public awareness of medical practitioners' ethical conduct, complaints against doctors are rising, often citing violations of the four core bioethical principles: autonomy, beneficence, non-maleficence, and justice (Tadd et al., 2022). Sociocultural changes and individual rights movements have further amplified ethical scrutiny (Nash, 2020). Many doctors receive only basic ethics training, and some studies indicate that ethical awareness declines as students advance through their studies (White, 2021).

Over the past three decades, ethics curricula have become universal in undergraduate medical education (Dhanraj et al., 2020). Effective ethics teaching should

align with trainees' developmental levels, address authentic dilemmas, and employ diverse methods such as mentorship, small-group learning, and formal evaluation (AlMahmoud et al., 2017). However, curricula often focus on 'neon issues' (e.g., abortion, euthanasia) rather than day-to-day moral struggles (Powell, 2022). A 'top-down' approach based on abstract principles may neglect students' self-identified needs, whereas a 'bottom-up' approach prioritises trainees' experiences (Schmidt, 2021).

Technological complexity introduces further ethical challenges, demanding revised curricula and decision-making skills (Anker, 2021). Education is shaped by teachers, programmes, equipment, and the learning environment; incorporating learner and teacher perspectives improves quality (Barnett, 2021). Interactive methods case studies, problem-based learning, and audiovisual tools encourage participation (Elliott, 2021). Medical students are expected to internalise ethical principles that guide their professional judgment and actions (Shultz, 2020). Given the emphasis on patient safety, undergraduate ethics education is critical, and faculty mentorship plays a key role (Kuczewski, 2021).

In Nigeria, medical education remains largely focused on traditional basic and clinical sciences, leaving students to develop moral attitudes passively through observation and intuition a situation not unique to Sub-Saharan Africa (Ojo, 2020). This study therefore aimed to assess perceived training needs, teaching preferences, and associated factors in medical ethics education among medical undergraduates in Edo State, Nigeria, with a view to informing curriculum improvement.

Methods

Study design and setting: A descriptive cross-sectional study was conducted over six months at a public tertiary university in Edo State, Nigeria. The university's medical programme prepares students for modern healthcare delivery, with medical ethics forming part of the curriculum. The study focused on clinical students (500 and 600 levels), where integration of ethics into clinical training is most critical.

Study population and sampling: The target population comprised all 500- and 600-level medical undergraduates. Students who were too ill to participate or declined informed consent were excluded. The minimum sample size of 144 was calculated using the Cochran formula, incorporating a 10% non-response allowance and a prevalence of 90.7% for knowledge of medical ethics from a previous study (Olufunmilayo et al., 2020). A stratified random sampling technique was used: students were stratified by academic level, a

sampling frame was obtained from college records, and simple random sampling was applied within each stratum.

Data collection: Data were collected using a structured, interviewer-administered questionnaire covering sociodemographic characteristics, perceptions, preferences, and factors influencing medical ethics education. The questionnaire was pretested on 14 final-year nursing students, with revisions made based on feedback.

Data analysis: Data were entered and analysed using SPSS version 21. Descriptive statistics (frequencies, percentages) were computed. Associations between sociodemographic variables and perception of ethics education were assessed using the chi-square test, with statistical significance set at $p < 0.05$.

Limitations: The study excluded preclinical students, which may limit generalisability to earlier years of medical training.

RESULTS

Sociodemographic characteristics: Most respondents (43.1%) were aged 26–30 years, followed by 20–25 years (33.3%). Over half were single (54.2%) and male (54.9%). The majority were Christian (91.0%), and more were in 500 level (57.6%) than 600 level (42.4%) (Table 1).

Table 1. Sociodemographic characteristics of medical undergraduates (N = 144)

Variables	Frequency (n = 144)	Percent (%)
Age group (years)		
20 – 25	48	33.3
26 – 30	62	43.1
31 – 35	29	20.1
36 – 40	5	3.5
Gender		
Male	79	54.9
Female	65	45.1
Marital Status		
Single	78	54.2
Married	66	45.8
Religion		
Christian	131	91.0
Muslim	11	7.6
African Traditional Religion	2	1.4
Level of Study		

Variables	Frequency (n = 144)	Percent (%)
500	83	57.6
600	61	42.4

Perceptions of medical ethics education: Most students rated medical ethics as very important (41.0%) or important (31.3%) to their training, and very important (47.2%) or important (23.6%) to medical practice. Just over half (55.6%) felt the curriculum adequately prepared them for ethical dilemmas. Confidence in making ethical decisions after training was reported as very confident (29.9%) or confident (38.2%). However, 63.2% stated that ethics was insufficiently emphasised during clinical rotations, and 59.7% identified role-playing as the most effective teaching method (Table 2). Overall, 57.8% had a positive perception of medical ethics education (Figure 1).

Table 2. Perceptions of medical ethics education (N = 144)

Variables	Frequency (n = 144)	Percent (%)
Importance of medical ethics to your training		
Very important	59	41.0
Important	45	31.3
Neutral	21	14.6
Unimportant	19	13.2
The current medical ethics curriculum adequately prepares students for ethical dilemmas in clinical practice	80	55.6
Yes	64	44.4
No		
Confident in your ability to make decisions in a clinical setting after receiving medical ethics education	43	29.9
Very confident	55	38.2
Confident	26	18.1
Neutral	20	13.9
Not confident		
Importance of medical ethics education for medical practice		
Very important	68	47.2
Moderately important	34	23.6
Slightly important	20	13.9
Not important	22	15.3
Medical ethics education is given emphasis during clinical rotations and patient interaction	39	27.1
Yes, enough emphasis is give	91	63.2
No, more emphasis is needed	14	9.7
Not sure		
The most effective teaching method for learning medical ethics		
Lectures	30	20.8
Case studies	54	37.5
Group discussions	79	54.9
Role-playing scenarios	86	59.7
Online resources	39	27.1

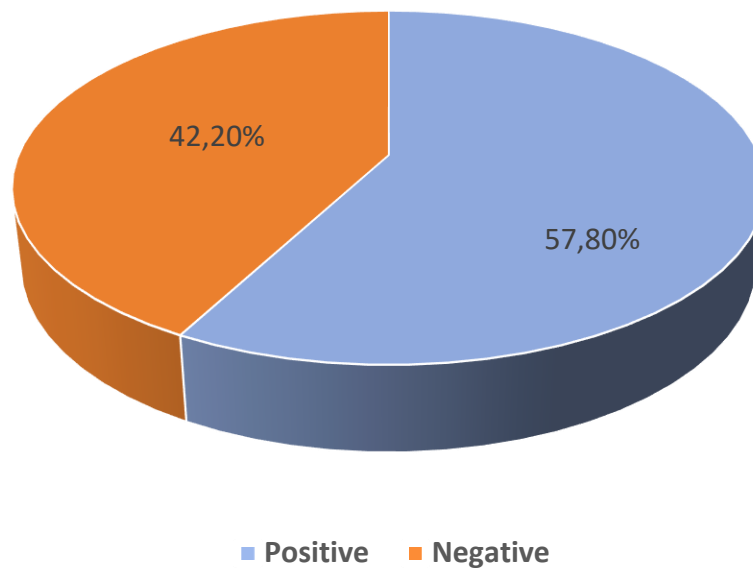


Figure 1. Categorical perception of medical ethics education (positive vs. negative)

No significant associations were found between sociodemographic variables (age, gender, marital status, religion, level of study) and perception of ethics education ($p > 0.05$) (Table 3).

Table 3. Association between sociodemographic variables and perception of medical ethics education (N = 144)

Variables	Positive	Negative	Total	Test Statistics	p-value
Age group (years)					
20 – 25	25 (17.4%)	23 (16.0%)	48 (33.3%)		
26 – 30	37 (25.7%)	25 (17.4%)	62 (43.1%)	X ² = 1.055	0.589
31 – 35	18 (12.5%)	11 (7.6%)	29 (20.1%)		
36 – 40	3 (2.1%)	2 (1.4%)	5 (3.5%)		
Gender					
Male	49 (34.0%)	30 (20.8%)	79 (54.9%)		
Female	34 (23.6%)	31 (21.5%)	65 (45.1%)	X ² = 1.303	0.513
Marital status					
Single	46 (31.9%)	32 (22.2%)	78 (54.2%)	X ² = 1.268	0.439
Married	37 (25.7%)	29 (20.1%)	66 (45.8%)		
Religion					
Christian	75 (52.1%)	56 (38.9%)	131 (91.0%)	X ² = 1.624	0.126
Muslim	6 (4.2%)	2 (1.4%)	8 (5.6%)		
African Traditional Religion	2 (1.4%)	3 (2.1%)	5 (3.4%)		
Level of study					
500	37 (25.7%)	46 (31.9%)	83 (57.6%)	X ² = 1.573	0.131
600	46 (31.9%)	15 (10.4%)	61 (42.4%)		

*Values are significant when $p < 0.05$.

Preferences for medical ethics education: Formal ethics training was rated as very important by 51.4% of respondents. Role-playing (61.1%) and group discussions (50.7%) were the most preferred teaching methods. Most students (66.7%) considered faculty role-modelling very important, 37.5% favoured interprofessional learning, and 41.1% preferred ethics education to begin in the preclinical years (Table 4).

Table 4. Preferences for medical ethics education (N = 144)

Variables	Frequency (n = 144)	Percent (%)
Importance of medical students receiving formal education in medical ethics	74	51.4
Very important	52	36.1
Important	18	12.5
Not important	45	31.3
The preferred teaching methods for learning medical ethics	59	41.0
Lectures	73	50.7
Case studies	88	61.1
Group discussion	27	18.8
Role-playing		
Online resources		
Importance of professors and clinicians to model ethical behavior in clinical settings	96	66.7
Very important	41	28.5
Important	7	5.9
Not important		
Prefer to learn medical ethics alongside students from other healthcare disciplines	54	37.5
Yes	90	62.5
No		
The level of medical studies at which ethics education should be attribute		
Preclinical years	58	41.1
Clinical years	39	27.6
Throughout the entire medical curriculum	47	33.3

Factors affecting medical ethics education: Insufficient curriculum time was reported by 64.6%, and 70.8% noted inadequate learning resources. Faculty expertise was rated as good by 50.0%. Cultural or religious beliefs influenced understanding of ethics for 14.6% of respondents. Most (68.1%) agreed that ethics education prepares them for real-world challenges, and 57.0% recommended introducing the course at the 300 level (Table 5).

Table 5. Factors affecting medical ethics education (N = 144)

Variables	Frequency (n = 144)	Percent (%)
Time allocated for medical ethics in the curriculum		
Very sufficient	11	7.6

Variables	Frequency (n = 144)	Percent (%)
Sufficient	40	27.8
Insufficient	93	64.6
Rate the expertise of faculty teaching medical ethics		
Excellent	22	15.3
Good	72	50.0
Average	39	27.1
Poor	11	7.6
Sufficient resources available for learning medical ethics		
Yes	42	29.2
No	102	70.8
Cultural or religious belief influence understanding and application of medical ethics		
Yes	21	14.6
No	123	85.4
Medical ethics education prepares you for real-world ethical challenges		
Yes	98	68.1
No	46	31.9
When should medical ethics education be introduced to medical student		
100 level	14	9.7
200 level	48	33.3
300 level	82	57.0

DISCUSSION

This study found that while medical undergraduates strongly value medical ethics education, significant gaps exist in curriculum time, resources, clinical integration, and interactive teaching methods. These findings align with previous Nigerian research. At the University of Lagos, most students supported a structured ethics course, preferably introduced during clinical years (Okoye et al., 2020). In Ethiopia, only a minority of doctors demonstrated good ethical practice, with age, knowledge, attitude, and work environment playing significant roles (Teshome et al., 2019). Collectively, these results highlight the need for continuous, contextually relevant ethics training that bridges theory and practice.

Students preferred interactive teaching strategies like role-playing and group discussions and emphasised faculty role-modelling. Similar findings from the University of Ibadan and another Nigerian study reported that students favoured case discussions, seminars, and participatory methods (Adejumo et al., 2021; Ezeome & Chukwuneke, 2018). These preferences underscore the value of experiential learning and professional modelling in ethics education.

Structural limitations were prominent: insufficient time, inadequate resources, and cultural/religious influences on ethical reasoning. These concerns relate to the 'hidden curriculum' implicit institutional norms that may contradict formal ethics teaching (Hafferty & Franks, 1994). Exposure to unstructured influences can erode empathy and promote ethically problematic practices. Most students agreed that ethics education prepares them for real-world challenges, but over half recommended earlier introduction, suggesting that current delivery is suboptimal.

Overall, while students value ethics education, improvements in curriculum design, instructional methods, faculty role-modelling, and resource provision are necessary to enhance ethical competence.

CONCLUSION

Medical ethics education is central to developing students' ethical competence. Although most students recognise its importance, gaps persist in curriculum content, teaching time, resources, clinical rotation emphasis, and faculty role-modelling. Cultural influences and the hidden curriculum further affect ethical decision-making. Medical schools should strengthen ethics training through structured curricula, greater emphasis during clinical rotations, interactive teaching methods, and consistent faculty mentorship. These actions will improve students' preparedness for ethical challenges and promote professional, patient-centred care.

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Statements and Declarations:

Ethical Considerations: Ethical approval for this study was obtained from the Institutional Ethics Review Committee of the Irrua Specialist Teaching Hospital (Approval Number: ISTH/HREC/20250502678). The study was conducted in accordance with the Helsinki Declaration of 1975, as revised in 2013. All methods were carried out in accordance with relevant local, national, and international guidelines and regulations.

Consent to Participate: Written informed consent was obtained from all individual participants included in the study.

Consent for Publication: Not applicable. This manuscript does not contain any individual person's data in any form (including individual details, images, or videos).

Data Availability Statement: The datasets generated and/or analysed during the current study are available from the corresponding author on reasonable request.

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