

Original Research Article

ASSESSMENT OF THE PRACTICE OF BIOETHICS EDUCATION IN A TERTIARY INSTITUTION OF NIGERIA

ABSTRACT

Background/Aim: Bioethics is essential in utopia. The aim of this study was to assess the practice of Bioethics education in a tertiary institution in Esan-Central Local Government Area of Edo State, in order to foster the implementation of bioethical education in tertiary level.

Methodology: Focus group discussions were held with fifth-year medical students and a key informant interview with a head of department. The analyses were implemented using Creswell's six-step qualitative data analysis.

Results: Nine respondents were recruited for this study. During the data analysis, themes with the following titles were identified: Incorporation, Education Methods, Assessments, Importance, Self-change and Suggestions.

Discussion: The respondents all had a good knowledge on Bioethics and stated that practical sessions will be more useful than just class lectures. An earlier onset of Bioethical education before the start of clinical postings was also proffered.

Conclusion: Knowledge and practice of bioethics was high in this study and the study participants had positive attitude towards its education. Despite this, a lot has to be done to enhance its coverage and impact on the lives of students and educators. Each code obtained may

contribute to improving medical ethics education for all institutions. In addition, further studies can be conducted on measures to help students internalize ethical issues.

Key words: Practice, Bioethics Education, Focus Group, Key Informant, Methods, Assessments.

UNDER PEER REVIEW

INTRODUCTION

1.1 Background

The existence of life is a precondition for all human activities and the quality of life is the foundation of the progress of humankind. Life education, therefore, is an eternal educative theme. Bioethics invites the values and principles of ethics to test how human activities influence human life, animal life, plant, life and ecology.^[1]

Bioethical reflection requires a solid foundation so that arguments from different scientific fields can be integrated into reasoning.^[2] From an educational point of view, the teaching of bioethics presents an opportunity to foster the development of critical thinking and abilities, including concepts of responsibility, democracy and respect for others. This is particularly relevant in the development of competences for decision-making, health promotion, education, and empowerment.^[3]

Bioethics is the study of the ethical issues emerging from advances in biology and medicine. It is also moral discernment as it relates to medical policy and practice.^[4] Bioethics are concerned with the ethical questions that arise in the relationships among life sciences, biotechnology, medicine, politics, law, and philosophy. It includes the study of values ("the ethics of the ordinary") relating to primary care and other branches of medicine. Ethics also relates to many other sciences outside the realm of biological sciences.

The term Bioethics (Greek bios, life; ethos, behavior) was coined in 1926 by Fritz Jahr in an article about a "bioethical imperative" regarding the use of animals and plants in scientific research.^[5]

Ethics or moral philosophy is a branch of philosophy that involves systematizing, defending, and recommending concepts of right and wrong conduct.^[6] The field of ethics, along with aesthetics, concerns matters of value, and thus comprises the branch of philosophy called axiology.^[7] Ethics seeks to resolve questions of human morality by defining concepts such as good and evil, right and wrong, virtue and vice, justice and crime. As a field of intellectual inquiry, moral philosophy also is related to the fields of moral psychology, descriptive ethics, and value theory.

Bioethics is a trans-disciplinary subject involving reflection on ethical issues in health care, science, business, law and policy. Fields of bioethical enquiry include medical ethics, animal ethics and environmental ethics, some of which overlap. According to Post, bioethics offers a reflection on the moral significance of nature and human nature, and on the development and application of biomedical technologies.^[8] As outlined by Potter, the concept of bioethics covers not only medical ethics but also all that infers with the phenomenon of life.^[9] The ethics of all interventions on the human being – including health education and promotion – is amenable to being framed within this type of approach.^[10]

After high school, students' environments change substantially. Many students are living away from home for the first time. College can expose students to individuals with many different backgrounds, values, and perspectives. After building a strong base of moral character and ethical reasoning skills in primary school and applying those skills to specific topics in secondary

school, ethics education in college offers further opportunity to continue to apply and specify. In undergraduate education, students start to specialize their learning, choosing tracks and majors. Ethics education in college courses can start to teach students how to identify, confront, and resolve ethical dilemmas they will encounter as professionals.^[11]

Bioethics education has been integrated across undergraduate curricula in different ways. For example, the Kennedy Institute of Ethics has implemented several ethics education initiatives at Georgetown University that demonstrate the diverse opportunities for instructors to collaborate in developing interdisciplinary learning opportunities related to ethics.^[12]

Africa reveals that bioethics education and ethical concerns have unwittingly been recognized, downplayed or overlooked by local governments in Africa for the past fifty to sixty years of its existence. This situation is unacceptable considering the fact of the influence of bioethics as the most important field that serves and protects the wellbeing of humanity.^[13]

However, in Nigeria, the West African Bioethics (WAB) Training Programs, with support from the National Institutes of Health's National Human Genome Research Institute and the Fogarty International Centre research grant, provides strong leadership in Bioethics education. In various empirical studies conducted to assess the levels of knowledge of research ethics, the majority of participants demonstrated appreciable knowledge.^[14]

**In recent times, bioethics has emerged as a burgeoning interdisciplinary field of scholarly investigation which has in the past decades migrated from bedside consultations to public policy debates and wider cultural and social conversations that privilege all discourse about everyday life issues. Today, bioethics is increasingly seen as a field departing from a multi-disciplinary

perspective to an autonomous discipline. In most Western countries, the field is now more organized, complete with undergraduate minors and majors, and even high school courses in bioethics, master's degrees and doctoral programs, and professional associations. ^[15]

Integrating ethics into education at all levels is a promising model for increasing ethics literacy and teaching students how to examine the subjects they are studying through the lens of ethics^[16]. Yet teachers might be reluctant to introduce ethical considerations into the classroom. This reluctance can pose serious challenges to integrating ethics education into existing educational structures, but these challenges can be overcome.

This study provides an account for the value and use of Bioethics in the 'shaping' of students of tertiary institutions.

Currently, Bioethics is not taught at all tertiary institutions in my environment. Also, its implementation has not received attention lately in research works. This study is designed to fill the knowledge gap in this area.

Further, it can be argued that the separation of science from values in general, and ethical considerations in particular, is a relatively recent, Western and secular phenomenon. ^[17] In particular, it is important that those who go on to be professional scientists appreciate from the Beginning of their study of science how the ethical issues that attend science can be addressed.

The main objective of the study was to assess the practice of Bioethics education in a tertiary institution using Ambrose Alli University, Ekpoma, Edo State as the area of study in order to foster the implementation of bioethical education in tertiary level. The study further sought to explore the following specific objectives:

1. To demonstrate self-perception on the importance of Bioethics in education.
2. To assess students' knowledge on Bioethics.
3. To determine the level of acceptance of the implementation of Bioethics to curriculum by school administrators.

2.0 METHODOLOGY

2.1 Study Area

The study was carried out at a tertiary educational institution, Ambrose Alli University (Faculty of Clinical Sciences), sited in Irrua, Esan Central Local Government Area of Edo State, Nigeria. The Faculty of Clinical Sciences has 16 departments, closely associated with Irrua Specialist Teaching Hospital which is located adjacent to the school.

2.2 Study Design

A cross-sectional design with a qualitative component (Focus Group Discussion and Key Informant Interview) was adopted.

2.3 Study Population

The study population was fifth-year medical students of the Faculty of Clinical Sciences, Ambrose Alli University and a school administrator (Head of Department).

2.4 Selection Criteria

2.4.1 Inclusion Criteria

1. Fifth year students who consented to be part of the study and who have received basic lectures in Ethics.
2. School administrators (Head of Department).

2.4.2 Exclusion Criteria

1. Those that is ill or too sick to participate in the study.
2. Those that are away from school at the time of the study.
3. Those that have not had lectures in medical ethics.
4. Those that did not consent.

2.5 Study Duration

This study spanned from April to October, 2019.

2.6 Sample Size

The sample size comprised of 9 responders (8 students and a school administrator)

2.7 Sampling Technique

An invitation was sent through the class representative and consenting students gave their contacts. The Head of Dentistry Department was invited directly and she obliged. Consent forms were handed to each responder after describing the purpose of the research to them.

The sampled population consisted of fifth year students who had completed ethics education, and have had clinical exposure, and a head of department. Overall, focus group discussions were successfully conducted in 2 sessions and key informant interview in a session.

2.8 Study Instrument

Focus group discussion and interview guides were used to find out students' views in detail. Focus group interviews are advantageous compared to one to one interviews in terms of clarifying questions, receiving more extensive and in-depth opinions by means of interactions among the participants and seeking answers to the questions like “why?”, “how?” and “what?”.

^{[18][19]}. They are also used for program evaluations. ^[20]

2.9 Data Collection Method

For each focus group interview, 4 students were invited. Two focus group interviews were held within the same week in a classroom and steered by two moderators (author of this study and a colleague) trained in conducting focus group interviews. The first moderator asked the questions and distributed papers containing the questions, while the second moderator performed the technical follow-up of the recording process and took notes by observing the interview process.

At the beginning of the interviews, the students were provided with information about the focus group meeting and the aim of this study. They were also informed that the interviews would be recorded and only their code names would be mentioned. With their signed informed consent obtained, a code (A-H) was assigned to each student and these codes used while transcribing the records.

2.10 Data Management

2.10.1 Measurement of Variables

Some open-ended questions were asked by the researchers to the students to make them express in detail their opinions on the medical ethics education provided in their fifth year of medical education. These questions included:

- What is your knowledge on bioethics?
- What do you think about the incorporation of ethics education into the medical education curriculum? (KII specific)
- What do you think about the education methods?

- What do you think about the assessment of students' learning in bioethics and the assessment methods?
- What do you think are the positive aspects of bioethics education?
- Has bioethics education led to any change in your opinions or behaviors? If so, please explain with examples?
- What aspect(s) of bioethics education do you think need(s) to be improved in your institution?

The data collection was completed following the second focus group discussion.

2.10.2 Data Analysis

Immediately after the interviews, the data obtained was transcribed verbatim by the researchers. Both interviews were tabulated by indicating the code names of the students, interview questions and responses. In this way, the data was organized for the analysis. The transcribed text prepared for analysis was re-read a couple of times, during which repetitive words and phrases meaningful for the purpose of the study were searched and codes were defined. Then, the themes or categories (knowledge, importance and implementation recommendations) were developed using the codes thought to be linked with each other. The findings will be interpreted and reported in the light of the literature review in the fourth chapter. Direct quotations of some of the participants will be used to support the findings.^[21]

2.11 Ethical Consideration

Ethical approval was sought from the Ethical review board of ISTH. Permission was obtained verbally from the Class Representatives of the 500 level class. Informed consent was obtained from the respondents after communicating the purpose and benefits of the study to them, as well as assuring them of confidentiality.

2.12 Study Limitation

The low number of focus group interviews may be considered as a limitation; however, it is within the recommended range used for such studies. There is no certain number of interviews advised for such studies to collect information.^[22] Barbour suggests that 2 to 4 focus group interviews are sufficient for data collection^[23]

The study was carried out in a single faculty (Clinical Sciences) and it may not be generalized to other faculties (Basic Sciences). Therefore, the findings of this study may not highlight what happens at the lower classes.

3.0 RESULTS

Two focus group discussions and a key informant interview were held and a total of nine respondents (eight students; five males and three females) participated in the interviews. The groups consisted of four students each. The average age of students was 26 years (min: 23 - max:

29). The average discussion time was approximately 52 minutes and 20 minutes for the key informant interview. The interviews were completed in October 2019.

At the end of the qualitative data analysis, seven themes were identified. Table 1 shows the themes and their respective codes. The statements under the theme “suggestions” were assessed and organized as codes, and they were presented in a different table since they included long statements (Table 2).

Table 1.

Themes and codes identified at the end of the qualitative data analysis.

Themes	Codes
Incorporation	Very Helpful Cannot be over-emphasized Great importance Essential Welcome development

Education Methods	Lectures only Inadequate
Assessments	Written exams only Good Inadequate
Importance	Better healthcare systems Protects doctors' rights Protects patients' rights Safety culture Appropriate safeguards Dos and don'ts of the profession
Self-change	Positive Confidentiality Misconceptions corrected Politeness Patient-doctor relationship Boundaries

Aspect to be improved	Methods Assessments Incorporation time
Suggestion	(in a separate table for sake of long sentences)

Table 2

Statements/Codes under the theme *Suggestions*.

Aspect	Suggestion
Methods	<p>Activities allowing for discussions and interaction with clinicians</p> <p>Use of case studies</p> <p>Socializing with patients</p> <p>Organizing seminars builds interest and recollection</p> <p>Opportunity to put the knowledge given in the lectures into practice.</p>

	<p>Interpreting assignments and providing students with feedback</p> <p>Methods should be aimed at making the students think out solutions instead of memorizing answers</p> <p>Discussion and movie sessions will improve interest and recollection</p> <p>Sessions should be open to voluntary participation</p> <p>Affording to students the opportunity of more practical sessions</p> <p>Inviting students to Ethics Conferences</p> <p>Planned meeting with clinicians</p> <p>Practical sessions aimed at causing behavioral changes</p> <p>Teaching aids</p>
Assessments	<p>Use of case demonstrations</p> <p>Asking case-based questions in examinations</p> <p>Report on book assignments</p>
Incorporation time	<p>Introduction of bioethics to preclinical students or just at the start of clinical, that is, in their fourth year of study will grossly improve educational outcome</p>

Importance of Bioethics in Education.

All respondents stressed on the importance of Bioethics. Physicians are expected to know ethical, legal and moral obligations of their practice and to act accordingly. Bioethics education, especially when taught early, helps the clinicians in discharging his duties effectively while bearing in mind his safety and wellbeing of the patient as regards the four basic principles of Medical Ethics as postulated by Tom Beauchamp and James Childress- authors of the textbook “Principles of Biomedical Ethics”. In general, Bioethics promotes a safety culture and sets appropriate safeguards culminating in better healthcare delivery systems.

A few remarkable expressions were as follows: “It guides patient-doctor relationship”, “It distributes the benefits and burden of care across society”, “It would enhance a safety culture and set appropriate safeguards” and “It will grossly reduce the incidence of medico legal issues”.

Students’ Knowledge on Bioethics.

In-depth knowledge on Bioethics was expressed by all respondents. Bioethics, with special focus on Medical Ethics, guides the functioning of professions. In Medicine, the four principles of autonomy, beneficence, non-maleficence and justice apply values to the clinical practice and in scientific research. These principles are judged and weighed against each other, taking into consideration the scope of their application, and this allows doctors, care providers and families to create a treatment plan and work towards the same common goal.

Willingness to Implement Bioethics to Curriculum by School Administrators.

Incorporation of Bioethics into the medical curriculum is a welcome development as it will afford the student the opportunity to be abreast with the dos and don'ts of their intended profession. Students are exposed to the relationship between Biotechnology, Medicine, Politics, Law and Philosophy. Already implemented in this institution, Bioethics education is gaining grounds in the country, with medical schools being the forerunners. However, more studies should be done in other education cadres to assess the willingness of school administrators to implement bioethics to curriculum.

4.1 Discussion

Students' willingness to express their opinions during the focus group interviews and their active participation ensured the collection of a wide range of data. This section presents the discussion of the findings in the light of the literature review and the themes obtained from the analysis of interviews.

The mean age of the students was 26 years which was higher than 22.5 years in a qualitative study by Ahmet Can Bilgin et al in 2018^[24]. This could be explained by differences in data collection and differences in age ranges.

In this study, all the respondents had a good knowledge of Bioethics and all the students expressed their opinions on the importance of Bioethics education. This was in concordance with a study by Johnston C. Haughton in 2007 which reported that students agreed with the importance and necessity of medical ethics education^[25]. A few remarkable expressions were as

follows: “It guides patient-doctor relationship”, “It distributes the benefits and burden of care across society”, “It would enhance a safety culture and set appropriate safeguards” and “It will grossly reduce the incidence of medico legal issues”. Thus, the incorporation of Bioethics education is a welcome development and its importance cannot be over-emphasized. (Theme: Incorporation, Importance)

The respondents had much need to express their opinions on the methods used in Bioethics education. The following codes were identified under this theme: lectures only, inadequate. They indicated that students regarded ethics lectures as dull and not practicable. Aldughaiter et al reported that students were not in favor of didactic lectures. In this study, another remarkable finding on lectures was that students associated them with assessment and considered them as an easy way of getting a grade ^[26]. Improvement is thus required. (Theme: Education methods, Aspect to be improved)

Just like all other subjects in medical education, Bioethics also needs to be assessed. The respondents’ opinions were also in favor of such assessment. Effective teaching and assessment methods aid better internalization, thus leading to positive behavioral change. A study conducted by Ozan S, Timbil S, Semin S, et al with first grade medical students found that 82% of students did not find assessment necessary, while 40% of sixth graders of the same faculty stated that the assessment of medical ethics education was necessary.^[27] (Theme: Assessments, Behavioral Change).

On the part of school administrators, implementing Bioethical education programs has a positive bearing, as voiced in the key informant interview. It is a welcome development. However, many factors come into play such as political will, sourcing for and distribution of resources. A 2004 survey in the US and Canada revealed that 78% of medical schools integrated ethics into preclinical courses.^[28] This is an affirmation of the finding in this study.

4.2 Conclusion

Knowledge and practice of bioethics was high in this study and the study participants had positive attitude towards its education. Despite this, a lot has to be done to enhance its coverage and impact on the lives of students and educators.

4.3 Recommendations

Each statement or code obtained from the students' expressions and placed under the theme "suggestions" can be considered as suggestions to the faculty for developing a better bioethical educational system.

When bioethics education is included within medical curricula, it should be made clear that there are differences between ethical reasoning and scientific reasoning and that the methods used to arrive at scientific knowledge are therefore not the same as those used to reach ethical conclusions. In a bid to improving education methods, seminars and case demonstrations will prove helpful.

An earlier incorporation of bioethical education, preferably at the very start of clinical sciences, which is in the fourth year, will be most beneficial. This was also emphasized the students.

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