



Original Article

## Development of a Curriculum for Certificate Ethics Courses in Kenya

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The teaching of bioethics in higher education institutions allows for best practices to be encouraged. The ever-changing scientific fields, multidisciplinary nature, and increasing technological advancements raise numerous ethical challenges. A needs assessment was undertaken to inform the implementation of certificate courses in bioethics in Kenya. The aim was to understand the perceptions of the need for capacity building in bioethics in Kenya and to suggest relevant topics for inclusion in bioethics certificate courses. We also sought to determine the mode of delivery of such training. Data collection was done through a questionnaire administered via an online survey (SurveyMonkey). The target audience was stakeholders from Institutional Ethics Review Committees (IERCs), Research Institutions, Universities, and Hospitals totalling 106. The survey was voluntary. Data analysis was done via SurveyMonkey. Respondents indicated support for training in bioethics, were enthusiastic about wanting to be trained and provided input as to what should be included. Research ethics and public health ethics were deemed to be areas needing training. Other topics suggested included clinical ethics, work / organisational ethics, gender roles and obligations, and professionalism. The preferred delivery of the training was a hybrid, that is, inclusive of both in-person and distant learning. The overall response rate to the survey was, however, poor. There is interest in the pursuit of bioethics training at institutions of higher learning in Kenya. This information was used to develop courses that are currently being implemented by the CBEC-KEMRI Bioethics Training Initiative (CK-BTI), a collaboration between institutions in Pakistan and Kenya.

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## INTRODUCTION

Bioethics is a branch of ethics that involves the study of social, legal, and philosophical issues arising in medicine and the life sciences (Mutugi & Lenaola, 2018). It involves understanding and analysing the diverse ways in which humans comprehend right and wrong, the influence of histories of a people, shared cultural and religious values, and local socioeconomic realities (Mutugi & Lenaola, 2018), (Chadwick, 2019), (National Institute of Environmental Health Sciences, 2021). Like in other parts of the world, in African countries, bioethics is still a growing field (Wasunna, Toure & Wasunna, 2016). This points to the need for training professionals from different backgrounds to find solutions for ethical dilemmas that arise.

Continuous technological developments in healthcare over the years have saved lives and contributed to the improvement of the quality of life. Technology has had a huge impact on medical processes and the practices of healthcare professionals (Farid, 2019). These desirable technological advances have in turn, led to several complex issues in healthcare such as beginning and end of life, palliative care, access to healthcare, and use of scarce medical resources, especially in limited resource settings. Challenges arising from technological advances are expected to continue

exponentially with increasing innovations (Dzau & Balatbat, 2018). There is a need for the application of ethics in these situations, with crucial attention to context, local values, and social realities (Dzau & Balatbat, 2018).

One healthcare area where ethics can be overlooked concerns access to affordable medicine. Pharmaceutical companies are profit making and sometimes, their interest in profits may seem to outweigh the needs of patients, making medicine unaffordable (Hassoun, 2020). Clinicians, especially those in limited resource settings, may face scenarios of- for example, lack of respirators like in the COVID-19 pandemic (Mack et al., 2007). In addition, medical research is also a fast-growing field, fraught with concerns about human research protection and research misconduct.

There is a need to employ new and critical approaches to bioethics education in Kenya, raise awareness and equip individuals and institutions with the tools needed to effectively address these challenges. By law, the Kenya National Commission for Science, Technology, and Innovation (NACOSTI) regulates all research. In fulfilling its mandate, it has delegated the task of ethical clearance of research proposals to Institutional Ethics Review Committees (IERCs). Currently, a total of 30 IERCs are accredited (National Commission for Science, Technology,

and Innovation, n.d.). Equipping the IERCs through training would encourage the application of best practices in research. Training in clinical ethics would also enhance the appropriate practices of healthcare workers.

In Kenya, bioethics has not yet been adequately adopted as a key subject in the health sciences as only two universities offer postgraduate programs; that is, Strathmore University (Strathmore University, n.d.) and Moi University (Moi University, n.d.). By conducting a needs assessment, we sought to understand the needs of stakeholders which would eventually inform curriculum structure and content. Training would in turn equip health science professionals with knowledge on ethical issues and encourage best practices.

The aim of this study was not only to determine the need for developing an innovative bioethics program to build bioethics capacity within institutions of higher learning in Kenya but also to understand the perceptions of prospective stakeholders on the need for capacity building in various areas of bioethics. To initiate the curriculum development process, an online needs assessment survey was conducted involving local stakeholders. This survey helped determine the content of the certificate course curriculum in line with stakeholders' needs.

To rapidly build capacity in bioethics, the CBEC-KEMRI Bioethics Training Initiative (CK-BTI)- a collaborative program between the Centre of Biomedical Ethics and Culture, Sindh Institute of Urology and Transplantation (CBEC-SIUT), Karachi- Pakistan, and the Kenya Medical Research Institute (KEMRI), Nairobi-Kenya; developed a certificate course bioethics training program. CK-BTI is funded by the Fogarty International Centre at the US National Institutes of Health (NIH).

## MATERIALS AND METHODS

To enable program implementation, an online survey was administered through a user-friendly and convenient platform known as Survey Monkey. The focus was on the need for training at both certificate and postgraduate levels. However, this paper is focused on the certificate course level.

The sample size was based on a representative target population of at least one response from the following: accredited IERCs, research institutions, both public and private hospitals, and universities accredited by the Commission for University Education (CUE). It was estimated that at least 106 responses would indicate coverage of this target population. The process was voluntary.

The participants were sent an email to invite them to respond to the survey. The period when the survey was open was slightly over three weeks. Participants could only take the survey once. Two reminders were sent to the respondents; the first one a week after their first invitation by email and a second one six days after the first reminder both by email and follow-up phone calls.

Using both closed-ended and open-ended questions, different areas were assessed including the importance of having formal training in the field of bioethics, interest in enrolling in a bioethics course, types of academic training (workshops, certificate course, degree level), and duration of training. We also assessed essential topics for an academic program in bioethics, knowledge on the availability of formal bioethics programs in Kenya, and suggestions on function and structure as well as relevant learning resources. The full questionnaire is available upon request.

## RESULTS

Despite sending reminders, the response rate was very poor- with 11 out of 106 responding. A total of 7 (11% of the target) were from people working in universities, 2 (40% of the target) from research institutions, and 2 (8% of the target) from hospitals.

### Importance of Bioethics Training

The majority (93%) indicated that it is important for professionals to have formal training in Bioethics as this would enhance moral reasoning and practice in research, health care, and biotechnology. A minority (7%) indicated formal bioethics training was not important because the courses are covered during undergraduate studies. All the respondents confirmed that they had encountered ethical challenges at their places of work, with the majority 10 (91%) reporting seeing colleagues engage in what they considered unethical behaviour.

### Interest in pursuing a Bioethics Course

Not only did all the respondents indicate their interest in enrolling in a suitable bioethics course, but they also confirmed that they would encourage their colleagues/workmates and students to enrol.

When asked about their knowledge of any formal bioethics course currently offered in Kenya, a third (36%) of the respondents confirmed that they did not know of any; a third (36%) knew of one, and the rest were not sure.

### Nature of the Course

The majority (91%) recommended a workshop as a suitable way of training with the optimum duration recommended as a week by (45%), more than one week by 45%, and 4-days by 9%. The majority (91%) indicated that a certificate course that covers a specific area of bioethics exhaustively would be suitable for those interested in bioethics; with the optimum duration suggested as more than a week by 5 (45%), a week by (36%) and four days by (18%). Most (73%) respondents thought that researchers, doctors, nurses, paramedics, social scientists, social workers, educators, and administrators should have their own specific bioethics training programs, while a few (27%) thought that a unified program would be adequate.

All participants agreed that case studies as a learning resource would be most important to them if they were to study bioethics. When asked about learning resources, most (91%) recommended a Hybrid/ Blended course, almost three quarters (73%) recommended a social networking tool and portfolio, almost two-thirds (64%) recommended Instructional Videos and almost half (45%) recommended online-based courses and the minority (18%) recommended hyperlinks. Lastly, the participants suggested the types of learning facilities that they would expect in a Bioethics course. In order of importance, these included Libraries, An email account, Access to laboratories, hospitals, and hostel accommodation during the training.

### Relevant Topics in a Bioethics Course

The relevant topical areas for inclusion in a training course were recommended as Research Ethics by all

participants, Clinical Ethics by slightly more than half (55%), and Public Health Ethics by almost half (45%). Other topics recommended for inclusion included Work / Organisational ethics, Gender Roles and obligations, and issues of professionalism. In addition, almost two-thirds (64%) recommended Religion, Faith, and Culture for inclusion, and almost half (45%) inclusion of Humanities and the arts.

Almost two-thirds (64%) of the participants suggested that a Bioethics course for professionals in the medical field ought to have a component of philosophy. In addition, almost three-quarters (73%) recommended the incorporation of religious thought and discourse into such training. All participants considered discussions on law and legal implications as a mandatory part of training.

### DISCUSSION

Despite a very poor overall response rate to the survey (10%), respondents indicated support for training in bioethics, were enthusiastic about wanting to be trained and provided input as to what should be included in a training curriculum.

Bioethics training was noted to be important for good professional practice. Other studies have highlighted the importance of bioethics training (ten Have, 2019), as evidenced by the development of an ethics curriculum for medical students by national medical bodies around the world, such as the Indian Council of Medical Research (Kumar, 2006). Only a few of our respondents were aware of ethics courses offered in Kenya. Strathmore University offers a Masters in Applied Philosophy and Ethics (Strathmore University, n.d.) and Moi University has a Masters in International Health Research Ethics (Moi University, n.d.). Our respondents who were from different professional backgrounds likely face ethical dilemmas regularly for which they need suitable solutions arising from a place of clear understanding. Training attempts to enable professionals to get familiar with potential issues and learn how best to manoeuvre/resolve them (Kumar, 2006), (Pati, Sharma, & Zodpey, 2014).

There was great interest in attendance of bioethics courses. Paradoxically, while there was an indication that there was a need to build the capacity

in different areas of ethics, an initial 7% (1 respondent) felt there was no need for formal training. However, when asked about interest in enrolling in a bioethics course, there was 100% interest (11 respondents).

Respondents provided suggestions as to what to include in the curriculum for such training. In medical colleges in the United States, curriculum developers also determined that the content and teaching methodologies were important considerations (DuBois & Burkemper, 2002).

When selecting areas where there was a need for ethics training, research ethics was ranked at the top. This was expected, as research is a fast-growing field in Kenya, with the different local and international funding sources available (National Research Fund Kenya, n.d.), (European & Developing Countries Clinical Trials Partnership, 2021), (National Institutes of Health, n.d.). The curriculum for the Middle East Research Ethics Training Initiative (MERETI) program shows a similar trend (Silverman et al., 2010). It is noted that there is minimal focus on public health ethics in different countries (Doudenkova et al., 2017). In India, drug development has been considered relevant for training. Ethics courses are mainly offered to medical students (both undergraduate and postgraduate), non-medical students, researchers, and members of IERCs (Kumar, 2006). Training through short-term workshops was recommended by the majority. This has been demonstrated as a rapid way of building capacity and is convenient for working professionals (Silverman et al., 2010). A variety of topics can be sufficiently covered if the workshops are tailor-made to the specific needs of the target groups. The MERETI Research Ethics certificate course, for example, is currently offered online – the aim of this structure is to meet the needs of working professionals (Silverman et al., 2010). Questions that were specific on content and timing of training informed a plan for four (4) certificate courses with suggestions of Research and Public Health Ethics, Clinical Ethics, Research Methods, and Fundamentals of Bioethics as core needs. These suggestions were then forwarded to a Curriculum Development Committee to develop the details of the courses for training.

## Limitations

Despite sending information to 106 target institutions with email and phone call reminders and leaving the survey open for longer than initially planned, the response rate was not as anticipated, as only 11 responses were received. Additionally, some of the forms submitted were incomplete with a few skipped questions. We can therefore not conclude that this is truly representative of all institutions of higher learning in the country. The poor response rate, however, is a typical challenge of online surveys (Crouch, Robinson, & Pitts, 2011), especially in the developing world.

## CONCLUSION

Bioethics training was noted to be important and there was general interest in its pursuit by individuals from different professions. Training through short-term workshops was recommended especially for working professionals. The survey informed the topics considered relevant and of interest in the bioethics arena.

This information was utilised to develop a curriculum for ethics certificate courses that have been offered since 2017.

## CONFLICT OF INTEREST

The authors declare no conflicts of interest with respect to the research, authorship, and/or publication of this paper.

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