



Original Article

## Opportunities and Lessons Learnt from conducting Research Ethics Training to Staff at a Health Non-Governmental Organization in Nairobi, Kenya

Yvonne Opanga<sup>1\*</sup>

<sup>1</sup> Amref Health Africa in Kenya, P. O Box 27691-0056, Nairobi, Kenya.

\*Author for correspondence ORCID ID: <https://orcid.org/0000-0002-3163-0633>; email: [Yvonne.opanga@amref.org](mailto:Yvonne.opanga@amref.org)

Article DOI: <https://doi.org/10.37284/eajhs.5.2.980>

**Date Published: ABSTRACT**

25 November 2022

**Keywords:**

*Research Ethics,  
Training,  
Bioethics.*

Despite efforts to create awareness and sensitise healthcare workers to research ethics through various programs in Kenya, most staff from non-governmental organisations (NGOs) are yet to be reached with Bioethics Training. There is an increase in the number of studies conducted by NGOs. However, most of the staff have inadequate knowledge of research ethics. This issue could result in potential harm to study participants. This paper highlights opportunities and lessons learnt from conducting research ethics training for staff at a health NGO in Kenya. The project entailed 5 weeks of training with one-and-half-hour sessions conducted once per week between May to June 2018. The project targeted 15 trainees from the Amref Kenya Country office. The selection was voluntary following the research manager's email circulation of the training. Interactive training methodologies including lecture method using slides, Class discussions of case studies, use of short clip videos and student presentations were used in facilitating the sessions. The majority of the participants were female (n=12, 80%), project officers (n=9, 60%) and had worked in the organisation for more than 5 years (n=7, 46.7%). Participants appreciated the use of video clips as a teaching tool in bioethics because it helped them understand the magnitude of the effects of conducting ethical research and unethical research, made the participant visualise and think through how they have been conducting research and made the class interactive. Experiential learning emerged as a key tool to promote learning when conducting bioethics training during class discussions. Mentorship from conceptualisation of the idea, planning and execution conducted by faculty of the training institution contributed to better use of teaching methodologies, improved interactions

from participants hence better learning outcomes. Therefore, when teaching research ethics, applying an andragogy teaching style characterised by the use of Interactive training methodologies and experiential learning promotes optimal learning and critical thinking skills among learners. Mentorship of young trainers in bioethics is key to enhancing learning and improving training outcomes.

#### APA CITATION

Opanga, Y. (2022). Opportunities and Lessons Learnt from conducting Research Ethics Training to Staff at a Health Non-Governmental Organization in Nairobi, Kenya *East African Journal of Health and Science*, 5(2), 47-59. <https://doi.org/10.37284/eajhs.5.2.980>.

#### CHICAGO CITATION

Opanga, Yvonne. 2022. "Opportunities and Lessons Learnt from conducting Research Ethics Training to Staff at a Health Non-Governmental Organization in Nairobi, Kenya". *East African Journal of Health and Science* 5 (2), 47-59. <https://doi.org/10.37284/eajhs.5.2.980>.

#### HARVARD CITATION

Opanga, Y. (2022) "Opportunities and Lessons Learnt from conducting Research Ethics Training to Staff at a Health Non-Governmental Organization in Nairobi, Kenya", *East African Journal of Health and Science*, 5(2), pp. 47-59. doi: 10.37284/eajhs.5.2.980.

#### IEEE CITATION

Y. Opanga, "Opportunities and Lessons Learnt from conducting Research Ethics Training to Staff at a Health Non-Governmental Organization in Nairobi, Kenya", *EAJHS*, vol. 5, no. 2, pp. 47-59, Nov. 2022.

#### MLA CITATION

Opanga, Yvonne. "Opportunities and Lessons Learnt from conducting Research Ethics Training to Staff at a Health Non-Governmental Organization in Nairobi, Kenya". *East African Journal of Health and Science*, Vol. 5, no. 2, Nov. 2022, pp. 47-59, doi:10.37284/eajhs.5.2.980.

## INTRODUCTION

In sub-Saharan Africa, there has been progress in the area of bioethics especially in Research ethics. This has been highly influenced by the growth of institutional Review Boards that drive the research ethics agenda in these countries (Maina & Kipkosgei, 2015). In addition, there have been efforts to conduct training in research ethics through research ethics capacity development programs like online courses and funded programs by WHO, NIH, Wellcome Trust, and the Erastus Mundus program. However, these training programs have not been able to reach adequate African researchers (Paul Ndebele, 2019). Additionally, there are still gaps in research ethics including the inadequate capacity of African research on issues of research ethics, inadequate national ethics regulatory guidance and policies that would address ethical issues in emerging issues (Barchi & Little, 2016), ethical dumping, which encompasses developed countries conducting research in developing countries that they would not conduct in their country among other factors (Paul Ndebele, 2019). This necessitates

continuous research ethics training in Sub-Saharan Countries to empower African researchers to ensure high-quality, ethical research is conducted.

In Kenya, there was a necessity to create a framework for reviewing research ethics in the early 1980s after research was recognised as an important function for the thriving health sector (Maina & Kipkosgei, 2015). In 1977, the National Council for Science and Technology (NCST) was established due to increased research activities that led to the formation of health sciences specialist committee to review and approve clinical trials. Kenya Medical Research Institute was then established in 1979 owing to an increased research workload and this led to the creation of the Kenya Medical Research Ethical Review Committee. From 1985, the research institutions and universities continued to form their own research ethics committees to oversee research. In 2009, the NCST established National Bioethics Committee to develop guidelines, advise the government on ethical matters and arbitrate ethical cases as a way to regulate research in Kenya. In 2013, National

Commission for Science, Technology, and Innovation (NACOSTI) was established, and its main roles are registration of research committees and researchers and quality assurance.

In Kenya, training in research ethics is partially done in universities (Masters and PhD levels) and research institutions as part of the training though integrated into some courses and not offered as independent courses. Additionally, there are externally funded programs by the National Institute for Health (NIH), European & Developing Countries Clinical Trials Partnership (EDCTP), and UNESCO, among others, that have focused on training professionals and members of research ethics committees and national Bioethics Committee members on Research ethics. Despite these efforts, not everyone has been reached with Bioethics Training, yet the majority of research is conducted not only by universities and research organisations but also by non-governmental organisations, individuals, and contracted research organisations. Despite the progress in the uptake of research, most of the staff in non-governmental organisations and contracted research organisations (consultancy firms) have inadequate knowledge of research ethics, an issue that could result in potential harm to the study participants. Unpublished data from Amref Ethics and Scientific Review Committee (ESRC) and evidence from other studies indicate that protocols submitted from NGOs and Contracted Research Organisations (CROs) often lack ethical and scientific vigour leading to major revisions (Delisle et al., 2005; Zachariah et al., 2010); a component that should be addressed. There is therefore need to continuously build capacity and empower relevant institutions and individuals to ensure that research conducted conforms to the highest standards of ethics.

Amref Health Africa is a non-governmental organisation headquartered in Nairobi, Kenya that implements public health-related interventions among underserved populations in Kenya and other African Countries. The strategic focus is to serve vulnerable and underserved populations in line with its vision of 'Lasting Health Change in Africa'. This is executed through four program areas: 1) HIV/AIDS, TB, Malaria and Non-Communicable Diseases. 2) Reproductive, Maternal, Newborn, Child, Adolescents, Youth Health, and Nutrition. 3)

Water, Hygiene, Sanitation and Neglected Tropical Diseases, and 4) Health Systems Strengthening with research projects cross-cutting across all the program areas. (Amref Health Africa, 2020). At the organisation, operations research is embedded within projects across the 4 programmatic areas, and project evaluations both process and impact evaluations are conducted. These studies are mostly carried out in communities. In addition, the organisation also has an institutional research committee which reviews and approves all research and evaluation protocols to be implemented by the institution and other NGOs. At the organisation, it is mandatory that all evaluations and research protocols receive ethics approval prior to data collection. This project therefore had a goal of improving the knowledge of research ethics among staff of Amref Health Africa Kenya Country office.

## PROJECT GOAL AND METHODOLOGY

The project entailed 5 weeks of training whose aim was to build the capacity of staff at Amref Health Africa on research ethics to enable them to apply the knowledge to ensure the protection of human subjects when implementing research studies and evaluations within communities served by the institution. The training entailed one-and-a-half-hour sessions conducted once per week between May to June 2018. The sessions covered the following topics: 1) Introduction to research ethics concepts, 2) responsible conduct of research and research integrity, 3) Role of Institute Review Boards in the protection of Human Subjects, 4) Informed Consent and Assent, and 5) Conducting research among vulnerable populations. The topics were selected based on: 1) Research ethics priority areas established through a mapping exercise conducted within the institution and 2) Reviewers' comments on ethical issues identified in protocols submitted to the Institute Review Board (IRB) from Amref Staff and faculty.

The project targeted a total of 15 trainees from the Amref Kenya country office. The selection was on a voluntary basis. Working closely with the Research Manager at the Kenya Country office, information about the course was shared with the entire staff at Amref through email by the Research Manager. All interested members, especially those from the Monitoring, Evaluation, and Research

Office who take part in research activities implemented within the 4 programmatic areas implemented by Amref were encouraged to apply. The first 15 members who registered were given priority. Once signed up for the course, it was mandatory that the staff attend all six sessions to be taught. The training was conducted in the Amref Health Africa Boardroom. A working lunch was

organised to ensure that the sessions were fully attended and did not interrupt with usual work.

Interactive training methodologies were used in facilitating the sessions and this included lecture method using slides, Class discussions of case studies, use of short clip videos and student presentations; details of the sessions are included in *Table 1* below:

**Table 1: Description of the Training content and teaching tools**

Proposed Topic	Teaching Objectives	Teaching Methodology
Introduction to Research Ethics Concepts	<ul style="list-style-type: none"> <li>•Define research ethics</li> <li>•Understand the history of research ethics</li> <li>•Comprehend the essence of research ethics</li> <li>•Understand Research ethics guidelines</li> </ul>	Lecture method, class discussions and a short clip Videos on: Edward Jenner story, Willow Brook study
Ethical Values and Principles of Research Ethics	<ul style="list-style-type: none"> <li>•Define Values, the importance of values and examples</li> <li>•Understand the values behind ethics in research</li> <li>•Discuss research ethics principles</li> </ul>	Video: Tuskegee Syphilis study Case discussion and student presentations Class discussions, Lecture method using slides
Responsible Conduct of Research and Research Integrity	<ul style="list-style-type: none"> <li>•Discuss the role and composition of research teams</li> <li>•Discuss research misconduct and Publication ethics</li> </ul>	Class Discussion Video: publish or perish
Vulnerable populations and mechanisms for the protection of research subjects in community-related research	<ul style="list-style-type: none"> <li>•Define vulnerable populations</li> <li>•Identify types of vulnerable populations</li> <li>•Discuss emerging ethical issues when carrying out studies in vulnerable populations and protection mechanisms</li> </ul>	Video Clip: Nazi experiments on prisoners Group Discussions
Informed Consent and Assent	<ul style="list-style-type: none"> <li>•Define Informed Consent</li> <li>•Define informed assent</li> <li>•Discuss components of an informed consent</li> <li>•Prepare informed consent forms based on case studies</li> <li>•Practically administer informed assent/Consent in a role play</li> </ul>	Slides, Class Slides, Class discussions and Group work
Institute Review Board: Case of Amref Ethics Scientific and Research Committee	<ul style="list-style-type: none"> <li>•Discuss the origin of IRB</li> <li>•Role and significance of IRBs</li> <li>•Discuss procedures and requirements for protocol submission to Amref ESRC</li> <li>•Identify ethical issues that arise from Amref protocols submitted to the IRB</li> </ul>	Slides, case studies and discussions

## FINDINGS

### Socio-Demographics of The Participants

A total of 15 participants attended all six weekly sessions. The majority of the participants were female (n=12, 80%), project officers (n=9, 60%), and had worked in the organisation for more than 5 years (n=7, 46.7%). Based on representation from

various departments of the organisation, the highest proportion was from the Malaria, HIV, and TB department (n=6, 40%), followed by monitoring evaluation and Research (n=4, 26.7%). Worth noting was representation from the Communications and Country director's office, most of whom play a key role in the dissemination of research findings. Details of participants are indicated in *Table 2*.

**Table 2: Socio-demographic characteristics of participants**

Variable	Description	N	%
Sex	Male	3	20
	Female	12	80
Positions	Project Officers	9	60
	Project Assistants	3	20
	Director	1	6.6
	Communications	1	6.6
	Administrator	1	6.6
Departments	Malaria HIV and TB	6	40
	Monitoring Evaluation and Research	4	26.6
	Health Systems Strengthening	2	13.3
	WASH and NTDs	1	6.6
	Communications	1	6.6
	Country Director Office	1	6.6
Time in the Organisation	<One year	5	33.3
	1-5 years	3	20
	> 5 years	7	46.7

### Feedback on the Teaching Methods Applied in Each of the Sessions

#### *Use of Video Clips in Teaching Bioethics Promotes Interactive Learning*

The training utilised a number of short video clips in conducting the training, as indicated in *Table 1*. The process entailed sharing with the team the theme of discussion, taking them through the discussion guide and then showing the videos. This was followed by discussions focusing on 1) Description of what was happening in the video, 2) Relation of the video to the theme of the study, and 3) identification of ethical issues in research. An analysis of participant feedback from the sessions showed that: 1) participants appreciated the use of video clips as a teaching tool in bioethics because it helped them understand the severity of harm caused to vulnerable humans during the experiments and

helped them understand the magnitude of the effects of conducting an ethical research unethical research, 2) Made the participant visualise and think through how they have been conducting research, 3) Some mentioned that the videos made the class interactive, and 5) participants were able to tease out key ethical issues and provided an opportunity for further discussions

Some of the key ethical issues discussed in various short clips are indicated below:

#### **Ethical Issues Identified from Video Clips**

*The Smallpox study (<https://www.youtube.com/watch?v=jJwGNPRmyTI>)*

*(Edward Jenner Story - YouTube, n.d.)*

The video uses animation to share Edward Jenner's story of how he developed the smallpox vaccine. As



a scientist, his aim was to conquer smallpox. Cows often presented with cowpox and sometimes milkmaids would often get cowpox infections from the cows but would never catch deadly smallpox. His main question was whether getting infected with cowpox would protect one from smallpox. To test his hypothesis, he needed someone young who had never been infected with smallpox or cowpox. He chose James Phipps aged 8 years, and informed him that it was going to stop him from getting infected with smallpox and that it would not hurt much. He took a cowpox purse from the milk maids' infection and rubbed it into two scratches on the boys' arm. Cowpox was called vaccinia, so he named his invention vaccination. James got cowpox in a few days, and he was very ill and later recovered. Six weeks later, he took pus from a smallpox victim and deliberately tried to give James Phipps the deadly disease. There was no cure for smallpox, but James never got smallpox and lived up to old age.

The video was appropriate to the session because it provided some understanding of how previous studies conducted raised ethical issues that necessitated the development of guidelines for conducting research. In this video, Edward Jenner used a male minor to develop a vaccine for smallpox. Some of the ethical issues raised from the discussion were:

- **Vulnerability** - Conducting a study on a minor was unethical consent was not even sought. The boy was selected because he was the son of a farmer working for the scientist
- **Harm** was caused to the boyThe boy was intentionally infected with cowpox by rubbing pus from a milkmaid on the scratches he had on his hands. The boy later developed cowpox but survived. After surviving, Jenner intentionally infected the boy with Smallpox. Participants noted that the procedures conducted were inhuman and unethical
- The participants also noted that as much as the outcome of the study was good, i.e., the development of vaccination, the process involved was not ethical

**Willow Brook Study** (<https://www.youtube.com/watch?v=Sx0t-gJMvIo>).

(*Willowbrook State School / Scary for Kids*, n.d.)

The video highlights the conditions at Willow Brook State School, which was an institution for Children with Mental Disabilities. The school began as a hospital for mentally handicapped Children but was later converted to a warehouse where mentally disabled children were dumped. This later became overcrowded and filthy with poor hygienic conditions and minimal employees to care for the children. As a result, the children became malnourished and contracted many illnesses, were abused physically and some ended up wandering away and dying in nearby woods. Between 1963 till 1966, doctors intentionally infected them with hepatitis in order to study the disease and era used as human guinea pigs. The justification for conducting the study in the school was that there was a high infection rate and practically inevitable that the children would become infected (*Case: Willowbrook Experiments*, n.d.; *Willowbrook State School / Scary for Kids*, n.d.)

Participants raised the following ethical issues:

- Participants noted that the selection of the study participants was wrong, especially since these were mentally disabled children who were very vulnerable
- The conditions which the study was conducted were inhuman, i.e., children were isolated in dark rooms, congested, and left to feed on their own faeces
- Intentional harm was caused to the participants, especially by injecting them with the hepatitis Virus
- Consent and assent were not sought

**Tuskegee Study** (<https://www.youtube.com/watch?v=fxeLohZEqs0&t=369s>).

(*The Appalling Tuskegee Syphilis Experiment - YouTube*, n.d.)

The video highlights the procedures undertaken during the Tuskegee Syphilis Study. The video also describes the context within which the study was conducted and its implications. The study took place at the Tuskegee University, located in Tuskegee,

Alabama and was an institution where former slaves pursued higher education after the Civil War. The study took place when the United States Public Health Service (PHS) took the lead in monitoring, identifying, and figuring out ways to treat ailments, diseases, and conditions that were impacting all US citizens. The first phase of the study to identify the Southern counties with the highest rate of Syphilis among African-American males was supported by the Rosenwald Fund, an organisation that promoted the education and health care of poor African-American farmers. Their original intention was to identify and treat the disease. With the reduction in funding, the PHS approached the Tuskegee Institute (located in Macon County) about forming a research group to study the effects of untreated Syphilis on a black male population for a duration of six to nine months and then follow up with a treatment plan.

Approximately six hundred Macon County men, 399 with Syphilis and 201 who were not infected were enrolled in the study. All the men did not know that they were enrolled in a study, but they were deceived with the promise of “free health care”, something that none of them had, and treatment of “bad blood”. They were informed that they would receive free medical exams, meals, and burial insurance. Those who were diagnosed with Syphilis were never informed nor given treatment. The procedure involved painful and unnecessary spinal taps that were very painful. The deception seemed to result from the lack of respect the doctors had for them because most were illiterate and researchers thought they would not figure out what was going on); there were also less than subtle hints of racial prejudice. Despite the discovery and adoption of penicillin as a treatment drug for Syphilis, the participant offered penicillin as treatment. The justification was that the researchers wanted to watch the progression of the disease despite the severe illness and death that was reported (Matt Blitz, 2014)

Participants raised the following ethical issues:

- Injustice in the selection of study participants, only blacks with poor socioeconomic status was involved
- Deception was used as a tool to influence participants to take part in the study. They were

promised medical insurance and food which was not given. It was also seen as an undue influence

- Denial of medication to participants after penicillin was discovered
- Harm caused to the patients especially since Syphilis was left to progress to levels of severity and even death
- There were no benefits to the study participants
- Consent was not sought

#### **Nazi Experiments on Prisoners** (*Top 5 Disturbing Facts About Nazi Experiments - YouTube, n.d.*)

The video summarises a number of experiments conducted by German Physicians on Prisoners during World War II. These were extremely painful and often deadly experiments that were done in inhumane conditions, often with a lack of consent and questionable research standards in concentration camps. For instance, experiments in the camps that intended to facilitate the survival of the Military Experimental Institution for Aviation were conducted in high-altitude experiments on prisoners to determine the maximum altitude from which crews of damaged aircraft could parachute to safety. Scientists further carried out freezing experiments on prisoners to find an effective treatment for hypothermia. Camp inmates were also used to test immunisation compounds and antibodies for the prevention and treatment of contagious diseases, including malaria, typhus, tuberculosis, typhoid fever, yellow fever, and infectious hepatitis. Other experiments were performed on twins of all ages at Auschwitz to advance the racial and ideological tenets of the Nazi worldview. Other mass sterilisations of prisoners to further Nazis’ racial goals against the Jewish race were conducted.

Some of the issues raised by the clip were:

- Injustice, especially in the selection of prisoners as study participants
- Physical and psychological harm to prisoners

- Lack of consent from participants to take part in the study
- A lot of inhuman practices conducted on the prisoners

Additionally, some of the ethical values at stake, as discussed, were:

- **Honesty** - The value was at stake because the investigators chose to use deception to lure the men to get into the study
- **Fairness/Justice** - The participants noted that discrimination and racism were utilised in the selection of participants. For a disease that affects people of all races, it was unethical to conduct it among blacks, specifically those of poor socioeconomic status
- **Respect** - The free will of participants to make decisions was not considered; Denial of penicillin after it was discovered
- **Humane** - Harm was caused to the participants, i.e., let the disease progress without intervening, Deaths were reported etc
- **Freedom** - No consent was sought; Participants were not allowed to opt out of the study
- **Professionalism** - The study was not conducted in a professional way
- **Trust** - Participant trust in the scientist was at stake, especially for the participants who had already joined the study expecting to receive treatment
- **Empathy** - Harm was caused to participants, and nothing was done to assist the participants. The investigator did not empathise with the participants

The videos also created an opportunity to have discourses and further discussions on ethical issues raised.

For instance, in the Tuskegee Syphilis video, one of the participants asked:

*'If the goal of the scientists was to determine the natural progress of diseases, was there a*

*better way these scientists would have conducted the study?'* Female Participant

This was concluded that first, they would have considered carrying out the study in animals first and voluntary informed consent would have been sought from the participants prior to engaging them and penicillin should have been given to participants after its discovery. Lastly, the study would have stopped the minute signs and symptoms of Syphilis were discovered.

One other participant asked:

*'If voluntary consent had been sought, do you think participants would have accepted to participate in such a study knowing that the result was death? Do you know of any of such studies where participants have accepted to take part in a study that leads to death?'*

This was discussed, and we were able to conclude that based on the Nuremberg code point that states that if the end result of a study is death, the study should not even be conducted in the first place. This opened an opportunity to discuss other key international guidelines of research ethics and highlighted key areas that should be considered

In the clip from Nazi experiments, further discussions on what defines vulnerability and the impact of this on the populations were discussed. It was also noted that sometimes, these populations are over-searched, and due to the vulnerable state and power differentials, the majority of participants tend to give in to studies without generally knowing that they can refuse to participate in most of these studies. The issue of therapeutic misconception was raised as one of the influencers of participants to participate in studies only to realise later that they may not have direct benefits from the studies. From these discussions, it was concluded that for any studies carried out among such populations, it is important to give clear information so that the participants make independent and informed decisions on whether to participate.



### Sharing Real-Time Experiences from Participants During Class Discussions Exacerbates Learning

Experiential learning emerged as a key tool to promote learning when conducting bioethics training during class discussions. For example, in In Session 2, when discussing the topic of ethical values and principal research, participants shared experiences in their line of work where values have been breached. One participant shared an experience from HIV/AIDS program that she was conducting

*I was once working in an HIV program in Kibera Informal settlement. The program aimed at assisting patients who reported sexual assault, rape, and gender-based violence. At that time, they had just introduced Post Exposure Prophylaxis, a new intervention to prevent the spread of HIV/AIDS in cases where one had been exposed to it. One evening a group of 5 teen girls reported to that facility and requested PEP. They reported that they had attended a 'bash' and had taken alcohol. During this they were involved in an orgy and they suspect they could be at risk of contracting HIV/AIDS hence the need for PEP. However, the drugs came with guidelines that were not clear for adolescents and children. Since the guidelines were not clear, adolescents were denied the medication. Their HIV status was, however, tested, and all were found to be negative and were scheduled for follow-up visits.*

The experience led to a discussion on ethical dilemmas and how different values may conflict in certain situations. Some participants thought that the doctors made the best decision to deny the adolescents PEP as this was not in the guidelines. They strongly advocated for the value of professionalism. Other participants thought that it was unethical for the doctors to deny the adolescents PEP if it would have helped them. Some of the values at stake in this situation that the participants mentioned were trust, empathy, and fairness. This discussion concludes that it will be key to consider the context when faced with ethical dilemmas and assess the values at stake in order to guide decisions made.

In the session on informed consent and assent, one of the participants shared an experience below:

*I was collecting data for an end-term evaluation of a study that involved interviewing mothers with children aged two years. This particular household was headed by an elderly lady 65 years of age and she was a grandmother to a 15-year-old who was eligible for the study. On arrival, the team met the girl, explained to her the study and she agreed to participate. However, she mentioned that she needed permission from her grandmother before she could continue with the study. The team called the grandmother, explained the study to her, and sought her consent. Unfortunately, the grandmother refused. I had no choice but to leave the homestead" Female Participant*

This also led to a discussion on cases where the minor assents to be part of the study, but the parent refuses. What should be done? It was agreed that since these are minors, parental consent would take precedence, and it will be important to seek consent from parents first prior to assent from minors.

Another interesting discussion was on the role of the witness in the process of obtaining consent and when this is required. One of the participants shared the experience below:

*I was part of a study where a mother sued the organisation for using her photo in a study report. The mother said that consent was not obtained to use her photo. The only advantage the organisation had was that when consent to take participant photos was obtained. A witness also signed because the lady was elderly. During the case, it was confirmed by the witness that the mother had given consent for her photo to be taken and used in the study materials and report. This helped the organisation address the issue" Male Participant.*

It was agreed that a witness is key, especially when dealing with participants who are physically disabled, pregnant women, and other vulnerable population. The witness observes the informed consent process that includes the communication between the participant and research assistant and provider. He/she signs his or her name to indicate that the respondent heard the information given,

understood the information, and gave voluntary consent.

### **Impact of the Training on the Participants and Institution**

#### ***Impact on Participants:***

In the feedback session, most participants noted the following:

- The sessions were informative and they spurred their interest in research ethics.
- The participants appreciated the need to protect human subjects during research.
- One of the participants also mentioned that this was an eye-opener because in some of the studies that they have been conducting, they have in one way or another influenced participants to take part in the study through incentives. He promised to avoid the use of incentives
- Participants appreciated the need to submit their protocols to the Amref ESRC and correctly go through the informed consent process.

#### ***Impact on Organization***

The Research manager who was in attendance at the sessions noted that the sessions were important and the need to continue these training. Currently, research ethics has been identified as one of the sessions that should be included in the Research Community of Practice weekly meetings to continuously sensitise staff on research ethics issues. The Research Community of Practice is a platform that brings together researchers, project officers, and staff in all Amref implementing countries in the North and South. This has been a platform that has helped streamline matters of research ethics across the institution.

In session 6, on the institutional review committee, we presented findings on some of the process, scientific and ethical issues that arise from Amref protocols, especially in the various departments that were represented. Sharing some of the comments raised from the review of Amref protocols was also helpful to participants. Most said that this was an

eye-opener and useful information, especially as they prepare protocols for future studies. Hence, the quality of proposals submitted to the IRB from various departments, especially on the ethical consideration sections, has largely improved

In the session on publication ethics, the issue of who should be the lead author in a manuscript emerged. It was noted that there are some cases managers /Directors expect to take the lead in a manuscript without contributing anything not even reviewing. A follow-up session was scheduled with the directors and managers to discuss the issue.

Most of the time, unethical practices happen especially in studies conducted by students in Kenya. The Amref ESRC was advised to contribute to addressing this issue. Following these discussions, Amref ESRC is working closely with Faculty at Amref International University to ensure students' protocols approved are of high scientific and ethical standards.

### **Mentorship Feedback from CBEC-KEMI Bioethics Training Initiative (CKBTI) Faculty Helped Improve how Sessions were Conducted**

The CBEC-KEMI Bioethics Training Initiative (CKBTI) faculty contributed significantly to ensuring that the sessions were conducted professionally and content shared was relevant. The mentorship was conducted from conceptualisation of the idea, planning and execution.

During the conceptualisation and planning phase, the faculty played a key role in supporting the development of the project protocol, identification of areas to be covered, guiding on developing and standardising content to be covered during the sessions, and ensuring support from the various authorities. One was assigned two supervisors who guided the process.

At the implementation stage, the faculty organised feedback sessions where reports on every session would be shared and faculty would give advice on areas that needed improvement based on experience. The feedback contributed to better use of teaching methodologies and improved interactions from participants hence better outcomes of the training.

## DISCUSSION

In Kenya, there is a dire need to increase awareness of the bioethics discourse because of the increasing rise in health research with the expanded devolved health in Kenya (Waiharo et al., 2022). Currently, a significant number of non-governmental organisations (NGOs) are engaging in research to inform the development work they implement as well as influence policy through evidence-based interventions. However, most of the research conducted by non-governmental organisations lacks theoretical rigour, contextual understanding, and empirical detail making it challenging to utilise the findings to influence policies (Lewis, 2016). Contextual understanding is key in ensuring that participants engaged in research by staff from NGOs are adequately protected.

This paper highlights that the capacity strengthening of staff in bioethics is possible through the use of adult learning principles. These principles anchor on andragogy which is characterised by the use of self-direction, transformation, experience, mentorship, mental orientation, motivation, and readiness to learn (Gouthro, 2019). Andragogy has proven as the most appropriate methodology for teaching bioethics which ensures that students are motivated to learn, are able to relate to past experiences in the area of interest, and are eventually able to make moral judgments from their environment and current situations they experience (Morales-González et al., 2018). This is evident from the research training that was undertaken which showed that effective learning was achieved through the use of experiential learning, where participants were able to share experiences from the past research undertaken and relate it to the subject of discussion during the sessions.

Media technology is becoming more universally accepted in society as a tool for relaying messages. Using short video clips to teach bioethics has proven to be an effective teaching tool. For instance, a project where the students were engaged in the production and use of short clip-on bioethics for learning showed enhanced learning about ethical issues and provided an opportunity for students to easily relate scientific and ethical issues from various scenarios presented (Willmott, 2014). In the Bioethics Education Project (BEEP), it was evident

that videos provide emotional reactions and logical thinking that play a key role in making difficult decisions, a key skill required in resolving ethical dilemmas, especially in research contexts (Wellcome Trust, n.d.). In this project, most of the staff reported that learning was easier and more interesting through short video clips because they were able to relate to previous experiences, making the information easier to process and remember, as well as build critical thinking skills. Additionally, videos have become a way of standardising information shared.

However, it is worth noting that videos alone may not be adequate enough to enhance learning without guided discussion of the video after watching. Therefore, important for any facilitator to adequately develop clear guiding questions that will facilitate discussions, direct the issues raised to the topic of discussion and enhance learning. From experience, it was clear that one video can bring out several ethical issues and perspectives other than the intended ones. There is therefore need to ensure the selection of relevant and appropriate video clips that will address the intended goal of the session. Additionally, the use of relevant language is key and hence important for the facilitator to ensure the language used in the video is one that can be understood clearly by the participants to enhance learning. Video education is also key in providing culturally sensitive information. Worth noting is that watching a video once may not be adequate; hence facilitators may consider sharing the videos early enough to enable students to participate actively in the sessions

Capacity building in low- and middle-income country (LMIC) institutions hinges on the delivery of effective mentorship (Hansoti et al., 2019). Addressing ethical issues through mentorship is key to encouraging scientific integrity and increasing research capacity (Bukusi et al., 2019). In the project, it was evident that mentorship from faculty improved the training skills of the facilitator. Mentorship from faculty contributed to the delivery of quality sessions, improved participation of learners in the session, and hence improved learning. What worked best was the guidance provided during the planning and implementation phase. The feedback from mentor-mentee meetings and peer review of the sessions by colleagues were

equally important in strengthening the capacity to train

## CONCLUSIONS

Implementation of this program contributed to increased knowledge of research ethics among the staff. Therefore, when teaching research ethics, applying an andragogy teaching style characterised by the use of interactive training methodologies and experiential learning promotes optimal learning and critical thinking skills among learners. Mentorship of young trainers in bioethics is key to enhancing learning and improving training outcomes.

## ACKNOWLEDGEMENTS

I am grateful to the Centre for Biomedical Ethics and Culture for the award of the scholarship to undertake the PGD in Biomedical Ethics where I was able to complete the project. Grateful to my project Supervisors and mentors: Dr Aamir Jaffrey, Prof. Elizabeth Bukusi and Dr Bushra Shirazi for the mentorship and support provided during the planning and execution of the project. My sincere gratitude also goes to Amref Health Africa for the logistics and administrative support provided to ensure the successful implementation of the project and to all the trainees for active participation in the sessions.

Special gratitude to the Fogarty International Centre (FIC) - National Institutes of Health (NIH) USA for awarding The Kenya Medical Research Institute (KEMRI), Nairobi, Kenya, in collaboration with the Centre of Biomedical Ethics and Culture (CBEC), Karachi Pakistan the CBEC-KEMRI Bioethics Training Initiative (CK-BTI) grant (number 1R25TW010509-01) that facilitated my course work and practicum

## REFERENCES

- Amref Health Africa. (2020). *Amref Health Africa in Kenya Strategic Plan 1018-2022*. Office of the Chancellor, UPRM. <http://www.afpe.org.uk/physical-education/wp-content/uploads/afPE-Strategic-Plan-2016-2020.pdf>
- Barchi, F., & Little, M. T. (2016). National ethics guidance in Sub-Saharan Africa on the

collection and use of human biological specimens: A systematic review *Ethics in Biomedical Research. BMC Medical Ethics, 17*(1), 1–25. <https://doi.org/10.1186/S12910-016-0146-9/TABLES/5>

- Bukusi, E. A., Manabe, Y. C., & Zunt, J. R. (2019). Mentorship and Ethics in Global Health: Fostering Scientific Integrity and Responsible Conduct of Research. *The American Journal of Tropical Medicine and Hygiene, 100*(1\_Suppl), 42–47. <https://doi.org/10.4269/AJTMH.18-0562>
- Case: Willowbrook Experiments*. (n.d.). Retrieved November 12, 2022, from [https://www.qcc.cuny.edu/socialsciences/ppec/orino/medical\\_ethics\\_text/chapter\\_7\\_human\\_experimentation/case\\_study\\_willowbrook\\_experiments.htm](https://www.qcc.cuny.edu/socialsciences/ppec/orino/medical_ethics_text/chapter_7_human_experimentation/case_study_willowbrook_experiments.htm)
- Delisle, H., Roberts, J. H., Munro, M., Jones, L., & Gyorkos, T. W. (2005). *The role of NGOs in global health research for development*. <https://doi.org/10.1186/1478-4505-3-3>
- Edward Jenner Story - YouTube*. (n.d.). Retrieved November 12, 2022, from [https://www.youtube.com/watch?v=jJwGNPRmyTI&ab\\_channel=dartfordtech](https://www.youtube.com/watch?v=jJwGNPRmyTI&ab_channel=dartfordtech)
- Gouthro, P. A. (2019). Taking Time to Learn: The Importance of Theory for Adult Education. *Adult Education Quarterly, 69*(1), 60–76. <https://doi.org/10.1177/0741713618815656>
- Hansoti, B., Kalbarczyk, A., Hosseinipour, M. C., Prabhakaran, D., Tucker, J. D., Nachega, J., Wallis, L., Stiles, J. K., Wynn, A., & Morroni, C. (2019). Global Health Mentoring Toolkits: A Scoping Review Relevant for Low- and Middle-Income Country Institutions. *The American Journal of Tropical Medicine and Hygiene, 100*(1\_Suppl), 48–53. <https://doi.org/10.4269/AJTMH.18-0563>
- Lewis, D. (2016). Issues and Priorities in Non-governmental Organisation Research. [Http://Dx.Doi.Org/10.1177/097206340600800202](http://Dx.Doi.Org/10.1177/097206340600800202), *8*(2), 181–193. <https://doi.org/10.1177/097206340600800202>



- Maina, L., & Kipkosgei, T. (2015). B. s. k. *Bioethics Society of Kenya*, 1(1), 1–16.
- Matt Blitz. (2014). *The True Story Behind The Appalling Tuskegee Syphilis Experiment*. Today Newsletter. <https://www.todayifoundout.com/index.php/2014/04/true-story-behind-appalling-tuskegee-syphilis-experiment/>
- Morales-González, Á., Tirado-Lule, J. M., Alejandro González-Cisneros, López-De-León, E. O., Sanchez- Morales, A., & Manzanilla-Granados, H. M. (2018). Bioethics in Education. *Reflections on Bioethics*. <https://doi.org/10.5772/INTECHOPEN.74519>
- Paul Ndebele. (2019). *African governments need to fund research ethics training*. University World News. <https://www.universityworldnews.com/post.php?story=2019041516051932>
- The Appalling Tuskegee Syphilis Experiment - YouTube*. (n.d.). Retrieved November 12, 2022, from [https://www.youtube.com/watch?v=fxeLohZEqs0&t=369s&ab\\_channel=TodayIFoundOut](https://www.youtube.com/watch?v=fxeLohZEqs0&t=369s&ab_channel=TodayIFoundOut)
- Top 5 Disturbing Facts About Nazi Experiments - YouTube*. (n.d.). Retrieved November 12, 2022, from [https://www.youtube.com/watch?v=70I4emLo390&ab\\_channel=WatchMojo.com](https://www.youtube.com/watch?v=70I4emLo390&ab_channel=WatchMojo.com)
- Waiharo, J., Kithinji, C., Mwakisha, M., & Bukusi, E. A. (2022). Bioethics in Kenya: Who is Interested in Certificate Courses. *East African Journal of Health and Science*, 5(1), 19–25. <https://doi.org/10.37284/EAJHS.5.1.529>
- Wellcome Trust. (n.d.). *Bioethics Education Project*. Retrieved September 21, 2022, from <https://www.beep.ac.uk/content/1.0.html>
- Willmott, C. J. R. (2014). Teaching Bioethics via the Production of Student-generated Videos. *Https://Doi.Org/10.1080/00219266.2014.897640*, 49(2), 127–138. <https://doi.org/10.1080/00219266.2014.897640>
- Willowbrook State School | Scary For Kids*. (n.d.). Retrieved November 12, 2022, from <https://www.scaryforkids.com/willowbrook-state-school/>
- Zachariah, R., Ford, N., Draguez, B., Yun, O., & Reid, T. (2010). Conducting operational research within a non-governmental organisation: the example of Médecins Sans Frontières. *International Health*, 2(1), 1–8. <https://doi.org/10.1016/J.INHE.2009.12.008/2-1-1-TBL005.GIF>