An evaluation of the ethical concerns of a South African Research Ethics Committee using the principles and benchmarks proposed by Emanuel, Wendler, Killen and Grady (2004): Evaluating 2017–2018 minutes.

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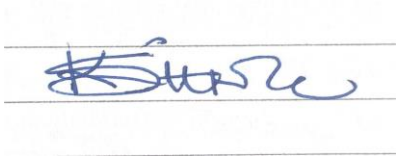
DECLARATION

I, Khutso Sithole, declare that this dissertation titled "An evaluation of the ethical concerns of a South African Research Ethics Committee using the principles and benchmarks proposed by Emanuel, Wendler, Killen and Grady (2004): Evaluating 2017–18 minutes" is my own work and where secondary sources of information have been used, they have been duly acknowledged.



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LIST OF ACRONYMS AND ABBREVIATIONS

CIOMS	Council for International Organization of Medical Sciences
DoH	Department of Health
FGDs	Focus Group Discussions
IRB	Institutional Review Board
MARC	Medicines Regulatory Capacity
NHA	National Health Act
NHREC	National Health Research Ethics Council
REC	Research Ethics Committee

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ABSTRACT

Historical ethical transgressions in research with human participants led to the development of ethical principles and guidelines to protect research participants. Research Ethics Committees (RECs) then emerged to further protect the rights of research participants and alert the researcher to the need to ensure compliance with legal requirements for research. (Silaigwana & Wassenaar, 2015).

This study aimed to identify ethical issues raised during ethics review of research protocols and assess their relative weight using the Emanuel et al. (2004) recommended principles for ethical review of clinical research. The 2017–2018 meeting minutes of a South African Social Science Research Ethics committee were identified, accessed and coded using the eight principles and benchmarks of the Emanuel et al. (2004) framework. This allowed observable patterns in ethical concerns raised during ethics review of research protocols to be recorded.

A total of 20 REC meeting minutes entailing 176 submitted protocols in 2017 and 2018 were purposively included in the study sample. Content analysis was used to analyse the data in terms of the Emanuel et al. (2004) framework. The data obtained during content analysis was captured using Microsoft Excel and analysed using frequency counts and simple descriptive analysis.

The study found that the most frequently raised ethical issues were around informed consent (n=300; 35%). The remaining principles were ranked as follows: scientific validity (n=159; 18%), fair selection of participants (n=122; 14%), independent reviews (n=76; 9%), ongoing respect of participants (n=71; 8%), risk-benefit ratio (n=41; 5%), collaborative partnership (n=35; 4%) and social value (n=31; 4%).

The study further revealed that the Emanuel et al. (2004) framework was useful in identifying and categorising the questions and concerns typically raised by the study REC during protocol review, with only a small number of queries not fitting into the framework. The framework provides a method and logical process to conduct further comparative analyses of RECs' concerns and can be used as a standard tool for REC members when reviewing protocols (Emanuel et al., 2004).

CHAPTER 1: INTRODUCTION AND BACKGROUND

1.1 Introduction

The principal aims of medical and social science research are to improve the well-being of human beings, to promote the advancement of science and to improve health and social outcomes globally. Research, however, comes with a number of challenges (Silaigwana & Wassenaar, 2015). Institutional Review Boards (IRBs) and Research Ethics Committees (RECs) have been established to focus on these challenges and enhance the protection of study participants through the review, approval, and oversight of approved studies. These establishments, however, have also created widespread debates about ethical practices in medical and social research (Slowther, Boynton & Shaw, 2006, p. 65)

Medical and health research largely focuses on principle or rule-based methods in which ethical decisions are made according to the consequences or outcomes of research participation or on the basis of principles such as autonomy, non-maleficence, beneficence and justice (Beauchamp & Childress, 2001; Seymour & Skilbeck, 2002). These methods have been criticised by some social science researchers who argue that these approaches are not suited for social science research because the ethical dilemmas posed in social science research are context-specific (Goodwin et al., 2003; Small & Newman, 2001).

Social scientists argue that ethical guidelines could be interpreted in multiple ways and are therefore difficult to apply (Molyneux & Geissler, 2008). For instance, interpreting and applying a broad principle like autonomy to a specific context of individuals in a research study within a diverse, social, financial, gender, relational and cultural setting, can be a challenge for researchers, REC members and regulatory bodies (Molyneux & Geissler, 2008). For example, in some South African cultures young girls are taught at an early age to respect their males counterparts and how as a 'makoti' (married woman) they will need to consult their partner in everything they do. This value contradicts the universal principle of autonomy.

The other criticism from social scientists is that adhering to principle or rule-based approaches may result in challenges for the researcher wishing to conduct research with a specific aim or focus. This brings about other ethical debates for decision-making in social science research such as, the researcher's commitment to participants' rights, and commitment to knowledge for oneself and for participants (Alderson, 2004). Some scholars have even gone to the extent

of advocating for the removal of REC reviews, stating that forced ethics review is unethical because RECs lack value, honesty and respect for the diversity of researchers and research methodology (Dyck & Allen, 2012).

Other arguments centered on medical and social science research are that they are both compromised by participant abuse, exploitation and other unethical research practices (Slowther et al., 2006, p. 65; Ndebele et al., 2014). This is particularly true in Africa and other developing continents, which have witnessed an increase in the volume of research that did not or does not necessarily translate into improvement in health and social outcomes (Ndebele et al., 2014). In this context, researchers and others have expressed dissatisfaction with the RECs, criticising them as being dysfunctional (Fost & Levine, 2007) and overburdened (Burman et al., 2001). Others criticise RECs for being inadequately developed, with erratic meetings and poor leadership; for lack of resources such as computers and office space; functioning in accordance with limited or outdated legislation; for having overworked and/or untrained committee members; displaying low awareness of ethics guidelines; for having no, or lack of, training in bioethics and research ethics (Ndebele et al., 2014). Several authors criticise RECs for overstepping their scope, being too bureaucratic, delaying important research and spending too much time rewording informed consent forms (Abbott & Grady, 2011; Gunsalus et al., 2006; Klitzman, 2015; Silaigwana & Wassenaar, 2019).

Despite these debates, there have been relatively few empirical studies exploring the work of RECs (Silaigwana & Wassenaar, 2019; Tsoka-Gwegweni & Wassenaar, 2014). RECs require periodic evaluation on whether they are effectively protecting human participants, operating efficiently, and whether they have adequate authority (Abbott & Grady, 2011).

1.2 Background and rationale

In the 20th century, ethical guidelines were developed in response to unethical research practices. The regulations that now guide ethical research include the Nuremberg Code (1947), the Declaration of Helsinki (1964, 2013), the Belmont Report (1979), Good Clinical Practice Guidelines (2008), the Council for International Organizations of Medical Sciences (2002) and the Health and Human Services Regulations for the Protection of Human Subjects, 45 CFR 46 (2009), to mention a few. However, researchers in developing countries (White, 1999; Onuoha, 2007) argued that these guidelines had been developed and influenced by western surroundings and therefore did not cater for the needs of developing countries. Emanuel et al. (2004, p. 930) mention that these ethical guidelines were centered on issues

of "standard of care that caters for developed countries, availability of interventions that are proven to be useful during the course of research trials and quality of informed consent". In response to the problems experienced when applying the existing guidelines, Emanuel et al. (2004) developed an ethical framework for research in developing countries in 2004. This framework by Emanuel et al. (2004) aims to provide unified and consistent ethical guidance for research conducted in developing world contexts. Emanuel et al. (2004, p. 930) stress that the "practical benchmarks will guide researchers and Research Ethics Committees in assessing how well the enumerated ethical principles have been fulfilled in particular cases". They identified eight main principles to guide the conduct of ethical research, namely: (1) collaborative partnerships, (2) social value, (3) scientific validity, (4) fair subject selection, (5) favourable risk-benefit ratio, (6) independent review, (7) informed consent and (8) ongoing respect for recruited participants and study communities.

Tsoka-Gwegweni & Wassenaar (2014) used the Emanuel et al. (2004) framework to describe and analyse issues raised by a South African REC in its routine work. The study revealed that the framework was useful in categorising the questions and concerns typically raised by RECs. Selormey (2015), Frimpong (2016) and Bengu (2018) also used the Emanuel et al. (2004) framework to identify ethical issues that were frequently raised during protocol reviews by RECs in Ghana and South Africa. All the studies revealed that the Emanuel et al. (2004) framework can accommodate typical questions raised during protocol review.

Following up on the study by Tsoka-Gwegweni & Wassenaar (2014), this research utilises the Emanuel et al. (2004) framework to identify ethical issues raised during ethics review of research protocols by the study REC and assess the relative weight of the ethical issues using the eight principles for ethical review of research studies.

This study is attached to a research institution that mainly conducts research into social and behavioural sciences and forms part of an international collaboration involving the 2013–2017 South African Research Ethics Training Initiative (SARETI) Masters degree students from the University of KwaZulu-Natal, South Africa. In addition to studying and describing the ethical concerns of African RECs using the Emanuel et al. (2004) framework, the series of studies also investigates whether demographic location affects decision-making and contributes to variability in decision-making during the review process of RECs.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

Scientific advancement through research is the cornerstone of improved health and social outcomes globally. With this in mind, research oversight capacity is important for the protection and prevention of exploitation of research participants and communities (Silaigwana & Wassenaar, 2015). RECs, which are one part of the 'research oversight system', are an integral part of the human research participants' protection system (Department of Health and Human Services, 2018; Silaigwana & Wassenaar, 2019).

RECs have a standard directive to evaluate the risk-benefit ratio of a research project; assist and provide guidance to researchers on research ethics; and to monitor, evaluate and audit research projects to ensure that they adhere to the scope of ethics they undertook to be bound by in conducting the study (Benatar, 2002). RECs ensure that humans are treated fairly and respectfully while researchers abide and comply with the locally acceptable ethical standards, norms and regulations (Guillemin et al., 2012)

2.2 History of ethics regulation of biomedical and social science research

Biomedical and social science research have undoubtedly improved the well-being of humans. Globally, research has generated a world of new discoveries such as: vaccinations for the protection of children against diseases, improved medication for cancer, medication for malaria and medication for HIV and AIDS. When organised research studies first began few rules existed to assist researchers while conducting research (Wiener Klinische Wochenschrift, 2018). An era of utilitarianism was then ushered in when greater emphasis was placed on the benefit to society as opposed to the individual. Research conducted during this time also involved vulnerable populations including children, orphans, prisoners and pregnant women, to mention a few (Beauchamp & Childress, 2009).

In the current context, RECs ensure that medical and social science research are not characterised by abuse and unethical practices. The next section focuses on unethical research practices that led to increased need to protect research participants and for countries to develop strict regulatory frameworks to govern medical and social science researchers while conducting research (Selormey, 2015). Schoeman (2019, p. 1) confirms that "governance structures now in research are generally a retrospective response to unethical research

practices". This assertion is further seconded by Kushe and Singer (2009, p. 3) who argue that research participation "is not a technical decision that only doctors are capable of making, but an ethical decision, on which patients and others may have views no less defensible than those of doctors".

2.3 Violation of ethical standards

Around 1932, an experiment called the 'Tuskegee Study of Untreated Syphilis with the Negro Male in Alabama' was conducted, funded by the United States Public Health Service (Amdur & Bankert, 2011). Initially the study was scientifically and socially valuable as there was no treatment for syphilis at that particular moment. The study was done in the hope of justifying treatment programmes for African Americans. "The study initially involved 600 black men where 399 men had syphilis and 201 did not have the disease" (Amdur & Bankert, 2011).

The Tuskegee study had many ethical concerns, including the following: (1) the supposed participants were not aware that they were enrolled in research; (2) there was no evidence of signed informed consent documents by participants; and (3) participants were unduly induced by the physicians because of the benefits they were provided with, such as free medical exams, meals, and burial insurance which they could otherwise not afford (Amdur & Bankert, 2011). The outcome of this research study shows that when the experiment finally ended, syphilis had killed 28 participants, 100 died of syphilis-related complications, 40 spouses had been infected, and 19 children were born with congenital syphilis. The most unethical feature of this study is that, even though a drug called penicillin became available around 1947 to cure the disease, it was not provided to the participants (Amdur & Bankert, 2011).

In the 1940s, during the time of World War II, the notorious Nazi experiments were conducted. Nazi physicians "had forced prisoners to undergo horrifying procedures for research purposes" (Amdur & Bankert, 2011, p. 7). Several German physicians carried out unethical medical experiments on prisoners in concentration camps without obtaining informed consent. Participants endured inhumane, prolonged suffering because of these experiments, such as being immersed in ice cold water until succumbing to hypothermia or drowning (Amdur & Bankert, 2011).

In the early 1960s another ethical violation occurred in West Germany involving pregnant women who suffered from nausea or morning sickness. The physicians treated pregnant

women with thalidomide even though this medicine was not approved for this indication. Many of the pregnant mothers gave birth to babies with severe limb deformities including absent limbs (Osadsky, 2011).

Africa has also been impacted by the same tragedy of unethical research practice, mostly in the psychological and health-related sectors (Ndebele et al., 2014). Due to lack of economic resources, a number of clinical trials conducted in Africa were and are still mostly being conducted by researchers from developed countries (Moghalu, 2014). This is mainly due to the demand and supply issues affecting the continent. It is well-established that Africa does not have the economic power to fund most of the health and social science research that is required to find solutions for its problems. On the other hand, many health issues in Africa, such as malaria, are not key in the developed world, and testing of such medicines and vaccines in the United States of America or Europe would be futile (Weigmann, 2015). In this regard, Africa provides the demand, while the developed world supplies.

An example of unethical research conduct in Africa was when Dr Werner Bezwoda, a cancer specialist who was head of the Department of Haematology and Oncology at the University of Witwatersrand in Johannesburg, South Africa, conducted research without ethical clearance and informed consent. Geoff (2016) reports that "Dr Bezwoda published fraudulent clinical trial data which suggested that use of a very aggressive chemotherapy regimen improved survival time in women with advanced metastatic breast cancer". These fraudulent findings caused thousands of women to undergo painful and costly treatment for no apparent benefit.

Another case of unethical conduct was of Mrs Grace Mawere, who was HIV positive and on anti-retroviral treatment (Wemos, 2017). During the course of her treatment, Mrs Mawere was approached to participate in the Europe-Africa Research Network for Evaluation of Second-Line Therapy trial. She was convinced that this HIV treatment could help her. In addition, she was told that she would be reimbursed $30 for transport. The researcher did not, however, disclose all the information that had to be shared with a participant before signing the informed consent document. Neither the risks of the medication, nor compensation for any harms, also the right to withdraw, and who to contact in case of questions or queries, were not shared with the participant. At the end of the trial, the participant lost her eyesight due to the trial medical treatment. She unsuccessfully attempted to find help regarding her situation and sadly died in 2014 (Wemos, 2017, p. 20). The researcher had not revealed the loss of vision to the funder and the patient never received any compensation for her deteriorating health since she was not well informed regarding her rights. This event should

have been reported as a serious adverse event (SAE) within 48 hours to the funder and the REC so that there could be an intervention, however nothing was done (Wemos, 2017, p. 24). This example illustrates the ethical concern regarding coercion of participants as well as an unfavourable risk benefit-ratio, inadequate informed consent and issues of voluntariness which the researchers blatantly ignored when they were conducting this study. Even though the researchers could see that the experiments were harming participants, they did not terminate the trial.

In 1996 Pfizer conducted an experiment in Nigeria for bacterial meningitis. This medication was tested on nearly 200 children with meningitis. Eleven children died during this experiment and several participants experienced paralysis or brain damage It was found that this experiment did not obtain research ethics approval from a local REC and the parents of research participants were not properly informed that their children were participating in a clinical trial (Ndebele et al., 2014).

In 2012 a pharmaceutical company called AstraZeneca recruited children around the world, including South Africa, between the ages of 6 and 12 years who were asthmatic (Wemos, 2017). The main inclusion criteria was children who used their asthmatic medication on a daily basis. One group was randomised into a placebo group and received an inhaler which contained no medication to be used twice a day for six weeks. The other group received the investigational medication. Wemos (2017) mentioned that when asked about the potential risks of harm posed to the children taking part in the trial, the researcher guaranteed that the participants were not at risk due to their relatively mild asthma. The researcher gave assurance that the participants who were in the placebo arm were not at risk but that, in case of crisis, rescue treatments would be provided. The Declaration of Helsinki (2013, p. 2191) clearly states that "benefits, risks, and effectiveness of a new intervention must be tested against those of the best proven intervention, except where no proven intervention exists, the use of placebo, or no intervention, is acceptable". In this case, even though a proven intervention existed, it was not used.

Another case occurred in Zimbabwe, where a physician named Dr McGown was charged with murder (Ndebele et al., 2014). He carried out interventional studies using new drugs and anaesthetics which were not approved by the National Drug Authority and used them without knowledge of his patients. This study involved 500 patients (Ndebele et al., 2014) and six of the patients died as a result of the treatment. This medical researcher did not take into consideration issues of vulnerability, risk-benefit ratio and he disrespected people's autonomy.

In 1970, Van Rensselaer Potter coined the term 'bioethics', the need to balance the scientific objectives of medicine with human values. Potter (1970) argued that the term *bioethics* could be "a bridge between present and future, nature and culture, science and values, and humankind and nature" (cited in Whitehouse, 2003, p. 26) because, as it stands, the future of bioethics to some extent lies in the past. This has been supported by Barrett et al. (2016, p. 21) who acknowledges that "bioethics also arose in response to medical paternalism and to the abuse of human subjects in medical research".

King and Hyde (2012) go a step further and draw attention to the issue of public morals. Their argument is that public morals, an essential feature of a vibrant democracy, are based on the belief that the goal of bioethics is to respect the human right of autonomy. In essence, human beings are autonomous and can make sound decisions regarding their well-being and involvement in medical treatments. In cases where people are unable to make their own decisions, researchers have the responsibility and obligation to protect them (Vanclay et al., 2013).

2.4 Inception of research ethics guidelines and the establishment of Research Ethics Committees

While an important part of medicine has always been ethics, the reports of the unethical practices that occurred in the medical and social sciences caused a shift in research, resulting in the formulation of formal research ethics principles and frameworks (Wiener Klinische Wochenschrift, 2018). From the time of World War II, when the so-called Nazi physicians' experiments occurred, various guidelines were initiated. The Nuremberg Code was the first one to be introduced.

The Nuremberg doctors' trial decision came with the inception of the Nuremberg Code. This code contains the basic principles that should be taken into consideration when research is conducted. The code gives a clear indication of what is legally and ethically acceptable when conducting human experiments and outlines the importance of participants' autonomy, informed consent, voluntary participation in research, as well as a favourable risk-benefit ratio (Nuremberg Code, 1947).

The Thalidomide experiments, which occurred around 1962, led to an amendment of the Food, Drug and Cosmetic Act in the very same year. This Act required investigators to obtain

informed consent from potential participants before administering experimental treatments. Amdur and Bankert (2011) highlighted the importance of physicians having sufficient knowledge about medicine before prescribing it to patients and this brought about a revolution in the history of medical research.

The Clinical Research Centre (CRC) at the National Institutes of Health (NIH) was established to oversee the CRC policy in the 1950s. This policy aimed at regulating research studies to ensure that all research involving human participants was conducted according to a uniform set of ethical standards. The process entailed submitting research protocols to committees who reviewed them, focusing specifically on issues of research ethics before research could be undertaken in view of minimising risks towards research participants. This process has to be undertaken by any researcher, whether working in public or private institutions anywhere in the world (Amdur & Bankert, 2011).

In the same year, the World Medical Association (WMA) met in Helsinki, Finland, to draft the Declaration of Helsinki. This document built on the Nuremberg Code of 1947. The Declaration of Helsinki describes the standards of ethical research involving human participants. This document has been revised several times and it has been used by medical and social science researchers as a guiding tool when undertaking research. The World Medical Association (2013) specifies that, in all research studies, protection and respect of participants should be paramount (Amdur & Banket, 2011, p. 10). The Declaration of Helsinki (2013) places emphasis on the responsibilities of physicians; namely to put participants' health first by safeguarding their lives, health, confidentiality, vulnerability, rights, privacy, dignity and integrity. Adding to this, an article published by Henry K. Beecher on ethics and clinical research in 1966, described 22 unethical cases of medical experiments, focusing on issues of informed consent and the need for morally driven researchers, and drew more attention to serious ethical concerns. This gave further impetus to the development of ethical guidance documents. The scope and limitations of research were seriously reconsidered. The protection of participants became a priority and led to a re-evaluation of the benefits to participants (Selormey, 2015).

"Senator Edward Kennedy directed a series of congressional hearings in response to public concern about ethical problems in the way medical research was being done" (Amdur & Banker, 2011, p. 12). After the congregational hearings in 1973, acknowledging the unethical medical experiments which had led to people's deaths, where participants were enrolled in research studies uninformed and the basic agreement was reached that federal oversight

would occur to ensure the protection of human rights and welfare in research (Amdur & Bankert, 2011). Subsequently, Congress passed the National Research Act which is not limited to medical or biomedical research, but also governs social science studies. This Act led to the institutionalisation of the Institutional Review Board system. The act "passed federal regulations that required Institutional Research Board (IRB) approval to conduct research involving human participants" (Amdur & Banker, 2011, p. 16). All the procedures needed for an IRB to follow when reviewing and approving a protocol were set up by the Act.

The National Commission released a statement of the basic ethical principles which should guide a system of research with humans, called The Belmont Report (1979). The Belmont Report identifies the boundary between practice and research, and outlines three global ethical principles that are particularly relevant to the ethics of research involving human participants:

1) Respect for persons – The Belmont Report requires researchers to focus on people as autonomous beings who are able to make their own decisions. People who are not autonomous or who have lost their capacity due to disabilities and circumstances which limit their capacity and liberty, also need to be respected, protected and treated with dignity by researchers and physicians (Belmont Report, 1979).
2) Beneficence – no participant should be harmed in the name of research. The researcher should be able to balance the benefits of the study and its risks. The risks cannot outweigh the benefits (Wiener Klinische Wochenschrift, 2018).
3) Justice – this means that like cases should be treated alike. The researcher is obliged to distribute the benefits and burdens of a study fairly (CIOMS, 2016).

The ethical principles were considered global principles which cover almost all ethical issues emerging in research, applicable to all social contexts. However, Onuoha (2007) argues that these principles cannot be regarded as global principles since they do not justify or embrace different ethical values which are existent across cultures. These principles are very individualistic and may cause conflict in indigenous communities. Onuoha (2007) further states that bioethics should be contextual, pluralistic and respectful of cultural diversity since some cultures do not believe in individual decision-making.

Vijayananthan and Nawawi (2008) argue that researchers should be well equipped and qualified in order to be able to apply ethical principles or guidelines. For this purpose, the World Health Organization (WHO) and the Council for International Organizations of Medical

Sciences (CIOMS, 2016) prepared a document titled International Guidelines for Biomedical Research Involving Human Subjects. "This document was developed to assist scientists, particularly in developing countries, given their socio-economic circumstances, laws and regulations, and executive and administrative arrangements, to effectively apply the principles from the Declaration of Helsinki and the Nuremberg Code while conducting clinical trials" (CIOMS, 2002).

2.5 Establishment of Research Ethics Committees in Africa

While funding of research in health and social sciences has increased, particularly in Africa, this "has not necessarily been accompanied by improvements in health research oversight, leaving the continent vulnerable to potential exploitative research" states Ndebele et al. (2014, p. 3). Indeed, while these initiatives might potentially have good intentions for the people of Africa, they also risk making Africa vulnerable to exploitation by resource-rich countries because of the lack of strict research regulatory frameworks that makes it almost effortless for developed countries to conduct research in Africa without ethical oversight and censure (Kombe et al., 2014).

Exploitation of research participants on the African continent has led to greater awareness of the need for structured ethical oversight and the development of stricter national laws, research ethics guidelines and principles, some of which have now been developed (Vanclay et al., 2013). These local guidelines have been influenced by many international guidelines and documents, such as the establishment of the Nuremberg Code (1947), the Declaration of Geneva (1948), the Declaration of Helsinki (1964, 2013), Good Clinical Practice Guidelines (2008), the Belmont Report (1979) and the Health and Human Services Regulations for the Protection of Human Subjects, 45 CFR 46 (2009). These documents all promote four philosophical principles of bioethics: 1) Autonomy, which is based on respect for persons, where each individual is free to make their own decision; 2) Non-maleficence, which requires researchers to make decisions that do not intentionally result in harming a participant; 3) Beneficence, which obliges the researcher to act for the benefit of participants; and 4) Justice, which requires researchers to treat all participants equally and fairly; no participant should carry more burden than another (Beauchamp & Childress, 2009).

The first African country to have systems in place for review of health research and to record cases of ethics review was South Africa (Ndebele et al., 2014). The University of the Witwatersrand established a health REC in 1966, and South Africa now has established RECs

in most tertiary, private and non-academic institutions (Moodley & Myer, 2007) . Other African countries followed: Zimbabwe established its first REC in 1969 and Kenya in 1979. All these RECs were supported by legislation, while in other African countries the RECs were still informal structures (Ndebele et al., 2014, p. 6) without any formal legislative systems in place. Even though some REC guidelines had been developed nationally and internationally, there was no standard framework designed to be used as a tool for RECs when reviewing protocols. This was a challenge for RECs because every REC interpreted the existing guidelines using its own discretion. Issues which caused most conflict with the international guidelines centered around "standard of care, availability of interventions during research trials and quality of informed consent" (Emanuel et al., 2004. p. 930).

Responding to the researchers' crisis, Emanuel et al. (2004) designed a universal framework of eight principles and benchmarks to guide the review of research protocols. The purpose of the framework was to provide a uniform framework that could be applied as an ethical guide for health and social science researchers conducting research in developing countries. The eight principles proposed by Emmanuel et al. (2004) are collaborative partnerships, social value, scientific validity, fair subject selection, favourable risk-benefit ratio, independent review, informed consent and ongoing respect for recruited participants and study communities.

Tsoka-Gwegweni & Wassenaar (2014) used the Emanuel et al. (2004) framework to assess ethical issues raised by a South African REC in its routine work. The study revealed that the framework was useful in categorising the questions and concerns typically raised by RECs. Selormey (2015) and Frimpong (2016) also used the Emanuel et al. (2004) framework to identify ethical issues that were frequently raised during protocol review by RECs in Ghana and South Africa. All three studies revealed that the Emanuel et al. (2004) framework can accommodate typical questions raised during REC reviews, provides a method to conduct further comparative analyses of RECs' concerns and can be used as a standard tool for REC members when reviewing protocols.

For this study, the researcher will be using the Emanuel et al. (2004) framework to evaluate the ethical concerns of a South African REC. The study will specifically identify the ethical issues raised during ethics review of research protocols by an institutional REC and assess the relative weight of the ethical issues using the eight principles for ethical review of research studies. It will further also reflect whether the concerns raised by the REC are compatible with the framework.

2.6 South African regulatory framework

Despite the large amount of clinical and social science research in South Africa, there are few insights into the functioning of RECs in this setting (Tsoka-Gwegweni & Wassenaar, 2014; Silaigwana & Wassenaar, 2019; Moodley & Myer, 2007). In order for medical or social science research to be conducted in South Africa, the research study needs to receive ethical clearance from a National Health Research Ethics Council (NHREC) registered REC (Strode et al., 2018). The National Health Act (DoH, 2004) made provision for the establishment of an NHREC. The NHREC sets guidelines for the functioning of local RECs, what standards they should follow, how they should be regulated, and how complaints and disciplinary action should be handled (Moodley & Myer, 2007).

These guidelines are in accordance with section 71(1) of the South African Constitution, which guarantees the right of access to health care services. The NHREC norms and standards are established in terms of section 12(2) of the Bill of Rights of the South African Constitution, which protects against research abuse by stating that "everyone has the right to bodily and psychological integrity, which includes the right to – security in and control over their body and not to be subjected to medical or scientific experiments without their informed consent". The National Health Act 61 of 2003 (NHA) provides the statutory authority for governance of health research and the necessary regulatory infrastructure (Moodley & Myer, 2007). -

The NHREC was established in 2006 in terms of section 71 of the NHA and is the regulatory authority of RECs. The NHREC has established norms and standards for health and social science research involving humans as well as animals, and facilitates the best practices for RECs by means of auditing the ethics committees, resolving complaints about ethics review and advising the Department of Health on ethical matters concerning research (Constitution and Code of Conduct of the National Health Research Ethics Council, 2017).

The NHREC tasked its Working Group for Norms and Standards to produce a revision of the first edition of the ethics guidelines initially issued in 2004. The Guidelines for Ethics in Health Research: Principles, Processes and Structures were released in 2015 and will hereafter be referred to as DoH (2015). This guideline provides an updated and strengthened guide ensuring that research is conducted responsibly and ethically in South Africa.

Strode et al. (2018, p. 829) mention that "the NHREC holds [registered] RECs accountable by ensuring that they are administratively effective and acting in accordance with the national

ethics guidelines, accountable to the institutions that host them and also accountable to protect the interests of participants". DoH (2015, p. 48) states that "every institution, health agency and health establishment at which health research is conducted must establish or have access to an REC registered with the NHREC". The ethics review process is required because it is beneficial and adds value to a research study by reducing harm and protecting study participants and researchers alike.

Unless granted an exemption, in South Africa no research study with human participants should proceed without ethical clearance being granted and researchers should obtain ongoing approval, at least annually, through the REC. Further, local and international journals require ethics approval to be submitted prior to publishing research results (DoH, 2015).

2.7 REC's functions, roles and challenges in South Africa

There is growth in the field of research ethics globally. Mokgatla et al. (2017) confirms this by revealing that there were 167 African RECs which were registered on the Mapping African Research and Medicines Regulatory Capacity (MARC) website, "89 of which were registered during the MARC Phase I project in 2010–2012. South Africa had 30 RECs listed on MARC, Nigeria 25, Egypt 23, Uganda 9, Cameroon 8, Ethopia and Sudan 7 each, Tanzania and Botswana 5 each, and Burkina Faso and the Democratic Republic of Congo 4 each".

According to the NHREC list of human RECs to date, there were 46 registered RECs with the NHREC. In this era, where technology is evolving and the scope of research ethics is expanding, ethical reviews are becoming more complex, necessitating a need for training of REC members (Mokgatla et al., 2017). The DoH (2015) stipulates that REC members should be trained in their cycle of serving as members, especially where RECs review high-risk studies. Equally, it is vital for RECs to have members who have the necessary qualifications and experience while at the same time not neglecting capacity building. The REC members should be experienced, competent and familiar with the national and international guidelines, should be inducted in research ethics and have continuous personal development in research ethics training. This can be done through online training and the REC chairperson can also facilitate induction or refresher courses annually for REC members. Mamotte and Wassenaar (2009, p. 69) mention that "competent RECs should promote ethical conduct of research through a quick yet thorough review of proposed research studies, be trained in research ethics and be familiar with a range of social science disciplines and methodologies".

Unfortunately, capacity building sometimes becomes a challenge because many of the institutions do not finance such training (Mokgatla et al., 2017).

The main function of an REC is to protect research participants. REC's primarily fulfil this function through independent ethics review of research protocols.

For an REC to be fully functional, there should be REC meetings, where the following conditions are met:

1) An REC should meet frequently to review protocols; some RECs meet face-to-face while others meet virtually, depending on geographical areas of the REC members and the financial strength of an institution.
2) When the REC members meet, they discuss research protocols which they have received prior to the meeting. All REC members have to participate in reviewing research protocols as per assignment of protocols to them; but members are not restricted to review only those protocols that are specifically assigned to them; they are at liberty to review more than that. They provide feedback at the meeting and the REC chairperson facilitates debate and discussions.
3) All the decisions made at the meeting should be by collective agreement and not only reflect an individual view.

The REC membership should include appropriate expertise in line with DoH (2015) as well as international ethics guidelines, such as the United States Department of Health and Human Services in its 45 Code of Federal Regulations part 46 (45CFR46). The REC membership should also include gender, culture and ethnic diversity (DoH, 2015) as well as representation of the disciplines and methodologies of the human and social sciences.

Despite the growth of RECs in South Africa, these committees face many challenges. Training and capacity building of REC members are challenging since some of the RECs do not have a budget for training (Nyika et al., 2009; Marzouk et al., 2014; Davies, 2020). Some committees utilise the fees that are charged for protocol review to pay for training while others provide in-house training, which is mostly facilitated by the chairperson. Unfortunately, some RECs do not provide training to its members due to a lack of time, as most of the REC members serve on the committees on a part-time basis (Cleaton-Jones & Vorster, 2008). According to IJsselmuiden et al. (2012), training is further hindered if RECs do not get the full support from their host institutions. Regardless of all these challenges, the DoH (2015) guidelines

encourage REC members to undertake online training and also to share articles amongst themselves to equip themselves to be able to review and evaluate the science of research.

Another challenge for REC members is the workload. The large number of protocols, coupled with the fact that reviewers are not involved in the committee full-time, affects the turnaround time of reviews and feedback to applicants. Wassenaar and Slack (2016) found that as REC members become more educated in the field of research ethics, there is a noticeable improvement in the quality of reviews and turnaround time.

Most research ethics offices have only one full-time member, which is the research ethics administrator. This is problematic and risky because there is no knowledge management (Wassenaar & Slack, 2016). Nyika et al. (2009) stress the importance of RECs on the African continent being well capacitated and equipped so that REC members are able to review protocols with higher standards in order to protect study participants and seriously consider the needs of research participants.

When REC members are familiar with the guidelines and understand their roles, they are bound to put the rights of participants first, regardless of their socio-economic status. It will not be problematic for them to always remember that participants need to be treated with respect and dignity and that their wellbeing is of importance (Wassenaar & Slack, 2016).

2.8 REC review process and the Emmanuel et al. (2004) framework

Emanuel et al. (2004) developed an ethical framework for conducting research in developing countries. This framework aims to provide unified and consistent ethical guidance for research conducted in developing countries, since the existing guidelines can be interpreted in multiple ways and are difficult to apply.

One of the applications of the framework is to improve the quality of reviews conducted by RECs by providing structure to the review of protocols, standardising reviews and trying to assist REC members not to review pointless matters, as there is a thin line that separates appropriate ethics reviews and excessive reviewing. Many RECs review research ethics protocols by applying the eight principles as proposed by Emanuel et.al. (2004), which principles apply to all types of research and assist RECs to minimise the possibility of misinterpreting guidelines and exploitation when conducting research especially with vulnerable participants. The eight principles are described in more detail below.

2.8.1 Collaborative partnerships

The most important component in research are the research participants, without whom, regardless of how well written the study design is or availability of funds, research cannot succeed (Federman et al., 2002). The individuals and their communities are important elements of the research process. According to Ngongalah et al. (2018) participants and their cultures should be respected, regardless of their socio-economic status and researchers should not take these individuals for granted.

The protection of research participants should be well documented in research guidelines. Unfortunately, this component of research was not documented initially and led to communities being exploited. Currently, community engagements have become an ethical requirement for research. In the 2000s, there were significant developments in community engagement, and dialogue with communities is promoted and documented as an integral part of ethics frameworks. These documents provide good guidance on community engagement (Vanderslott et al., 2021).

This phase of research can limit a research study if not taken into consideration. If a researcher applies an individualistic culture while conducting research in a communal set-up (Wasunna et al., 2014), the research risks not yielding successful results and not being accepted by the community. Participants could end up carrying unnecessary pressure, false rumours could start spreading resulting in fewer individuals volunteering in such conditions, resulting in the research lacking validity due to lack of proper communication.

When the researcher engages the community, this assists in formulating reasonable ethical ground rules which will assist the flow of research processes, facilitating the buy-in of the community and the consenting processes becomes less problematic. When the community is involved the guidelines for that specific study will cover all the concerns of that community's traditions and values (Weijer et al., 1999). In addition, collaboration improves the method of incentivising participants because researchers would be aware of the needs of that specific community.

Emanuel et al. (2004) encourage researchers to develop partnerships with health policymakers and communities. They advocate that research participants should become full and equal partners in the research enterprise and researchers should ensure that research is

acceptable and responsive to community's actual health problems and provides worthwhile benefits to the community (Madanhire, 2018).

There should be collaborative partnerships with policymakers and community representatives when researchers are planning and designing the research protocol to assist in developing structured and detailed rules of engagement between the two parties. Collaborative partnerships should involve researchers (organisations) working together with the researched community to achieve a shared goal; these collaborations will improve the quality of service delivered to the community and also protect research participants from forced rules, bringing about a flexible and explicit process (Federman et al.,02).

An important consideration when implementing this guideline is defining 'community'. Simwinga and Kabero (2014) state that the definition of 'community' is problematic as communities are unlikely to be homogenous. Use of the term community may refer to a group who shares a geographical location, common values or similar interests (Simwinga & Kabero, 2014).

According to Dickert and Sugarman (2005) community consultation is not limited to asking for permission to access the community but includes discussion about suggestions and concerns the community may have. Community participation in research is the active involvement of people from communities in the planning and implementation of projects that directly or indirectly impact them.

2.8.2 Social value

The research should be socially valuable, with equitable sharing of research benefits. Emanuel et al. (2004, p. 932) clearly states that researchers should "assess the importance of health problems being investigated and the prospective value of the research to beneficiaries" for a study to meet its social values; the ethical principles should be implemented. The societal benefits should be clearly shared with participants, since in most social science studies direct benefits are not expected. Above all, the research should be worth doing with minimal risks.

CIOMS (2016) states that it is not that simple to quantify social values in research and there are three pointers that can be observed to justify the social value of a research study. Social value is the relevance of the research to the importance of the health problems at stake at that moment. Contribution to the creation or evaluation of interventions to promote individual

or public health and the research design should be scientifically sound. The REC will query a research protocol which does not describe the beneficiaries of the research; the research study should be socially valuable to research participants, the community and/or society at large.

The research should specify the beneficiaries of the research to participants, assess "the importance of the health problems being investigated, the prospective value of the research" (Emanuel et al., 2004, p. 931). Dissemination of research results improves social value of a research study. When the results are being disseminated to the research participants, they should be written in a simple language that participants understand and should be easily accessible. The results should be shared with communities regardless of the outcome of the study. Even if the study has not yielded anticipated results, the information should be shared.

2.8.3 Scientific validity

The research methodology, sampling and study design should be sound and yield beneficial results which are reliable and valid according to accepted principles of research practices and those results can be interpreted (Emanuel et al., 2004). Researchers should "ensure that the scientific design of the research realizes social value for the host community" (Freedman, 1987, p. 7). The research protocol must be well designed, ethically sound and scientifically acceptable, because poorly designed research draws false conclusions which may be misleading, cause harm and waste resources. Wassenaar and Mamotte (2012) state that there must be evidence of a theoretical grounding, relevant review of the literature, and that the study will contribute to advancement of knowledge.

CIOMS (2016, p. 2) emphasises that "the requirements for scientific value applies to all health-related research with humans", so the REC needs to be strict when reviewing the scientific validity of any study regardless of the study type and purpose, and the study should be feasible within all contexts including social, political and cultural (Emanuel et. al., 2004). Even though the quality of information produced by the researcher depends on the scientific validity, it does not guarantee that the study will be socially valuable (CIOMS, 2016). Furthermore, the REC must make certain that the researcher is qualified to conduct the type of research by requesting proof of qualifications and researchers should acquaint themselves with research ethics training since that is a prerequisite when submitting an ethics clearance application.

2.8.4 Fair selection of study participants

The recruitment, selection, as well as the exclusion and inclusion criteria of research participants should be fair, just and based on scientific and ethical principles (Emanuel et al., 2004). It is required that the exclusion criterion be justified and well communicated, to avoid other individuals feeling unjustly excluded. Researchers should explain where potential participants will be recruited and detail any discussions that took place with the target population prior to data collection.

It should be clearly indicated whether participants are asked to volunteer or whether they will be selected, who will do the recruitment, and whether factors that increase participant's exposure to harm have been considered and offset (Bracken-Roche et al., 2017).

In addition, information should be provided about the age range and demographic profile of participants, and whether gender has been carefully considered. If minors are to be involved in research, the researcher should explain how the research problem is relevant to minors, how informed consent and assent will be obtained, specifically if consent will be obtained from parental substitutes, and independent consent by older minors; all of this should be justified, and clearly stipulated when applying for ethical clearance (DoH, 2015).

The fairness of inclusion of participants has ethical implications in terms of distributive justice. Researchers should avoid practices that lead to particular groups of participants bearing more than a reasonable share of burden. The REC should assess the risk-benefit ratio as well as future benefits to society. Furthermore, the researcher should avoid using a sample that is convenient unless that sample indeed will respond to the question being investigated (CIOMS, 2016).

2.8.5 Favourable risk-benefit ratio

Potential risks of harm should be outweighed by the benefits to participants or the community where data will be collected (Emanuel et al., 2004). Researchers should be able to identify the potential risks, whether emotional, psychological, social, legal or physical harm, that are associated with each intervention or procedure in the research. Researchers should also take measures to minimise potential harm and exploitation by protecting and respecting participant's rights and welfare. Similarly, researchers should specify the expected benefits of the research intervention(s) or procedure(s).

According to the Belmont report (1979) where a study does not offer any direct benefits to participants then the social value should be sufficient to justify the potential risk of harm or any inconvenience that participants may find themselves in, although that does not justify harm to research participants.

The Declaration of Helsinki (2013, p. 2192) acknowledges that medical research involves risks and burdens, however "this kind of medical research should be done provided the importance of the objectives outweighs the risks and burdens to research participants." It is important for researchers to have measures in place where they anticipate risks of harm and to be transparent about potential risks with research participants. Experienced researchers mention the anticipated risks of harm to participants while applying for ethical clearance because these are the kind of issues that the REC questions when reviewing protocols. Risks should be managed in a manner that the participant feels safe and that creates trust between the two parties.

Another task of the REC is to assess the risk levels of research. Shah et al. (2004, p. 476) refer to risk "as any psychological, social and physical risk of harm while participating in research". Che Chi et al. (2014) further state that the risk levels can vary from minimal to severe. These risk levels should be evaluated by REC members when reviewing protocols and identifying the risk levels assists in decision-making while reviewing protocols. Che Chi et al. (2014) discuss four categories of risks which are:

1) Minimal risk

   Minimal risk is the everyday life risks which include routine medical and psychological procedures. Some minimal risk studies do not serve at a full ethics meeting; the chairperson may nominate few REC members to assist in reviewing the protocol.

2) More than minimal risk

   This is when "potential risk is justified by the anticipated benefit that the research participant may gain from participating in the research" (Che Chi et al., 2014, p. 64). More than minimal risk studies are presented at a full REC meeting to be reviewed by delegated REC members and approval is granted at a meeting, not outside the meeting.

3) More than minimal risk, with no prospect of direct benefit, but which is likely to yield important generalisable knowledge regarding a disorder or condition.
   These types of studies are presented at a full REC meeting to be reviewed by all REC members and approval is granted at a meeting, not outside the meeting.

2.8.6 Independent review

Independent review is vital to ensure "public accountability through reviews mandated by the law and regulations" (Emanuel et al., 2004, p. 931). The REC should fulfil its function through independent review, free from bias and undue influence. If there is any conflict of interest the REC members should divulge this and recuse themselves for that application. The REC should always comply with the national and international regulations and be competent (Wassenaar & Mamotte, 2012).

The REC's decisions and resolutions should be made independently; no pressure from outside the REC may be exerted on the REC or its members to affect a particular resolution. Resolutions may not be overturned or overruled by an office bearer of the organisation or other parties. According to Wassenaar and Slack (2016, p. 308) when an "REC claims to review independently, then the REC members should be trusted and be transparent to researchers when reviewing protocols and not be biased".

The researchers should consider "a REC as a stakeholder and be able to engage and not feel that RECs are bureaucratic or that they hinder researchers especially with sensitive topics and vulnerable participants" (Wassenaar & Slack, 2016, p. 307). The REC should be available for its research community, and the chairperson should be there for researchers and make it known that he / she is available.

The researchers also have a responsibility to read the application form, policies, and terms of reference of the organisation before applying for ethics clearance so that they are aware of what is required from them to avoid pitfalls. When researchers respond to queries from the REC they should keep it friendly and professional and they should be "aware of the rich ethics resources available to inform the ethical quality of their research proposals" (Wassenaar & Slack, 2016, p. 311).

2.8.7 Informed consent

Informed consent is a procedure of getting permission from a person before any research is conducted. Shah et al. (2021) define informed consent in the health care setting as a process employed by a health care provider to explain to a patient the risks and benefits of a given procedure or intervention; the patient should be autonomous to decide whether to go ahead with the procedure or not. In research studies informed consent focuses on study participants being given all the information about the study enabling them to make an informed decision on whether to take part in the study or not.

"Informed consent requires disclosure of complete, accurate, and adequate information to participants" (Tsoka-Gwegweni & Wassenaar, 2014, p. 37). The researcher should be culturally sensitive when communicating information about the study. Emanuel et al. (2004) proposes that the following suitable procedures should be followed when recruiting participants: Firstly, the researcher should consult with the community while in the process of developing the protocol, so that the process of consenting will be informed by the community and participants. This process will ensure participants are not exploited and know exactly what to expect during the proceedings of the study.

Appropriate documentation of the consenting process should be described in full. The informed consent document should be written in a friendly and polite manner – the informed consent form should contain a greeting, mention briefly from which organisation the researcher comes from and explain why the research is of importance; explain the importance of participating; discuss the confidentiality issues; risks/discomforts; benefits of the study; incentives and reimbursements; voluntariness; who the participant should contact in case of harm or any other concern; how the collected data will be stored and how the participants will receive the results of the study.

The researcher should ensure that potential participants understand all that is written in the document and give potential participants some time to go through the informed consent document; potential participants should not be forced into consenting in any way. Participants should know their rights and feel free to withdraw from participation whenever they no longer feel comfortable or for any other reason. All these elements of informed consent should be written in simple language and in a manner that is understandable by potential participants.

The guideline requires that the person who consents to participate in the research should be autonomous, have the capacity to consent and be given a chance to choose what they are

comfortable with. Adequate informed consent should be a continuous process (Emanuel et al., 2004).

2.8.8 Respect for recruited participants and study communities

Researchers have a responsibility to maintain the confidentiality of research participants and host communities (Emanuel et al., 2004). This requires researchers to have proper procedures in place to protect the confidentiality of research participants and ensure that results are disseminated to participants as well as the larger community.

Vijayananthan and Nawawi (2008) emphasise that researchers should use codes or pseudonyms to protect the identity of participants. The DoH (2015) requires that collected data be stored in a locked cabinet for a certain period and the research protocol must explain how the data records are to be secured. Vijayananthan and Nawawi (2008, p. 3) point out that "records of research studies should be easily accessible and retrievable for accurate reporting, verification and interpretation". Emanuel et al. (2004) also stress that participants should be made aware that they are free to withdraw from a research study at any given time without feeling intimidated.

2.9 Adaption of the Emanuel et al. (2004) principles and benchmarks for social science research

The table which follows summarises the vital issues for consideration by social science researchers and RECs. These principles were used in the current study to develop an understanding of the Emanuel et al. (2004, p. 931) framework, as they apply to a developing country and to social science research

Emanuel et al. (2004) –Summary of the ethical principles and benchmarks for social science research	
Principle	**Benchmark**
Collaborative partnership	▪ Aims at encouraging researchers to develop partnerships with health policymakers and communities to help them become full and equal partners in the research enterprise, and lessens discrepancies between the researcher and the communities.

	▪ Recruited participants and communities to receive benefits from the research results, be it directly or indirectly. ▪ Share financial benefits or other rewards honestly.
Scientific validity	▪ The research methodology, sampling and study design should be sound and yield results, which are reliable and valid according to accepted principles of research practices. ▪ Researcher to ensure that the scientific design of the research realises social value for the host community. ▪ The research protocol to be well designed, ethically sound and scientifically acceptable. ▪ There must be evidence of theoretical grounding, relevant review of the literature, and that the study will contribute to advancement of knowledge.
Fair selection of study participants	▪ The recruitment, selection, as well as the exclusion and inclusion criteria of research participants should be fair, just and based on scientific and ethical principles. ▪ Researchers to explain where potential participants will be recruited, together with any activities and/or consultations with the target population of this study that have preceded or will precede data collection. ▪ It should be clear whether participants are asked to volunteer or whether they will be selected; the recruitment and selection process including who will do the recruitment; the factors which may increase the vulnerability of participants or increase their susceptibility to harm and measures to offset these.
Favourable risk-benefit ratio	▪ Potential risks of harm should be outweighed by the benefits to participants or the community where data will be collected (Emanuel et al., 2004). ▪ Researchers should specify the potential risks of emotional, psychological, social, legal or physical harm associated with each intervention or procedure in the

	research as well as measures to be taken to minimise potential harm. ▪ Researchers should specify the expected benefits of the research intervention(s) or procedure(s), as well as steps to be taken to maximise benefits to participants.
Independent review	▪ Independent review is vital to ensure public accountability and is mandated by law and regulations. The REC should protect research participants and researchers and improve the quality of the research (Wassenaar & Mamotte, 2012). ▪ The REC's decisions and resolutions are made independently; no pressure from outside. ▪ Resolutions may not be overturned or overruled by an office bearer of the organisation or other party.
Informed consent	▪ Informed consent requires disclosure of complete, accurate, and adequate information to participants (Tsoka-Gwegweni & Wassenaar, 2014) and the researcher should be culturally sensitive when communicating information about the study. ▪ The method used to obtain informed consent must be ethically and legally acceptable (individual and community consent where applicable). ▪ Appropriate documentation of this process needs to be submitted and described in full. An age-appropriate assent document for children between the ages of 7 and 18 years is necessary if minors are involved in the research.
Respect for recruited participants and study communities	▪ REC to ensure that researchers understand that they have an obligation to participants and the host community to maintain confidentiality of information (Emanuel et al., 2004). ▪ This principle requires procedures be put in place to protect the confidentiality of research participants and

	ensure that results are disseminated to participants as well as the larger community.

Source: Emanuel et al. (2004, p. 931)

2.10 Conclusion

This chapter provided an overview of the inception of international and national research ethics guidelines, IRBs and RECs. It further explained how South African RECs function and how they are governed, as well as how the REC review ties in with the Emanuel et al. (2004) framework. The next chapters will present the aims, methodology and results of an empirical research study which aimed to identify ethical issues raised during ethics review of research protocols by an institutional REC and assess the relative weight of the ethical issues using principles of the Emanuel et al. (2004) framework for ethical review of research.

CHAPTER 3: METHODOLOGY

3. Introduction

This chapter outlines the research question, study aims and objectives. The nature of the research, the research methodology, procedures, data collection and analysis are then detailed. The reliability and validity as well as the ethical considerations will also be discussed in this chapter.

3.1 Research questions

This study sought to answer the following research questions::

1) What ethical concerns does the study REC raise when reviewing protocols?
2) Is there a systematic prioritisation of some ethical issues over others? Does any feature of the Emanuel et al. (2004) framework dominate the concerns?
3) Is there an observable pattern to the ethical concerns raised by committee members? If so, what is the pattern?
4) Are there other concerns raised by the study REC that are not consistent with the framework discussed by Emanuel et al. (2004)?

3.2 Study aim

The overall aim of the study was to identify ethical issues raised during ethics review of research protocols by the study REC and assess the relative weight of the ethical issues using principles of the Emanuel et al. (2004) framework for ethical review of research.

3.3 Study objectives

The first specific objective was to study the minutes of the study REC's review meetings to identify and describe the pattern of ethical concerns and issues raised by members of the REC in their reviews of research protocols. The second objective was to analyse the identified ethical issues and concerns using Emanuel et al.'s (2004) framework.

3.4 Research design and method

This study adopted a descriptive research design as it aimed to obtain information to systematically describe a phenomenon. Content analysis was used to code the study REC meeting minutes and to identify and establish the frequency at which ethical concerns were identified. The Emanuel et al. (2004) framework of ethical principles was used as the theoretical framework in this research. In particular, the Emanuel et al. (2004) framework was used to evaluate if the study REC was using the principles and benchmarks proposed by Emanuel et al. (2004) and gain insight into the decision-making process that took place during ethics review of research protocols by the study REC.

3.5 Site selection

Purposive sampling was used to select the study site. The selected study REC, was purposely chosen for two reasons. First, the study REC was audited by the Department of Health in 2018. One of the findings was that the study REC does not have a standard reviewer template and that posed a risk to the REC because there is no evidence that significant ethics issues are considered. As such, this research will assist the study REC to determine whether reviewers currently apply the Emanuel et al. (2004) framework or not and identify how they can improve their reviews. Second, the study REC was selected as the researcher is employed by the REC as an administrator, making the study REC a convenient choice but also ensuring that the study REC will benefit from the findings of this study.

3.6 Data collection

Prior to data collection, ethics approval for the study was obtained from the UKZN BREC (see Appendix 1) and permission was obtained from the REC to access their REC minutes (Appendix 2 – withheld due to confidentiality) on the understanding that the data will be anonymised and that no individual applicant details nor the institutional identity will be disclosed in any reports on this study. A confidentiality agreement was signed between the study REC and the researcher and supervisor.

The inclusion criterion for the study was all new research protocols reviewed at a full ethics meeting in 2017 and 2018, regardless of the nature of the study (clinical or social). The exclusion criterion was research protocols which required continuing review (amendments, recertification or adverse events). The study REC holds 10 REC review meetings each year, which means 20 sets of minutes were available for analyses, since 2017 and 2018 REC minutes were included.

The relevant and available minutes were identified, accessed and coded using the eight principles and benchmarks of the Emanuel et al. (2004) framework. This allowed observable patterns in ethical concerns raised during ethics review of research protocols to be recorded. Content analysis was used to evaluate the 2017–2018 meeting minutes of the study REC. Content analysis is the process of collecting and organising information systematically in a standard format that allows the researcher to draw conclusions about the characteristics and meaning of recorded material (Alreck & Settle, 1995).

A standard data capture sheet was adapted (Appendix 3) from that used by Tsoka-Gwegweni & Wassenaar (2014), Frimpong (2016) and Silaigwana & Wassenaar (2019). The data capture sheet allowed simple frequency counts for each type of ethical issue raised to be coded. There was also provision for an 'other' category of review comment not covered by the Emanuel et al. (2004) framework. For each protocol reviewed, data was also collected on the year of review, study design, study participants, data sources and type of research.

3.7 Data analysis

The data obtained during content analysis was captured using Microsoft Excel and analysed using frequency counts and simple descriptive analysis. Frequency counts and simple descriptive analysis was appropriate to the aim of identifying and ranking the ethical issues raised by the study REC during review.

3.8 Validity, reliability and rigor

Noble and Smith (2015) explain validity as the precision in which the findings accurately reflect the data. Validity also speaks to the integrity and application of research methods undertaken. In this study, validity was ensured by utilising a previously validated coding scheme (Tsoka-Gwegweni & Wassenaar, 2014).

According to Noble and Smith (2015, p. 2) reliability is "the consistency of the analytical procedures, including accounting for personal and research method biases that may have influenced the findings". To ensure reliability, a portion of the study REC meeting minutes were coded independently by both the researcher and a research intern and the level of agreement between coders was established. This also reduced the element of personal bias

which could potentially have arisen as a result of the researcher being employed as the administrator for the REC under study.

3.9 Ethical issues

This study is a retrospective document review which does not involve human participants. The REC meeting minutes are however considered confidential organisational documents. In order to respect the confidential nature of the meeting minutes the researcher and supervisor signed a confidentiality agreement with the research council, and the study REC is anonymised in this final study report and in any further publications.

Ethical approval for the study (No. BCA342/16/1450/014CA) was obtained from the UKZN Biomedical Research Ethics Committee (BREC) and gatekeeper's permission was obtained from the research council.

CHAPTER 4: RESULTS

4.1 Introduction

This chapter describes the findings of the study. The framework of Emanuel et al. (2004) was used to asses, code and rank the ethical issues most frequently considered by members of the study REC; to observe the pattern of ethical concerns raised by the members of the study REC during the review of proposals; to further observe if the concerns raised by the members of the study REC are consistent with the framework; and to identify other issues which are not accommodated by the framework.

4.2 Description of the data

A total of 20 REC meeting minutes entailing 176 submitted protocols in 2017 and 2018 were available for this study, 10 sets of minutes from 2017 and 10 sets of minutes from 2018. These minutes serve as a basis for review feedback letters that are sent back to applicants. The 20 sets of meeting minutes include all newly submitted full review protocols, regardless of the field of study. Expedited reviews were excluded, as they do not serve at a full meeting.

The 20 sets of minutes consisted of 176 protocols of which 98 (56%) protocols were reviewed and minuted in 2017; out of that 57 (58%) were external and 41 (42%) were internal applications. The average number of protocols reviewed in each meeting was 9,8 the highest number of protocols reviewed in one meeting was 17 (Table 1, Figures 1 & 2).

In 2018, 78 (44%) protocols were reviewed of which 35 (45%) were external and 43 (55%) were internal applications. The average number of protocols reviewed in each meeting was 7,8 and the highest number of protocols reviewed in one meeting was 11 (Table 1, Figures 1 & 3).

Table 1 – Number of protocols reviewed per year

2017–2018		**2017**			**2018**	
Protocols (*n*=176)	Applicants	Protocols (*n*=98)	Percentage	Applicants	Protocols (*n*=78)	Percentage
		98	56%		78	44%
	Internal applicants	41	42%	Internal applicants	43	55%
	External applicants	57	58%	External applicants	35	45%
Totals		98	100%		78	100%

Figure 1 – Distribution of protocols reviewed for 2017 and 2018 (n=176)

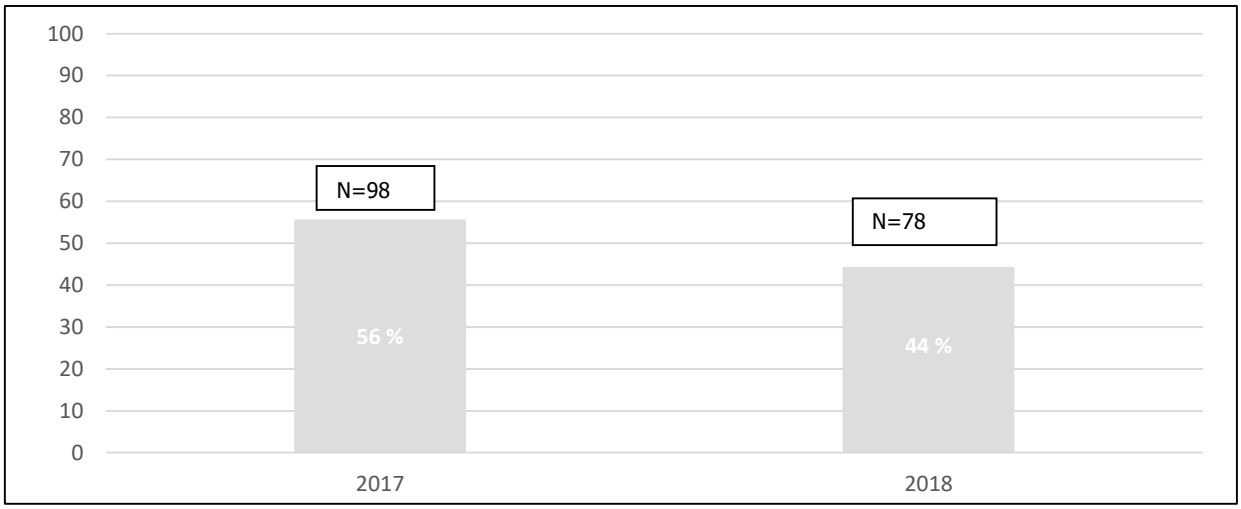


Figure 2 – Distribution of internal and external protocols in 2017 (n=98)

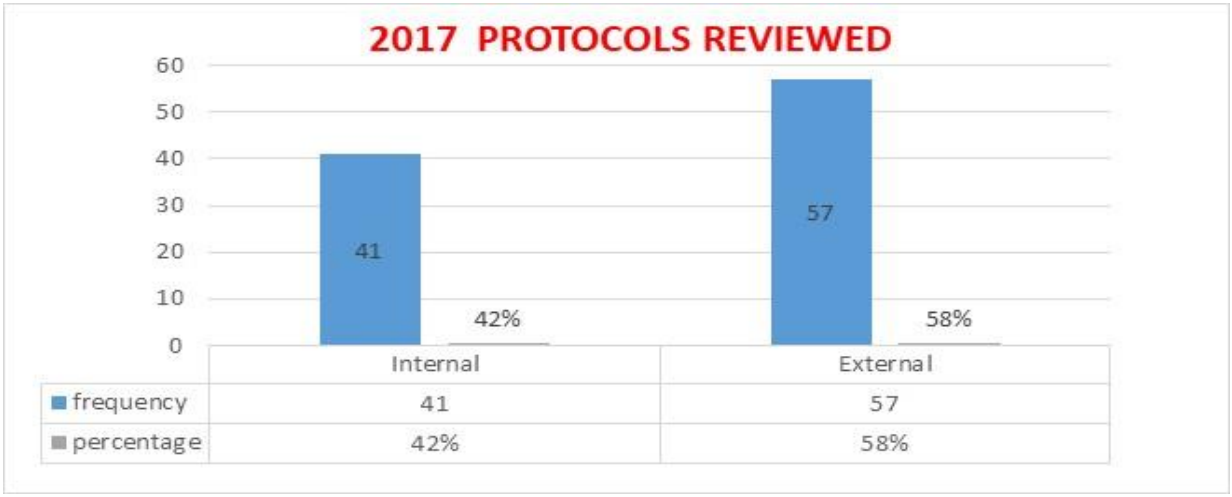
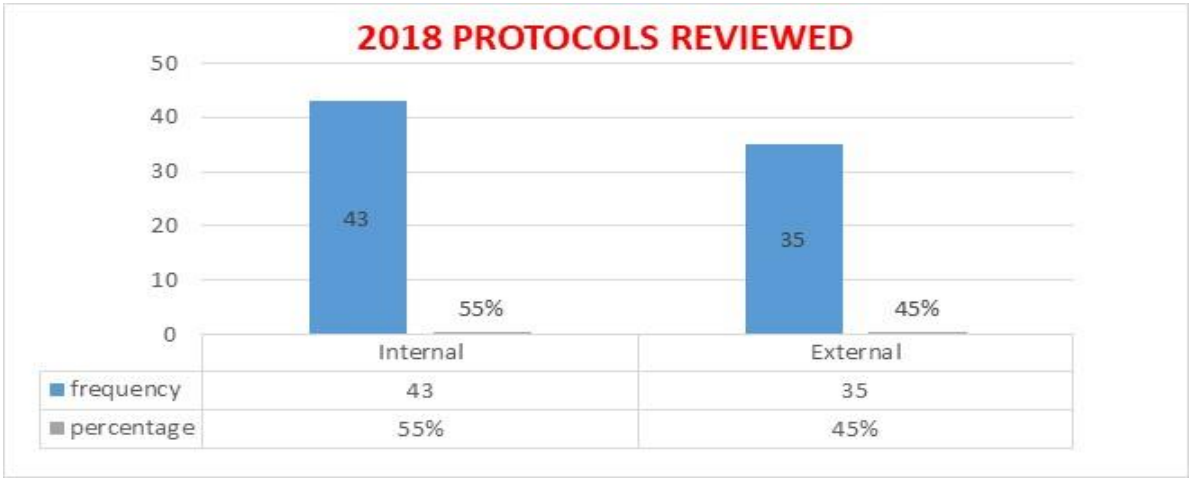


Figure 3 – Distribution of internal and external protocols in 2018 (n=78)



Of the 98 reviewed protocols in 2017, 5 (5%) involved children. The majority of the research studies involved adults 82 (84%), an adult being defined as any participant aged 18 years and above. In addition, 11 (11%) covered studies which involved both children and adults. The vast majority of protocols 95 (97%) collected primary data and only 3 (3%) collected secondary data which were mostly described as medical records.

Of the 78 reviewed protocols in 2018, 5 (6%) research studies involved children. The majority of the research studies involved adults 61 (78%), and 12 (15%) covered studies which involved both children and adults. The vast majority of protocols 72 (92%) collected primary data and only 6 (8%) collected secondary data which were mostly described as medical records. All of the research studies reviewed between 2017 and 2018 for ethical clearance with the REC, were social science studies. There were no clinical trials (Table 2). The 2017–2018 protocols reviewed by the REC members were further classified according to the following field of study (Table 2).

Table 2 – Summary of protocols reviewed in 2017 – 2018

2017–2018	2017		2018	
Protocols (*n*=176)	Protocols (*n*=98)	Percentage	Protocols (*n*=78)	Percentage
Study design				
Clinical	0	0%	0	0%
Social Science	98	100%	76	100%
Participants				
Children	5	5%	5	6%
Adults	82	84%	61	78%
Adults and Children	11	11%	12	15%
Data Sources				
Primary	95	97%	72	92%
Secondary	3	3%	6	8%
Field of Study				
Economic Performance	8	8%	7	9%
Education and Skills	12	12%	7	9%
Governance & Service Delivery	15	15%	11	14%
Health Sciences	12	12%	10	13%
Human and Social Development	14	14%	16	21%
Human Rights	3	3%	6	8%
Nutrition	2	2%	1	1%
Performance Planning	2	2%	7	9%
Public Health	28	29%	12	15%
Technology and Innovation	2	2%	1	1%

4.3 Ethical concerns raised by the members of the study REC when reviewing protocols as identified by Emmanuel et al. (2004)

The data capture sheet, adapted from Tsoka-Gwegweni and Wassenaar (2014), Frimpong (2016) and Silaigwana and Wassenaar (2019) (Appendix 3), allowed the ethical principles as identified by Emanuel et al. (2004) raised during each protocol review to be captured.

Table 3 – Ethics queries raised by the study REC between 2017 and 2018

Emanuel et al. (2008) principles and benchmark	2017 – 2018		2017		2018	
	Frequency (*n*) of queries 862	Percentage	Frequency (*n*) of queries 478	Percentage	Frequency (*n*) of queries 384	Percentage
Principle 1: Collaborative partnership	**35**	**4%**	**17**	**4%**	**18**	**5%**
Community representatives	20	57%	10	59%	10	56%
Responsibility sharing	15	43%	7	41%	8	44%
Principle 2: Social value	**31**	**4%**	**21**	**4%**	**10**	**3%**
Research beneficiaries	6	19%	2	10%	4	40%
Impact on health systems	25	81%	19	90%	6	60%
Principle 3: Scientific validity	**159**	**18%**	**89**	**19%**	**70**	**18%**
Appropriate design and methods	66	42%	37	42%	29	41%
Applicability of results	29	18%	17	19%	12	17%
Impact on provision of health care services	20	13%	12	13%	8	11%
Study design feasibility	44	28%	23	26%	21	30%
Principle 4: Fair selection	**122**	**14%**	**62**	**13%**	**60**	**16%**
Suitable study population	32	26%	18	29%	14	23%
Risk minimisation	44	36%	22	35%	22	37%
Benefits to participants	29	24%	14	23%	15	25%
Vulnerability	17	14%	8	13%	9	15%
Principle 5: Favourable risk-benefit ratio	**41**	**5%**	**30**	**6%**	**11**	**3%**
Risk identification and minimisation	41	100%	30	100%	11	100%
Principle 6: Independent review	**76**	**9%**	**53**	**11%**	**23**	**6%**
Regulatory compliance	65	86%	45	85%	20	87%
Minimisation and reconciliation of multiple reviews	11	14%	8	15%	3	13%
Principle 7: Informed consent	**300**	**35%**	**156**	**33%**	**144**	**38%**
Recruitment and incentives applicability to local context	35	12%	19	12%	16	11%
Appropriate disclosure documents and processes	14	5%	11	7%	3	2%
Presentation and accuracy of information	25	8%	8	5%	17	12%

Legally authorised representatives	20	7%	10	6%	10	7%
Gatekeeper's permission	57	19%	21	13%	36	25%
Context of consent process	149	50%	87	56%	62	43%
Principle 8: Respect for participants	**71**	**8%**	**38**	**8%**	**33**	**9%**
Monitoring health and well-being	4	6%	3	8%	1	3%
Confidentiality and privacy	56	79%	32	84%	24	73%
Voluntariness	11	15%	3	8%	8	24%
Other ethical concerns raised	**27**	**3%**	**12**	**3%**	**15**	**4%**
Grammatical errors – 2017	2	7%	1	8%	1	7%
Typographical errors – 2017	2	7%	1	8%	1	7%
Abbreviations – 2017	5	19%	2	17%	3	20%
Curriculum vitae – 2017	7	26%	3	25%	4	27%
Ethics training	11	41%	5	42%	6	40%

4.3.1 Collaborative partnerships

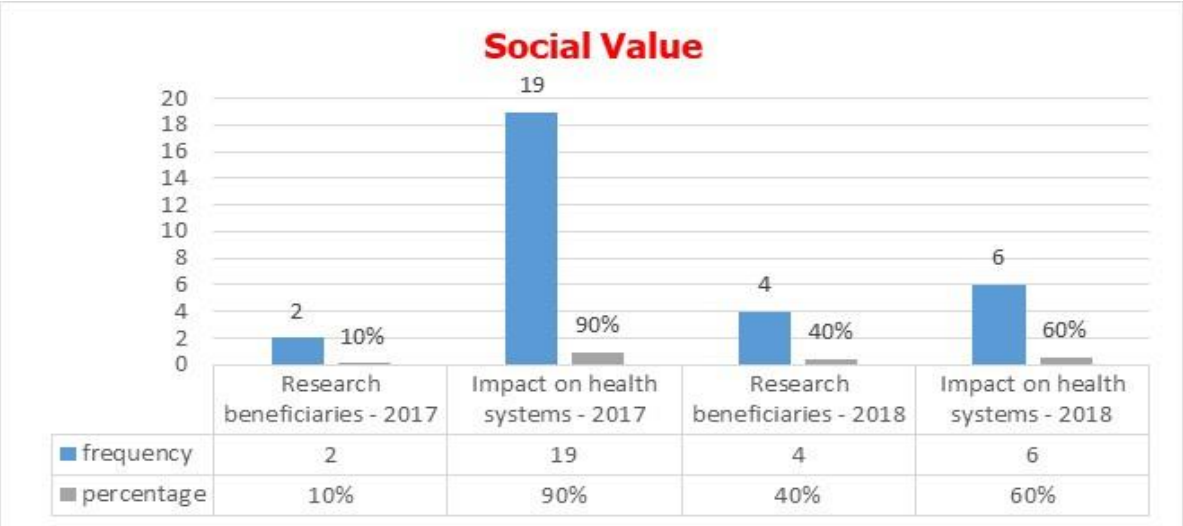
In 2017–2018, 35 (4%) queries were raised about collaborative partnerships. Collaborative partnership comprised queries about community representatives and responsibility sharing. Overall queries about community representatives were raised 20 times (57%) and queries related to responsibility sharing were raised 15 times (43%). In 2017 collaborative partnership was raised 17 times (4%). Of those queries community representatives was raised 10 times (59%) and responsibility sharing was raised 7 times (41%). In 2018, collaborative partnership queries were raised 18 times (5%), of which 10 queries (56%) concerned community representatives and 8 (44%) responsibility sharing (Table 3, Figure 4).

Figure 4 – Frequency of collaborative partnership concerns raised

4.3.2 Social value

In 2017–2018, 31 (4%) queries were raised about social value. Under this principle, impact on health systems queries were raised 25 times (81%) while research beneficiaries queries were raised 6 times (19%). In 2017, 21 (4%) queries were raised of which most concerned the impact on health systems (n=19, 90%) with only 2 (10%) research beneficiaries queries being raised. In 2018, 10 (3%) social value queries were raised. Issues discussed were mostly regarding impact on health systems (n=6; 60%) and issues concerning research beneficiaries (n=4; 40%) (Table 3, Figure 5).

Figure 5 – Frequency of social value concerns raised

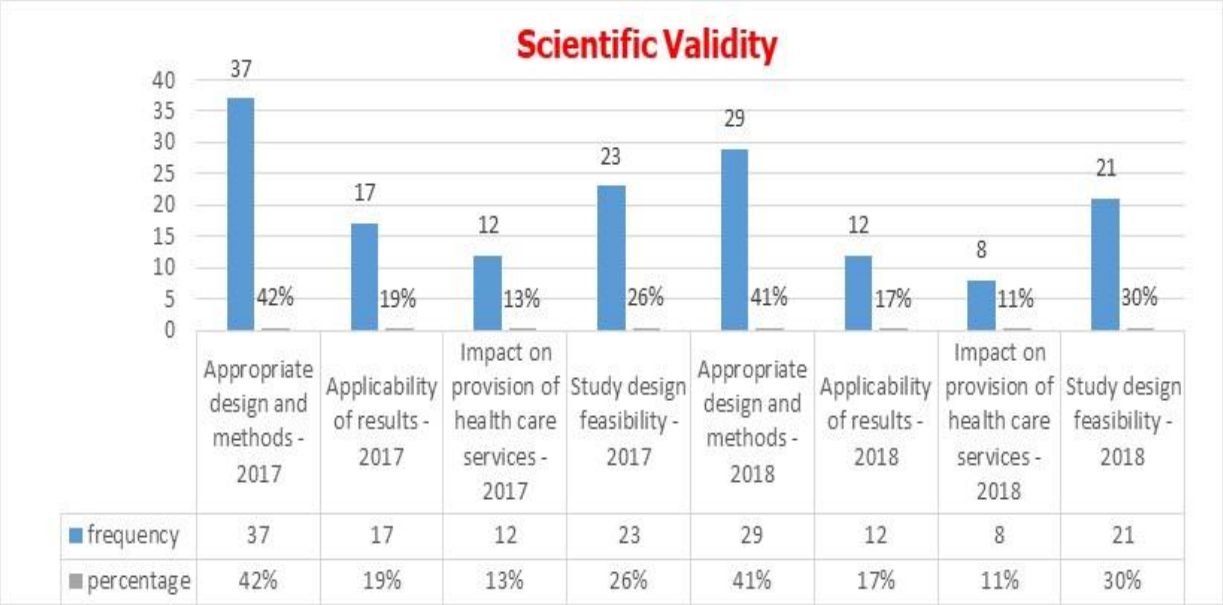


4.3.3 Scientific validity

In 2017–2018 queries of scientific validity were raised 159 times (18%). Appropriate design and methods were raised 66 times (42%). This was raised mostly when members of the study REC queried the research methodologies which were very vague, not rigorous and not carefully considered. The issue of study design feasibility was raised 44 times (28%), especially when the applicants did not furnish the study budget breakdown to assist reviewers to consider if the budget allocated was sufficient to cover the whole research study and if the applicant would be able to complete the study as planned given the budget. Applicability of results were raised 29 times (18%) and selection of participants and impact on provision of health care services was queried 20 times (13%).

In 2017, queries of scientific validity were raised 89 times (19%). Under this principle predominant issues addressed centred around appropriate design and methods, which was queried 37 times (42%), study design feasibility was raised 23 times (26%), applicability of results, 17 times (19%), and impact on provision of health care services, 12 times (13%). In 2018, queries of scientific validity were raised 70 times (18%). Under this principle, issues mostly addressed related to appropriate design and methods, which was queried 29 times (41%). Study design feasibility was raised 21 times (30%), applicability of results, 12 times (17%), and impact on provision of health care services was raised eight times (11%) (Table 3, Figure 6).

Figure 6 – Frequency of scientific validity concerns raised

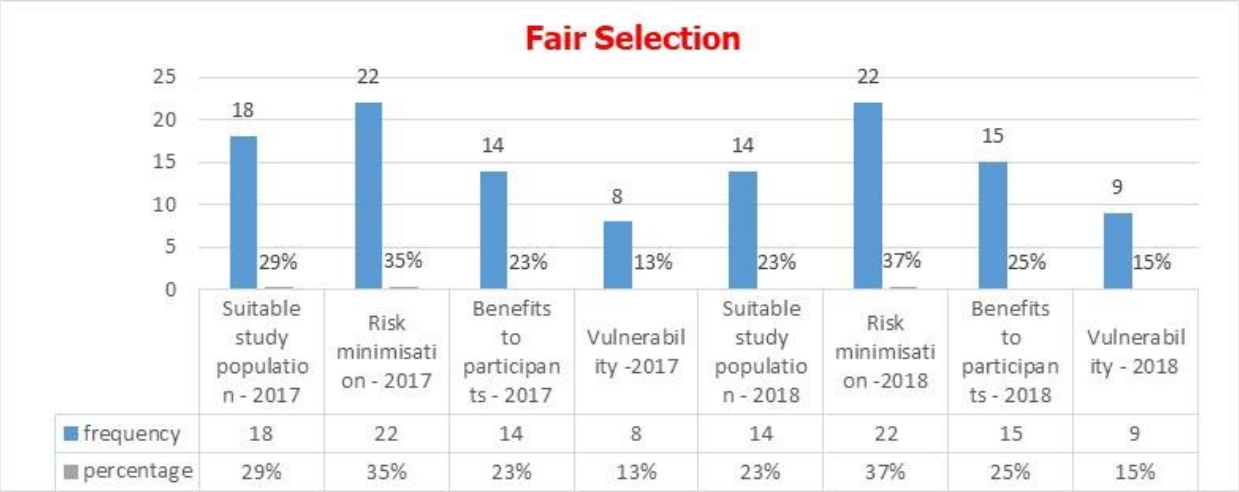


4.3.4 Fair participant selection

In 2017 and 2018, a total of 122 (14%) queries were raised about fair participant selection. The query that was emphasised most was the issue of risk minimisation which was queried 44 times (36%), for instance, where the risks were not adequately revealed, or even though the applicant anticipated some risks researchers tended to underplay them and not mention them to participants. In addition, the methods to minimise the anticipated risks were often not adequately catered for. Regarding suitable study population, this issue was raised 32 times (26%) by the members of the study REC who mostly queried the exclusion and inclusion criteria of participants. Benefits to participants was raised 29 times (24%) and vulnerability 17 times (14%).

In 2017, fair participant selection was queried 62 times (13%). Of these queries, the issue of risk minimisation was raised 22 times (35%), suitable study population was raised 18 times (29%), benefits to participants, 14 times (23%), and vulnerability concerns, eight times (13%). In 2018, fair participant selection was raised 60 times (16%). Of these queries, the issue of risk minimisation was raised 22 times (37%), benefits to participants, 15 times (25%), suitable study population was raised 14 times (23%), and vulnerability concerns, nine times (15%) (Table 3, Figure 7).

Figure 7: Frequency of fair participant selection concerns raised



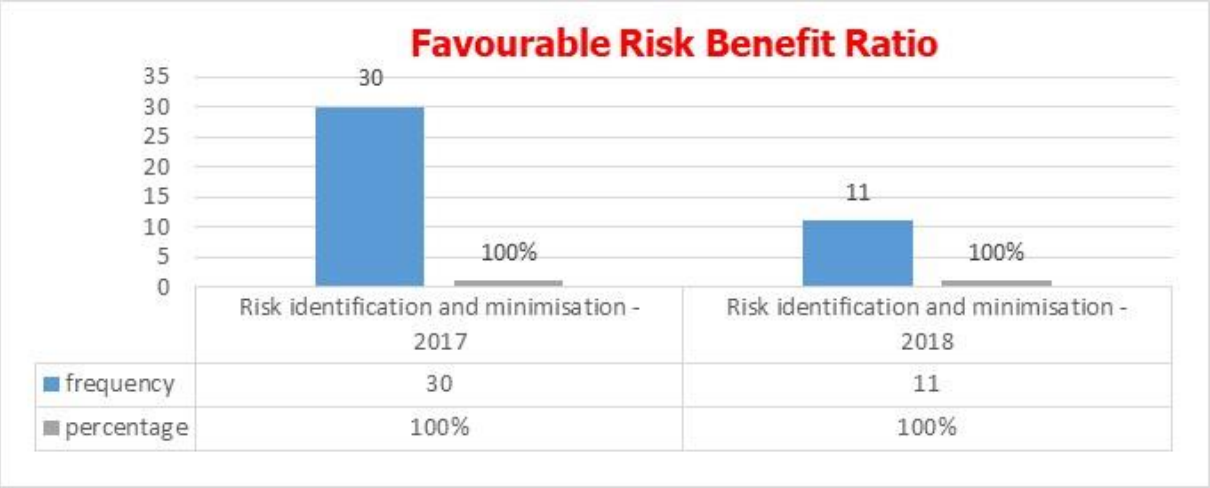
	Suitable study population - 2017	Risk minimisation - 2017	Benefits to participants - 2017	Vulnerability -2017	Suitable study population - 2018	Risk minimisation -2018	Benefits to participants - 2018	Vulnerability - 2018
frequency	18	22	14	8	14	22	15	9
percentage	29%	35%	23%	13%	23%	37%	25%	15%

4.3.5 Favourable risk-benefit ratio

In terms of favourable risk-benefit ratio, in 2017 and 2018, 41 (5%) queries were raised. Issues were related to researchers who did not adequately explain their plans for referral (e.g.

counselling). The matter of risk identification and minimisation is the only sub-theme, hence all 41 (100%) queries dealt with this topic. In 2017 the issue of favourable risk-benefit ratio was raised 30 times (100%) and in 2018 the issue of favourable risk-benefit ratio was raised 11 times (100%) (Table 3, Figure 8).

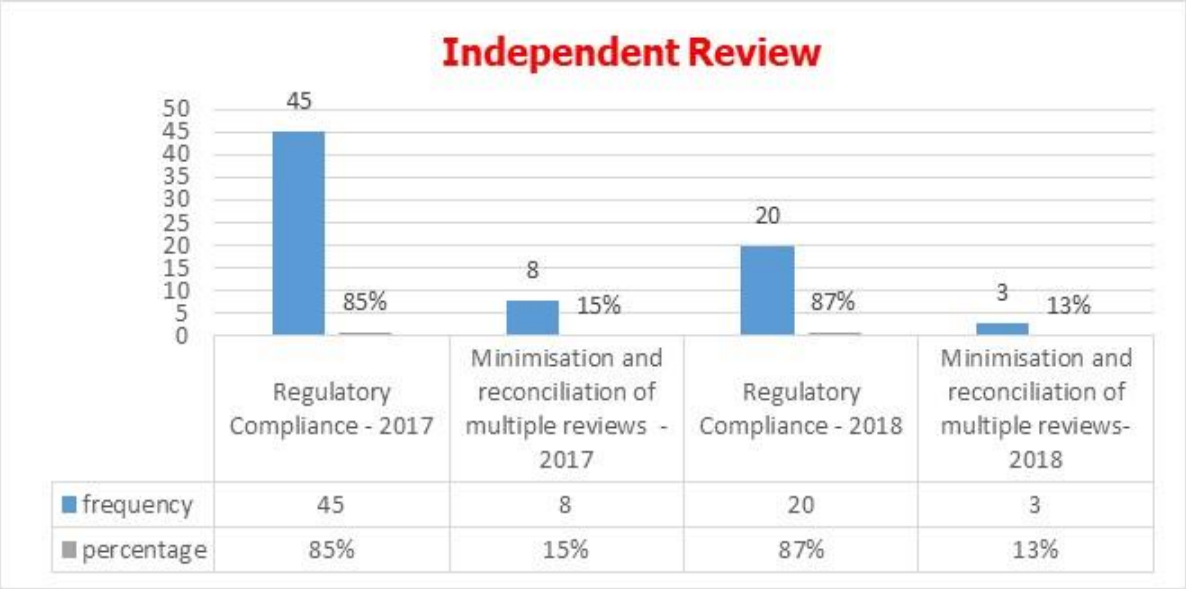
Figure 8 – Frequency of favourable risk-benefit ratio concerns raised



4.3.6 Independent review

In 2017 and 2018, 76 (9%) independent review queries were raised. Regarding independent review, issues of regulatory compliance were most often discussed (n=65; 86%) and the main concern for the members of the study REC were the challenges in receiving ethical clearance letters from the host institutions or organisations. The other areas of concern were minimisation and reconciliation of multiple reviews (n=11, 14%), which were sometimes caused by lack of communication between the applicant and the hosting institutions. In 2017, in terms of independent review 53 queries (11%) were raised. Out of that 45 (85%) queries focused on regulatory compliance and 8 queries (15%) focused on minimisation and reconciliation of multiple reviews. In 2018, 23 queries (6%) were raised regarding independent review. Of those, 20 (87%) queried regulatory compliance and 3 (13%) queried minimisation and reconciliation of multiple reviews (Table 3, Figure 9).

Figure 9 – Frequency of independent review concerns raised



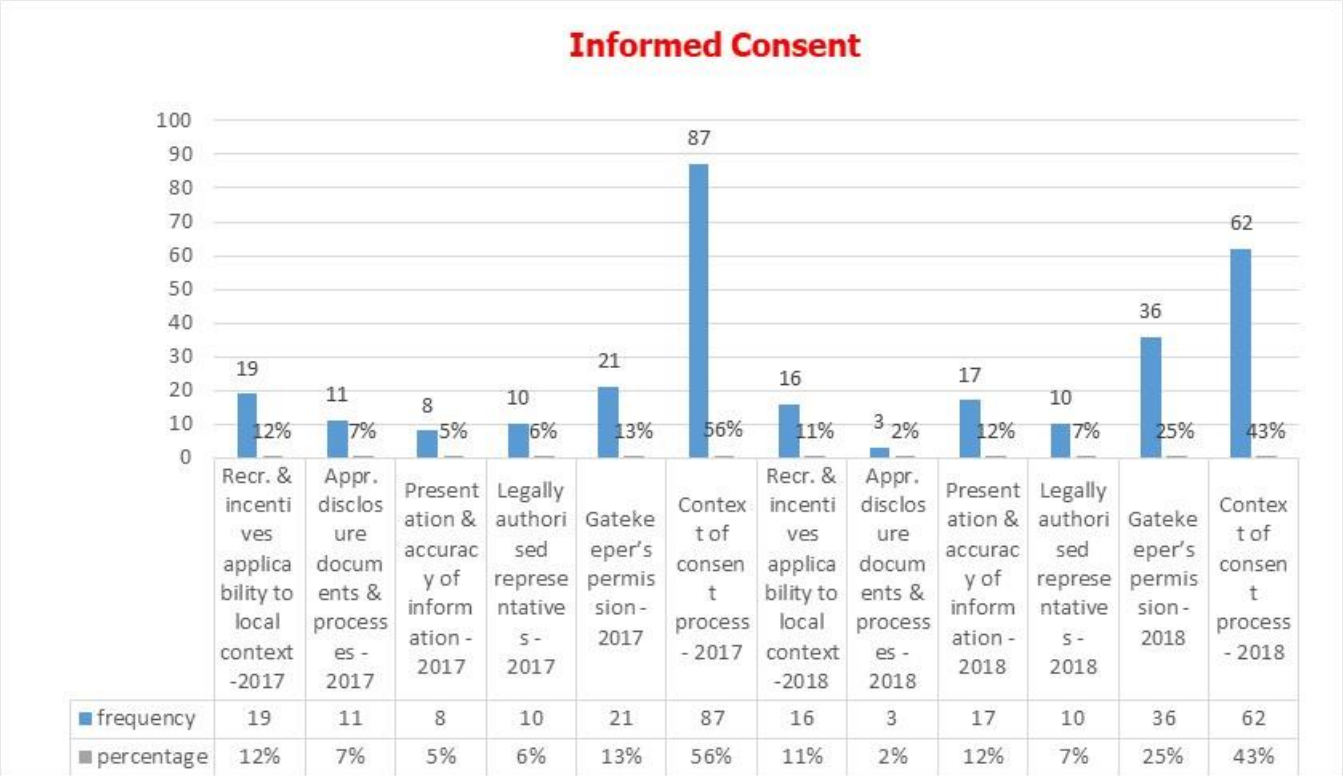
4.3.7 Informed consent

Three hundred (35%) queries were raised concerning informed consent. Of these 149 (50%) queries centred around the context of the consent processes in terms of adequate informed consent, confidentiality and reimbursements. Other issues frequently raised included gatekeeper's permission with 57 (19%) queries, applicability of recruitment and incentives to local context with 35 (12%) queries, presentation and accuracy of information with 25 (8%) queries, legally authorised representatives with 20 (7%) queries and appropriate disclosure documents and processes (n=14; 5%).

In 2017, informed consent was queried 156 times (33%), with issues concerning context of consent processes being raised 87 times (56%), gatekeeper's permission, 21 times (13%), applicability of recruitment and incentives to local context, 19 times (12%), appropriate disclosure documents and processes, 11 times (7%), legally authorised representatives, 10 times (6%), and presentation and accuracy of information, 8 times (5%).

In 2018, Informed consent was queried 144 times (38%), with issues concerning context of consent processes being raised 62 times (43%), gatekeeper's permission, 36 times (25%), presentation and accuracy of information, 17 times (12%), applicability of recruitment and incentives to local context, 16 times (11%), legally authorised representatives, 10 times (7%), and appropriate disclosure documents and processes raised 3 times (2%) (Table 3, Figure 10).

Figure 10 – Frequency of informed consent concerns raised

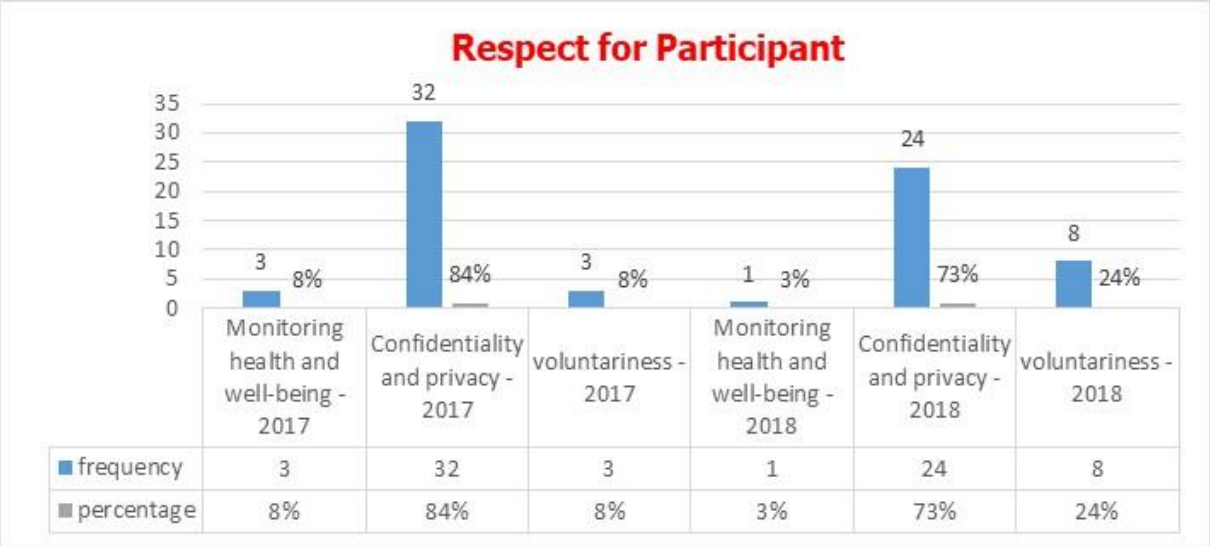


4.3.8 Ongoing respect for participants

Ongoing respect for participants' queries were raised 71 times (85%). Of these queries, issues of confidentiality and privacy were queried 56 times (79%), with REC members being most concerned with the confidentiality of collected data. Voluntariness was raised 11 times (15%) and monitoring health and well-being raised 4 times (6%).

In 2017, there were 38 (8%) queries regarding ongoing respect. Of these, issues of confidentiality and privacy were queried 32 times (84%), voluntariness was raised three times (8%) and monitoring health and well-being, three times (8%). In 2018, 33 (9%) ongoing respect queries were raised. Issues of confidentiality and privacy were queried 24 times (73%), voluntariness was raised eight times (24%) and monitoring health and well-being only once (3%) (Table 3, Figure 11).

Figure 11 – Frequency of ongoing respect for participants concerns raised

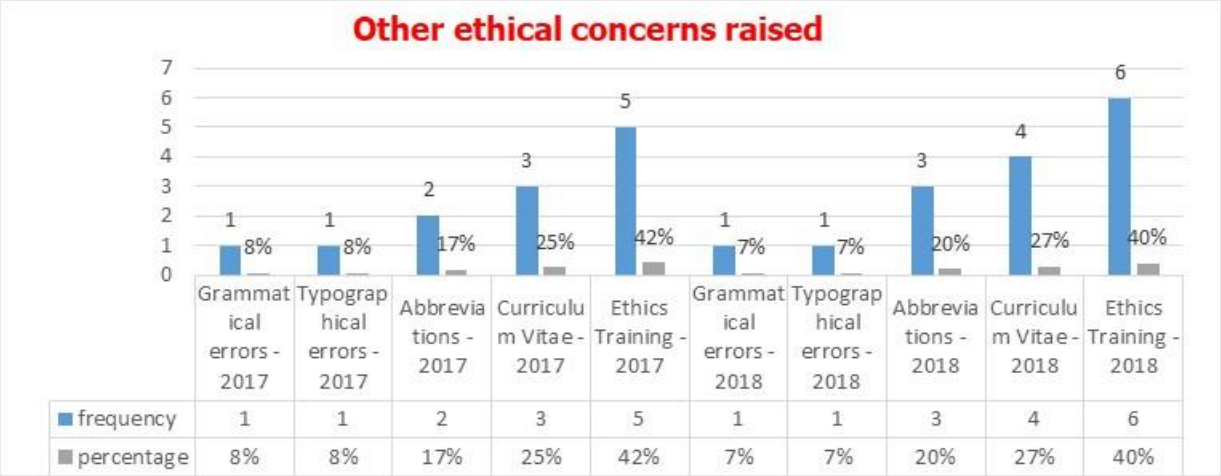


4.3.9 Other ethical concerns raised

The study REC raised 27 (3%) other ethical concerns which were not addressed by the framework between 2017 and 2018. These issues included grammatical errors (n=2; 7%) and typographical errors (n=2; 7%). Such errors were raised by the REC when they obscured the meaning. Abbreviations which were not explained were queried 5 times (19%), provision of CVs of principal investigators and their teams was queried 7 times (26%), and provision of evidence of ethical training certificates was raised 11 times (41%).

In 2017 other ethical concerns were raised 12 times (3%). Issues concerning ethics training were raised 5 times (42%), provision of CVs was raised 3 times (25%), abbreviations twice (17%), typographical errors and grammatical errors were both raised once (8%). In 2018 other ethical concerns were raised 15 times (4%). Issues concerning ethics training were raised 6 times (40%), provision of CVs was raised 4 times (27%), abbreviations 3 times (20%), typographical errors were raised once (7%), and grammatical errors once (7%) (Table 3, Figure 12).

Figure 12 – Frequency of other concerns raised which the framework did not accommodate

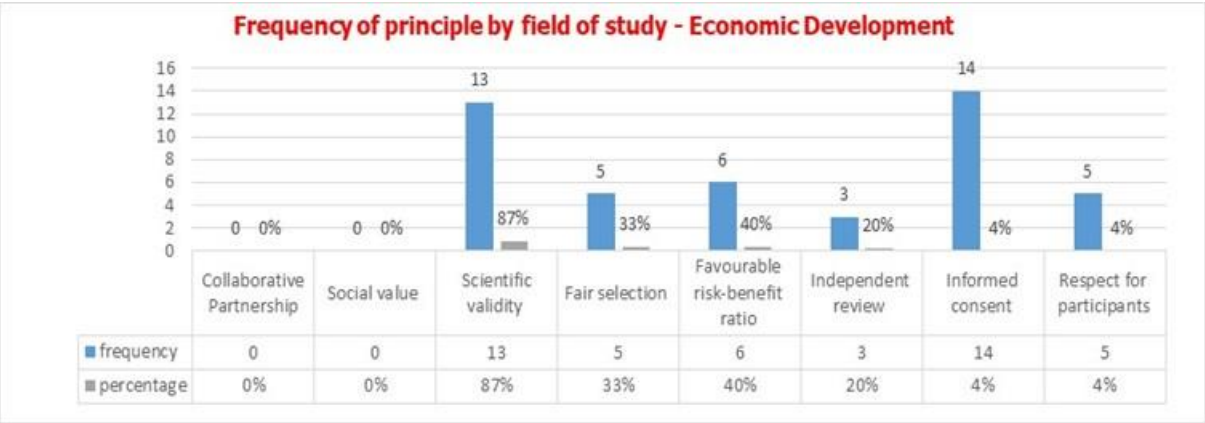


4.4 2017–2018 frequency of Emanuel et al.'s principles by field of study

Further to analysing the pattern of ethical issues raised by the study REC using the Emanuel et al. (2004) framework for all protocols, the researcher also analysed the same information, according to field of study. Table 2 shows the distribution of reviewed protocols according to 10 different fields of study. The frequency figures below show how each principle was covered in relation to the protocols per field of study.

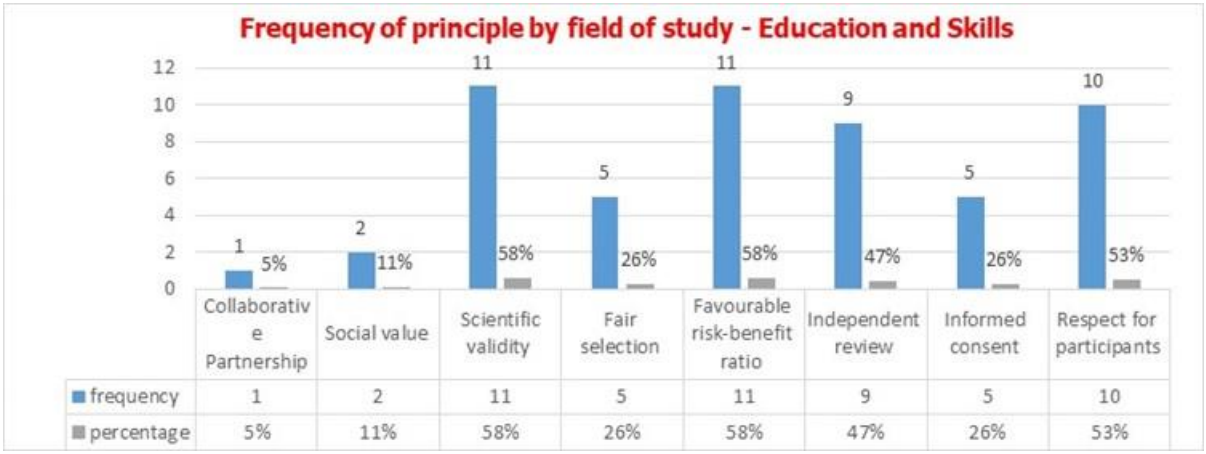
Of 176 protocols reviewed in 2017–2018, 15 protocols were in the field of economic development. In review of these studies, issues around informed consent (n=14; 93%) and scientific validity (n=13; 87%) were primarily raised (Table 2, Figure 13).

Figure 13: Frequency of principle by field of study – Economic Development



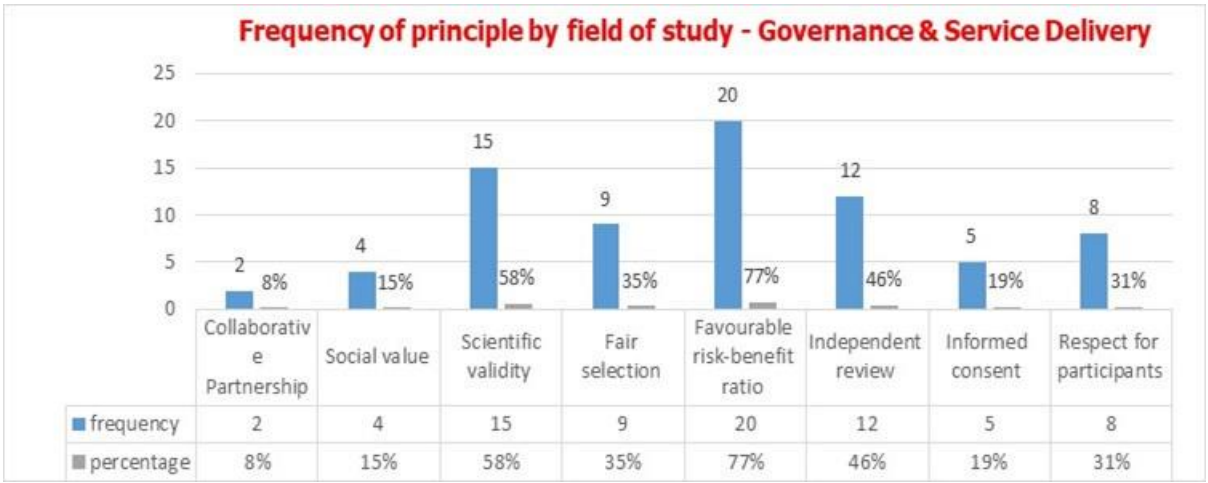
Nineteen protocols were in the field of education and skills. Issues queried predominantly by the study REC were scientific validity (n=11; 58%), favourable risk-benefit ratio (n=11; 58%), respect for participants (n=10; 53%) and independent review (n=9; 47%) (Table 2, Figure 14).

Figure 14 – Frequency of principle by field of study – Education and Skills



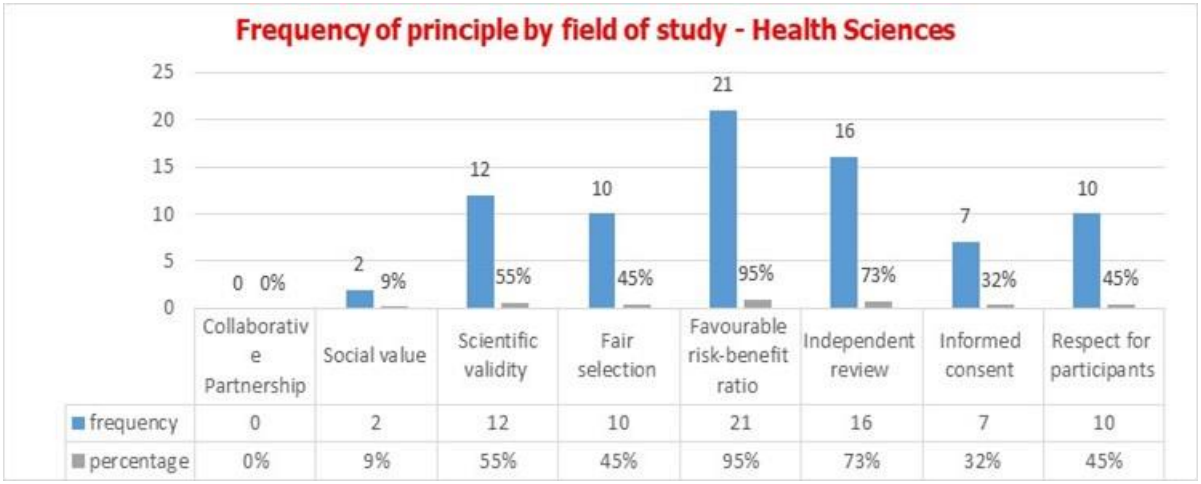
Twenty-six protocols were in the field of governance and service delivery. Issues that were queried most frequently by the study REC were favourable risk-benefit ratio (n=20; 77%), scientific validity (n=15; 58%) and independent review (n=12; 46%) (Table 2, Figure 15).

Figure 15 – Frequency of principle by field of study – Governance and Service Delivery



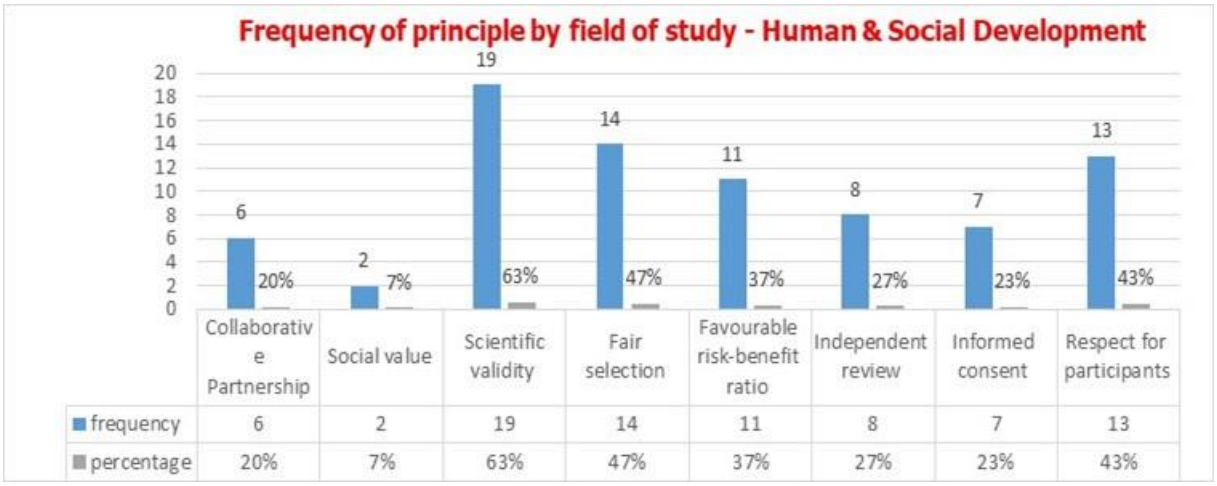
Twenty-two protocols were in the field of health sciences. Issues that were queried most frequently by the study REC were favourable risk-benefit ratio (n=21; 95%), independent review (n=16; 73%) and scientific validity (n=12; 55%). Both fair selection of participants and respect for participants were raised 10 times (Table 2, Figure 16).

Figure 16 – Frequency of principle by field of study – Health Sciences



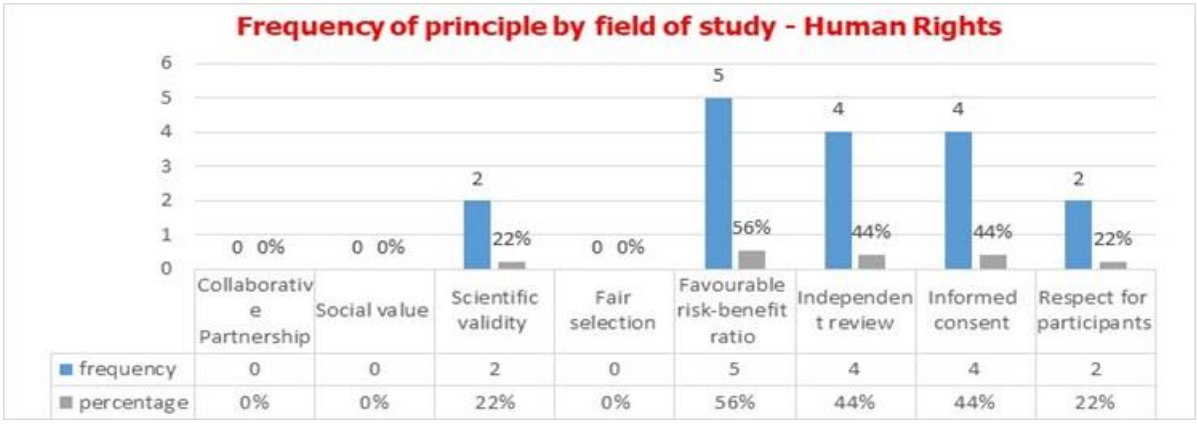
Thirty protocols were in the field of human and social development. Issues that were queried most frequently by the study REC were scientific validity (n=19; 63%), fair selection of participants (n=14; 47%), respect for participants (n=13; 43%) and favourable risk-benefit ratio (n=11; 37%) (Table 2, Figure 17).

Figure 17 – Frequency of principle by field of study – Human and Social Development



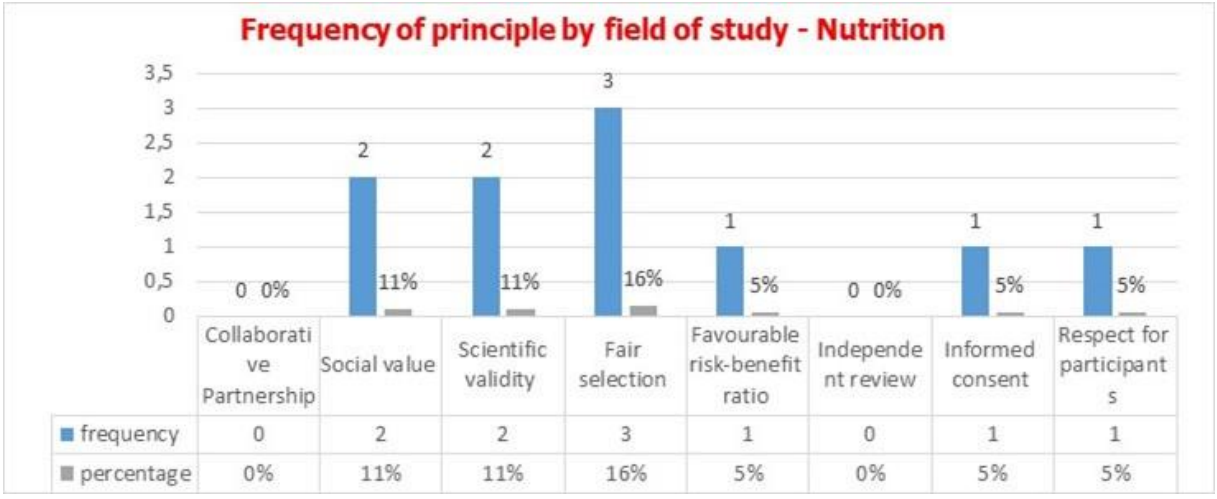
Nine protocols were in the field of human rights. Issues that were queried most frequently by the study REC were favourable risk-benefit ratio (n=5; 56%) and both independent review and informed consent (n=4; 44%) (Table 2, Figure 1).

Figure 18 – Frequency of principle by field of study – Human Rights



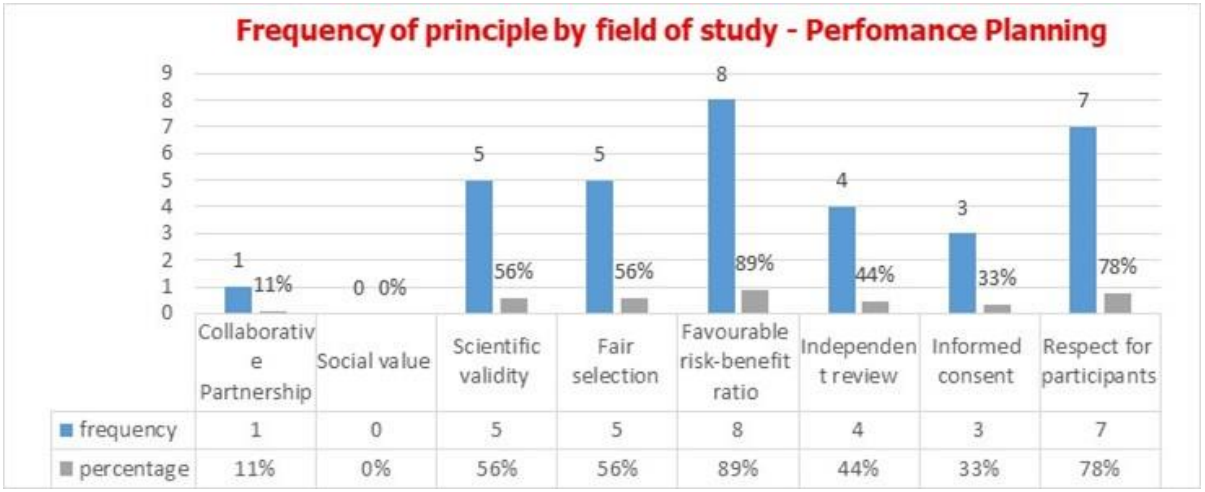
Three protocols were in the field of nutrition. Issues that were queried most frequently by the study REC were fair selection of participants (n=3; 16%), social value (n=2; 11%) and scientific validity (n=2; 11%) (Table 2, Figure 19).

Figure 19 – Frequency of principle by field of study – Nutrition



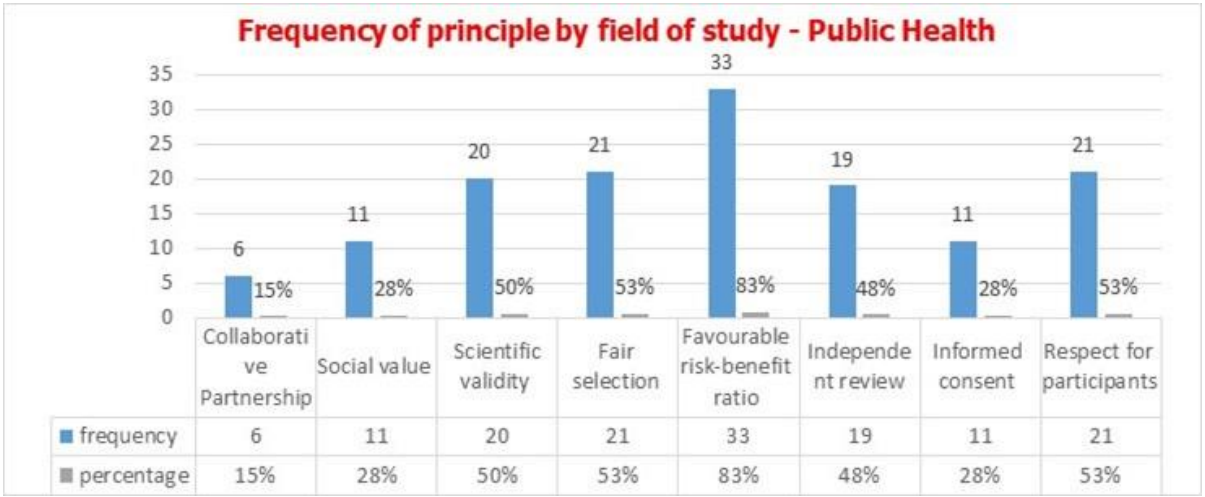
Nine protocols were in the field of performance planning. Issues that were queried most frequently by the study REC were favourable risk-benefit ratio (n=8; 89%) and respect for participants (n=7; 78%) (Table 2, Figure 20).

Figure 20 – Frequency of principle by field of study – Performance Planning



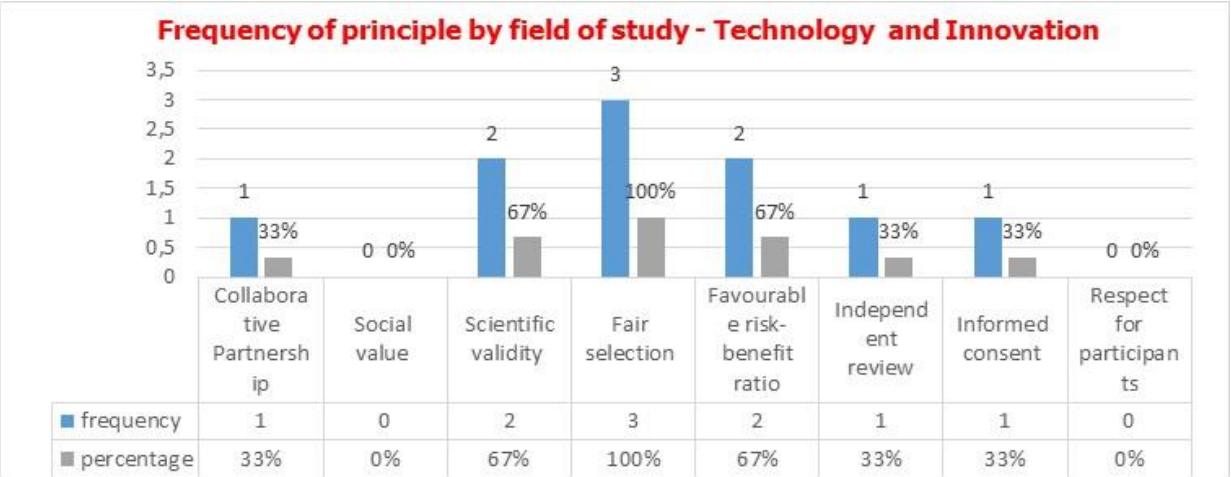
Forty protocols were in the field of public health. Issues that were raised most frequently by the study REC were favourable risk-benefit ratio (n=33: 83%), fair selection of participants (n=21; 53%), respect for participants (n=21; 53%), scientific validity (n=20; 50%), independent review (n=19; 48%) and informed consent (n=11; 28%) (Table 2, Figure 21).

Figure 21 – Frequency of principle by field of study – Public Health



Three protocols were in the field of technology and innovation. Issues that were raised most frequently by the study REC were fair selection of participants (n=3; 100%), scientific validity (n=2; 67%) and favourable risk-benefit ratio (n=2; 67%) (Table 2, Figure 22).

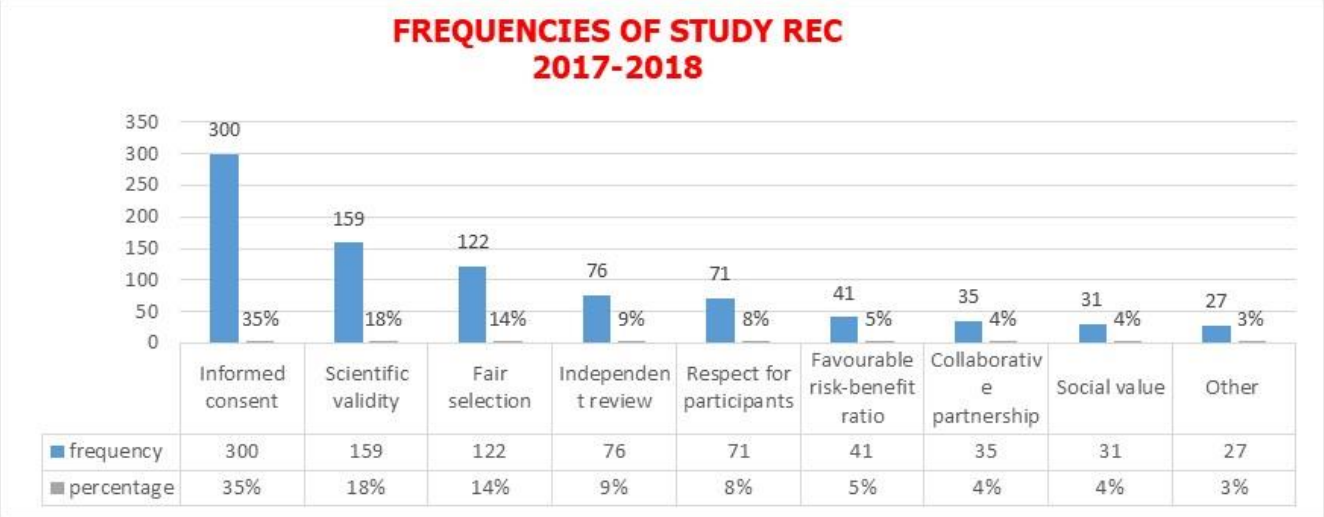
Figure 22 – Frequency of principle by field of study – Technology and Innovation



4.5 Ranking of ethical issues

The most frequently raised ethical issue was informed consent (n=300; 35%). The remaining principles were ranked as follows: scientific validity (n=159; 18%), fair selection of participants (n=122; 14%), independent reviews (n=76; 9%), ongoing respect of participants (n=71; 8%), favourable risk-benefit ratio (n=41; 5%), collaborative partnerships (n=35; 4%), social value (n=31; 4%) and other ethical concerns raised by members of the study REC that were not accommodated by the framework were raised 27 times (3%) (Figure 23).

Figure 23 – Frequency of ethical concerns raised in the study REC meetings



4.6 Conclusion

This chapter provided a breakdown of results of queries that were raised by the members of the study REC using the eight principles of the Emanuel et al. (2004) framework. When reviewing protocols, members of the study REC considered all the eight principles and beyond, given the observation that there were other issues queried which could not be categorised under Emanuel et al.'s (2004) eight principles.

Chapter 5: Discussion

5.1 Introduction

This chapter discusses the results presented above with specific reference to existing literature, focusing on studies that investigated research ethics protocols using the principles of Emmanuel et al. (2004).

5.2 Ethical concerns raised by the study REC

The following ethical concerns were raised by the study REC in order of frequency:

5.2.1 Informed consent

In the sampled protocols, informed consent was the most dominant ethical query considered by the study REC. Informed consent was the most dominant ethical query considered by the study REC with 35% of queries being concerned with this issue. This result is comparable to similar studies that ranked informed consent as the most frequently raised category of concerns. For Tsoka-Gwegweni and Wassenaar (2014) the most frequent issue that emerged from their findings were issues of informed consent focusing on the appropriateness of disclosure of documents and processes, presentation and accuracy of information. Similarly, in Bengu's (2018) study informed consent came out as a frequently raised ethical concern focusing also on the availability of appropriate disclosure of documents and processes used for recruiting participants. Silaigwana and Wassenaar (2019) also identified informed consent as the most common problematic area in research protocols. For Selormey (2015), who reviewed Ghanaian RECs, informed consent emerged as the most dominant issue considered by the REC. Fouka and Mantzorou (2011) also found informed consent to be a major ethical issue in conducting research. While the above mentioned studies observe that informed consent is a frequent query in research that includes vulnerable groups, not all research identified that trend. For example, Kirimuhuzya (2015), Frimpong (2016) and Madanhire (2018) found that while informed consent was one of the most frequent concerns raised, it was not always the most dominant. The relative ease of identifying informed consent issues compared with more complex and subtle principles like social value may account for why informed consent issues are identified more frequently.

Examining the different types of issues within the informed consent category, it is clear that most issues raised (50%) were concerned with contextualising the consent process, especially in Focus Group Discussions (FGDs). There appears to be a frequent discrepancy between the detail of explanation of the research and consent outlined in the protocol compared with the consent document given to participants. Participants are therefore not explicitly and clearly informed about their rights and what they are consenting to. Tolich (2008) emphasises that the REC should encourage researchers to explicitly detail all potential risks of anticipated harm in the information sheet so that participants can actively consent, being adequately aware of the risks of harm.

Another common concern was the absence of gatekeeper's permission letters (19%), which are a specific requirement in the examined REC. As a result, these queries were often directed to external applicants, especially those who were non-South African, as they were most likely not well-acquainted with the local regulations. South African Co-investigators are able to assist with this and can take on the responsibility for some local aspects of the study, which often results in the fast tracking of the ethics approval of a study (DoH, 2015).

The complexity of language used in the consent and assent forms was also queried (8%). Particularly, appropriate levels of language and the translation of the informed consent document into languages that participants understand being required to ensure participant autonomy. This is a complex and nuanced issue with a high degree of variability between different groups of participants. For example, Dixon-woods et al. (2008), in reference to the vulnerability of children, state that the REC ought to ascertain children's protection, that the language used for children's informed consent documents is simple and easy to follow and relevant to people such as guardians and caregivers who give consent on behalf of minors. Silaigwana and Wassenaar (2019) also cite studies where IRB chairpersons pose concerns regarding the length, intensity and complexity of written consent forms for children.

Members of the study REC also queried studies which involved Focus Group Discussions (FGDs) because researchers were not transparent in explaining the inability to guarantee confidentiality to participants. The study REC always insists that researchers should clearly state that participants should be made aware that although confidentiality will be encouraged in FGDs, it cannot be guaranteed. While the research team may guarantee confidentiality, the same cannot be said about other participants. Participants should thus be advised not to disclose sensitive personal information (Sim & Waterfield, 2019).

Five percent of queries encouraged researchers not to coerce participants to divulge personal information in such settings as confidentiality cannot be guaranteed. For instance, a researcher will mention to participants in an informed consent document that there are no immediate benefits to them from participating in this study. However, the study will be extremely helpful to the researchers. Participants may feel obliged to participate as the study may be extremely helpful. Kass et al. (2005) explain that researchers should ensure that participation is voluntary and not driven by coercion or undue inducement.

Accountability was also a concern regarding informed consent, with some queries raising issues around participant ability to contact the REC or researchers, enabling them to raise their challenges. In some cases, the study REC's contact details were not provided to participants resulting in them being unable to report any perceived harm experienced by them or if they had any other concerns related to their participation in the study. International applicants often furnished international contact details to local participants creating clear cost barriers for participants to report any issues.

In order for the study REC to assist applicants in writing a comprehensive informed consent, the REC populated a standard participant informed consent document that applicants can modify to meet their needs when applying for ethical clearance, to minimise the above-mentioned difficulties. As is evident from the variety of issues faced by applicants, it is difficult to create a standard document able to provide information in appropriate simple language which is applicable across a range of data collection methods.

5.2.2 Scientific validity

Scientific validity (18%) was the second most queried principle. This principle has four benchmarks which are: appropriate design and methods; applicability of results; impact on provision of health care services; and the study design feasibility. Queries that were raised by the study REC related to research study budgets because feasibility of the research study is dependent on the projected budget. The quality of the methodology was also often queried. Some applicants provided vague and poorly designed research methodologies, making it difficult for the members of the study REC to review critical issues, which in turn may be misleading and affect participants negatively. Wassenaar and Slack (2016) explain that poor methodology can compromise the validity and usefulness of findings and can undermine the social value of research. Thus one of the requirements set by the DoH (2015) is that the committee should have members with strengths in qualitative and quantitative methodology.

In addition, poorly designed studies tend to delay the approval process of applications because members of the study REC could not make an informed decision regarding the application without a well-written research methodology. Several authors, such as Angell et al. (2010), Dixon-woods et al. (2008), Selormey (2016) and Silaigwana and Wassenaar (2019) also reported scientific validity to be the second most frequent issue raised by RECs. In the review of protocols from Ghana, Frimpong (2016) found scientific validity to be the most frequent issue raised. Frimpong (2016) explains that this is due to the specifically high number of queries relating to appropriateness of design and methods, and concurs that other research into REC protocols tends to find informed consent to be the most frequent issue.

5.2.3 Fair participant selection

This study focused on procedural accounts of fairness and not substantive frameworks that prescribe specific outcomes (Ballantyne, 2008). Fair selection of participants was the third most queried principle (14%) by the study REC. Bengu (2018), Selormey (2016) and Tsoka-Gwegweni and Wassenaar (2014) all document this issue as the third most prevalent in their respective studies. It was found that the researchers were not revealing the study risks adequately to participants, even though risks were anticipated. For example, researchers would anticipate the risks and not mention them to participants, and the methods to minimise the anticipated risks would not be adequately catered for in most cases. Another common omission is that of transgender or other non-binary gender options, as most studies limited selection of heteronormative standards.

Rahman (2015) concedes that inclusion and exclusion criteria that researchers use in research studies should be fair and justified. According to the Declaration of Helsinki (2008) medical research that involves a vulnerable population that bears the burden of the study should be the first to benefit from the research (the control groups or placebo groups). The Guidelines for Good Practice in the Conduct of Clinical Trials with Human Participants in South Africa (2008), issued by the South African Department of Health (DoH), state that inclusion and exclusion criteria should be fair, justified and appropriate to improve the effective treatment for life-threatening conditions and improve quality of life.

The members of the study REC also queried the manner of dealing with vulnerable groups (24%), especially minors, where most applicants were not familiar with South African laws, such as the Children's Act (DoH, 2015). In other instances, the study REC would request

applicants to provide a detailed Standard Operating Procedure (SOP) explaining how cases involving vulnerable groups will be managed.

Issues such as not being able to differentiate between incentives or reimbursements were also queried. The study REC's Standard Operating Procedures explaine that the researcher should indicate whether participants will be reimbursed for costs associated with participation. If participants will be reimbursed, the researcher should submit a reimbursement plan to the REC, which includes the nature of the cost to be reimbursed, the amount/method/value of the reimbursement, as well as a justification for the amounts proposed. This should be mentioned in the participants' informed consent document. Furthermore, the study REC's Standard Operating Procedures necessitate that researchers should explain whether incentives will be offered to facilitate participant recruitment. The inducement should not unduly influence an informed choice about participation and should not undermine a potential participant's assessment of the potential risk of harm.

Minimising risks was another issue queried (36%) under the topic of fair participant selection. Particularly, applicants' failure to specify the steps to be taken to minimise risks of harm to participants in the protocol or the information sheet. This includes failure to provide referral to counselling services for emotional or social harm experienced during a study.

5.2.4 Independent review

Independent review was the fourth most queried principle by the study REC with (9%). This was also the case for Frimpong (2016), but some variance can be observed across other literature (Bengu, 2018; Madanhire, 2018; Selormey, 2016; Tsoka-Gwegweni & Wassenaar, 2014). The Declaration of Helsinki (2013) maintains that the REC's decisions and resolutions are made independently; no pressure from outside the REC may be exerted on the REC or its members to effect a particular resolution. Resolutions may not be overturned or overruled by an office bearer of the host organisation or any other party. Thus the study REC always encourages applicants to attend the REC meetings and the REC includes external members and a Chairperson to avoid being biased.

Eighty-six percent of queries related to researches not furnishing the study REC with ethical clearance letters from their affiliated institutions. In addition, applicants did not demonstrate familiarity with South African health laws and ethics guidelines. Some queries, for example, showed that applicants were not familiar with the Children's Act (DoH, 2015) and Guidelines

for Good Practice in the Conduct of Clinical Trials with Human Participants in South Africa (2006), and the Clinical Trial Participant Time, Inconvenience and Expense (TIE) Compensation Model (SAHPRA, 2018). It is imperative for researchers to familiarise themselves with these documents as they instruct ethics review for health research, including socio-behavioural and psychological research (Wassenaar & Slack, 2016). These guidelines serve as a reference text and provide guidance on minimum standards that are acceptable for researchers when conducting research in human participants in South Africa.

The study REC queried the reconciliation of multiple reviews (14%) – there were instances where an applicant applied simultaneously to the study REC and their host university REC for ethics clearance. Once the study received ethical clearance from the university, it became very difficult for the applicant to submit revisions to the study REC because in some instances there will be clashes of comments between the two. It is recommended that the applicant deals transparently with the processes taken to acquire ethical clearance so that both parties can communicate, if and when the need arises, to avoid delaying the process of obtaining ethical clearance and to avoid duplicating the work. However, Dyck and Allen (2012) feel that mandating multiple reviews of multi-site research shows that RECs do not trust the merit and integrity of other RECs. Dawson et al. (2019) argue that the study REC should invite applicants to attend REC meetings when their applications are discussed so that applicants are given an opportunity to respond to queries immediately, bearing in mind the confidentiality of the meeting, to encourage transparent review.

5.2.5 Ongoing respect for recruited participants and study communities

Respect for recruited participants and study communities was the fifth most queried principle (8%). As the less frequently queried principles are clustered together more closely, there is less consistency with other studies with regards to ranking of frequency. Bengu (2018), Frimpong (2016), Madanhire (2018), Selormey (2016) and Tsoka-Gwegweni and Wassenaar (2014) all reported ongoing respect for participants and study communities as fourth most frequent or less.

In this study, 79% of the queries received regarding the principle of ongoing respect concerned missing procedures to anonymise data, maintenance of confidentiality, justification for using photographs and how photos will be anonymised. These requirements were posed to researchers as it is imperative to clarify procedures for anonymity and confidentiality, to avoid participants being stigmatised and to ensure participants' right to privacy and

confidentiality (DoH, 2015). Another issue that was flagged by the REC was the method and duration of data storage. Most applicants did not explain the fate of the recordings. The Protection of Personal Information Act 4 of 2013 which is in effect has increased the need to ensure computer safety, locked record storage facilities and careful gate-keeping access to raw data.

There was a specific lack of explanation of how confidentiality would be maintained when interviews and Focus Group Discussions were conducted. Applicants did not explain how participants would be made aware that confidentiality cannot be guaranteed in FGDs. For example, the most asked question by reviewers centred around the provision of safe spaces for conducting participant interviews to avoid being overheard and/or to avoid stigmatisation. Researchers were also asked to justify the use of photographs. Dixon-woods et al. (2008) advocate strongly for issues of confidentiality and privacy when protocols are reviewed.

Additionally, the study REC requested details on how study results would be presented and made accessible to participants, since they ought to have access to findings of a study to which they dedicated their time and information to (Curran et al., 2018; Turcotte-Tremblay & Mc Sween-Cadieux, 2018). The presentation and accessibility of results made available to participants, as well as the time frames for this, should be appropriate and clarified with participants.

Lastly, the study REC also emphasised that participants should know their rights and feel free to withdraw from participation whenever they no longer feel comfortable, or for any other reason, without being intimidated or victimised by the researcher or feeling that they may lose out on some benefits of the study. In total, 15% of queries were about the voluntariness of participants, and 6% of queries focused strictly on monitoring the well-being of participants. Fouka and Mantzorou (2011) and Fernandez Lynch (2020) emphasise that freedom to withdraw from a study at any given time should be mentioned to participants.

5.2.6 Favourable risk-benefit ratio

Favourable risk-benefit ratio was the sixth principle that was queried by the study REC (5%). It was similarly low in frequency in studies by Bengu (2018), Silaigwana and Wassenaar (2019), and Tsoka-Gwegweni and Wassenaar (2014). Applicants generally gave this aspect significant attention and the study REC mostly reviewed minimal risk studies. Emanuel et al. (2004) mention that potential risks of harm should be outweighed by the benefits to

participants or the community where data will be collected. Members of the study REC were mostly concerned about referrals for counselling as a method of minimising the risks of harm, as researchers should be able to identify the potential risks, as well as measures to be taken to minimise potential harms and exploitation by protecting and respecting participants' rights and welfare (Fouka and Mantzorou, 2011).

It can be expected that issues of risk-benefit ratio vary between human sciences and biomedical research, as the risks and benefits are of a different nature. Frimpong (2016) emphasises the importance of researchers ensuring that scientific values are archived in studies that create burdens, inconveniences, discomfort and risks of harm to potential participants. It is worth noting that study applicants also tend to exaggerate the indirect benefits of participating in a study.

5.2.7 Collaborative partnerships

The seventh principle that the study REC queried was collaborative partnerships (4%). Members of the study REC used this broad category to ensure that applicants were aware of potential issues or risks that could affect the researched communities, or individual members of communities in which the research was planned to be conducted. In particular, the study REC wanted to make sure that applicants were aware of relevant cultural or contextual issues. For example, researchers may propose to incentivise participants with airtime vouchers without determining whether participants have cell phones or not. Alternatively, researchers may choose a certain community to conduct their research in without considering whether other research is already being conducted there. These ethical issues are usually mitigated by involving the community representatives in research preparations to ensure the local context is represented (Tsoka-Gwegweni & Wassenaar, 2014) and also to ensure that recruited participants and communities receive benefits from the research results, be it directly or indirectly (Emanuel et al., 2004). Other studies, such as Kirimuhuzya (2015) and Bengu (2018) tend to share this study's observation that collaborative partnerships is not a highly ranked issue. This could be accounted for by the fact that collaborative partnerships tend to raise issues that might require a higher degree of contextual knowledge to identify (Nyström et al., 2018).

5.2.8 Social value

Social value was ranked last together with collaborative partnerships, with 4% of queries relating to this. Nineteen percent of these issues focused on assisting the researcher to communicate the rationale, aims and objectives of the research to participants and explaining to participants the expected impact the study would have in their communities. The study REC wanted to ensure that the benefits of participating would be clearly explained to participants without being pressurised to consent and that participants would be made aware that, while they may not see the benefits now, results or benefits may be evident in future. The REC also stressed that the process for dissemination of results was to be clearly stated so that participants could see the significance of the study to their communities. Bengu (2018), Frimpong (2016), Kirimuhuzya (2015), Madanhire (2018), Selormey (2015), and Silaigwana & Wassenaar (2015)) ranked social value the least.

5.3 Systematic prioritisation of ethical issues and observable patterns

This study set out not only to identify and describe ethical issues raised by the study REC but to identify any systematic prioritisation of ethical issues and observable patterns. Examining the findings of this study and other SARETI research studies on the topic, a clear pattern emerges. Informed consent, scientific validity and fair participant selection rank as the most common ethical issues identified across all seven SARETI research studies conducted on the topic.

Informed consent was the most frequently identified ethical issue in four of the seven studies (present study Sithole, 2021; Bengu, 2018; Selormey, 2015; Tsoka-Gwengweni & Wassenaar, 2014) and the second most frequent issue in two of the studies (Frimpong, 2016; Kirimuhuzya, 2015). Scientific validity was the most frequently identified issue in two of the studies (Frimpong, 2016; Kirimuhuzya, 2015) and the second most frequent issue in four of the studies (present study Sithole, 2021; Bengu, 2018; Selormey, 2015; Tsoka-Gwengweni & Wassenaar, 2014). Fair participant selection was identified as the third most frequently identified ethical issue in five of the studies (present study Sithole, 2021; Bengu, 2018; Kirimuhuzya, 2015; Selormey, 2015; Tsoka-Gwengweni & Wassenaar, 2014).

5.4 Other concerns raised by the study REC that are not consistent with the framework discussed by Emanuel et al. (2004)

The study REC also raised concerns that were not consistent with the Emanuel et al. (2004) framework. In total these concerns only accounted for 3% (n=27) of the ethical concerns raised. These issues included grammatical errors, typographical errors, unexplained abbreviations, missing CVs and proof of ethics training. These additional queries fall neatly into two groups: issues with clarity of the protocol itself, and issues with qualifications or capacity of researchers.

Similarity, Bengu (2018) found that the minutes were not consistent with the framework which related to spelling errors, use of abbreviations, requests for clarity, timeframes and budgetary issues. Silaigwana and Wassenaar (2019) also identified administrative queries, such as missing investigator curriculum vitae (CVs) or research budgets. The study by Selormey (2015) reported that there were issues raised during the review meetings around administration, typographic and grammatical errors. Cleaton-Jones (2010) agrees that issues mostly queried were typing errors and incompleteness of application forms. Analysis of data for Madanhire (2018) revealed issues concerning administrative requirements – these issues entailed researchers not using the correct version of the application form, missing support documents, resource capacity and budgetary concerns and the other significant proportion of concerns tied in with typographical errors, that is, spelling and grammar mistakes.

The Emanuel et al. (2004) framework does not include any reference to relevant knowledge and skills of the applicants, research ethics certificates to show their familiarity with the field, and provision of the researchers' CV to check if the applicant has any background in research and qualifies to undertake research. These technical issues should form part of a comprehensive framework of ethical principles. DoH (2015) specifies the importance of a qualified researcher who possesses the technical competency to carry out the proposed research, since the researcher has the responsibility to protect participants and is responsible for implementing the study. It is important for international researchers to have a South African co-principal investigator to assist the researchers abide and comply with the locally acceptable ethical standards, norms and regulations (Guillemin et al., 2012) and one way of demonstrating competency is through academic qualifications and research ethics training.

5.5 Study limitations

This study had several limitations. The first limitation of this study is that there were ethical queries raised by the study REC which were applicable to more than one principle. During data capture those queries were categorised under one principle and counted once. As such the data may contain some coding errors. This concern was also raised in similar studies conducted by Tsoka-Gwegweni and Wassenaar (2014), Selormey (2015), Frimpong (2016) and Bengu (2018). It is unclear whether these areas of overlap and ambiguity across principles also lead to any variation in application and use of the framework by RECs. Alternatively, this overlap could also lead to duplication of issues. This observation from the results does suggest that there would be some benefit in conducting a more in-depth qualitative analysis of the specific queries of a smaller sample of protocols to identify whether ethical queries arise under multiple principles.

Secondly, the content analysis in this study was done manually (identification and coding) which was time consuming. Furthermore, considering the high volume of data which was analysed, this process of analysing was prone to errors (Bengu, 2018).

Another limitation of this study is that no demographic data was collected regarding the applicants whose ethics review feedback was included in the study. Collecting data on the Principal Investigators, research teams, researcher's qualifications and source of funding etc. would have allowed further analysis of whether ethical issues relating to scientific validity, social value and fair distribution of benefits.

The last limitation of this study is that data was collected using the 2017-2018 REC meeting minutes but due to unforeseen delays the thesis was only completed and submitted in 2021. As the host REC ethics application form has been updated twice since data collection, the applicability and subsequent benefit of these findings to the host REC is diminished.

5.6 Conclusion

This chapter discussed the study findings and examined how previous studies report similar distribution of queries. A pattern was observed that all elements which Emanuel et al. (2004) describe as the ethical principles and benchmarks for the developing world, do apply to the

current study REC, as all those benchmarks were compatible to the study REC queries when reviewing protocols.

Chapter 6: Conclusions and Recommendations

6.1 Conclusion

In response to the problems experienced when applying existing ethical principles and guidelines to research with human participants, Emanuel et al. (2004) developed an ethical framework for research in developing countries. This framework aimed to provide unified and consistent ethical guidance for research conducted in developing countries.

The aim of this study was to identify ethical issues raised during ethics review of research protocols by the study REC and assess the relative weight of the ethical issues using the eight principles of the Emanuel et al. (2004) framework for ethical review of research. This study identified and coded the 2017–2018 meeting minutes of a South African Social Science Research Ethics committee, using the eight principles and benchmarks of the Emanuel et al. (2004) framework. This study formed part of an international collaboration involving the 2013–2017 South African Research Ethics Training Initiative (SARETI) Masters in Social Science (Health Research Ethics) degree students from the University of KwaZulu-Natal, South Africa. The series of research studies aimed to evaluate the ethical concerns of African RECs using the Emanuel et al. (2004) framework.

Firstly, the study found that the most frequently raised ethical issues were around informed consent. The remaining principles were ranked as follows: scientific validity, fair selection of participants, independent reviews, ongoing respect of participants, favourable risk-benefit ratio, collaborative partnerships, and social value. Secondly, examining the findings of this study and other SARETI studies on the same topic shows a clear pattern. Informed consent, scientific validity and fair participant selection appear as the most common ethical issues identified across all seven SARETI studies conducted on the topic. Thirdly, the study REC was found, in a few instances, to raise concerns that were not consistent with the Emanuel et al. (2004) framework. These concerns related to issues with clarity of the protocol itself and issues with qualification or capacity of researchers.

Overall, the study revealed that the Emanuel et al. (2004) framework was useful in identifying and categorising the questions and concerns typically raised by the study REC during protocol review, with only a small number of queries not fitting into the framework. The framework does provide a means to conduct further comparative analyses of RECs' concerns and can be

used as a standard tool for REC members when reviewing protocols (Emanuel et al., 2004). The framework can improve the quality of work done by RECs, providing a harmonised structure to the review of protocols, allowing RECs to review protocols adequately by looking at suitable ethical implications and avoid missing important ethical issues. Using the Emanuel et al. (2004) framework also creates a sense of transparency of criteria used in the review process. It is also worth noting that the framework, given its usefulness for RECs, can also provide guidance to researchers during the planning and development phases of the research studies.

6.2 Recommendations

It is recommended that social science REC members be provided with intensive induction training using the Emanuel et al. (2004) framework in order to build capacity, reduce uncertainties from reviewers, improve turnaround time of reviews and improve the quality of reviews.

Although the host REC's ethics application form has been updated since data collection, it is recommended that future updates ensure that the ethics application form covers all areas of the Emanuel et al. (2014) framework to ensure all ethical principles and benchmarks are considered by both the applicants and the reviewers.

Lastly, it is recommended that REC administrators be familiarised with the Emanuel et al. (2014) framework to improve their understanding of the committees' and applicants queries.

REFERENCES

Abbott, L., & Grady, C. (2011). A systematic review of the empirical literature evaluating IRBs: What we know and what we still need to learn. *Journal of Empirical Research on Human Research Ethics*, *6*(1), 3–19. https://doi.org/10.1525/jer.2011.6.1.3

Alderson, P. (2004). Absence of evidence is not evidence of absence. *BMJ*, *328*(7438), 476–477. https://doi.org/10.1136/bmj.328.7438.476

Alreck, P., & Settle, R. (1995). *The survey research handbook*. McGraw-Hill/Irwin.

Amdur, R., & Bankert, E. (2011). *Institutional Review Board* (3rd ed.). Jones & Bartlett.

Angell, E., Biggs, H., Gahleitner, F., & Dixon-Woods, M. (2010). What do research ethics committees say about applications to conduct research involving children? *Archives of Disease in Childhood*, *95*(11), 915–917. https://doi.org/10.1136/adc.2009.172395

Ballantyne, A. (2008). 'Fair benefits' accounts of exploitation require a normative principle of fairness: response to Gbadegesin and Wendler, and Emanuel et al. *Wiley Online Library*, 2(1), 239-244. https://doi.org/10.1111/j.1467-8519.2007.00622.

Barrett, D., Ortmann, L., Dawson, A., Saenz, C., Reis, A., & Bolan, G. (2016). *Public Health Ethics*: *Cases Spanning the Globe*.

Beauchamp, T., & Childress, J. (2001). *Principles of biomedical ethics* (5th ed.). Oxford University Press.

Beauchamp, T., & Childress, J. (2009). *Principles of biomedical ethics* (7th ed.). Oxford University Press.

Beecher, H. (1966). Ethics and clinical research. *New England Journal of Medicine*, *274*(24), 1354–1360. https://doi.org/10.1056/nejm196606162742405

Benatar, S. (2002). Reflections and recommendations on research ethics in developing countries. *Social Science & Medicine*, *54*(7), 1131–1141. https://doi.org/10.1016/s0277-9536(01)00327-6

Bengu, S. (2018). *An evaluation of the ethical concerns of a social science research ethics committee using the principles and benchmarks proposed by Emanuel et al. (2004)*. [Unpublished master's thesis]. University of KwaZulu-Natal.

Bracken-Roche, D., Bell, E., Macdonald, M., & Racine, E. (2017). Erratum to: The concept of 'vulnerability' in research ethics: an in-depth analysis of policies and guidelines. *Health Research Policy and Systems*, *15*(1), 1–18. https://doi.org/10.1186/s12961-017-0186-8

Burman, W., Reves, R., Cohn, D., & Schooley, R. (2001). Breaking the camel's back: Multicenter Clinical trials and local institutional review boards. *Annals of Internal Medicine*, *134*(2), 152–157. https://doi.org/10.7326/0003-4819-134-2-200101160-00016

Che Chi, P., Horn, L., & Kruger, M. (2021). Risk-benefit assessment. In M. Kruger, P. Ndebele, & L. Horn (Eds.), *Research ethics in Africa*: *A resource for research ethics committees* (pp. 63–70). SUN MeDIA. http://www.sun.ac.za/english/faculty/healthsciences/paediatrics-and-child-health/Documents/9781920689315%20Research%20Ethics.pdf

CIOMS. (2002). *International ethical guidelines for biomedical research involving human subjects*. https://pubmed.ncbi.nlm.nih.gov/14983848/

CIOMS. (2016). *2016 International ethical guidelines for health-related research involving humans*. https://cioms.ch/publications/product/international-ethical-guidelines-for-health-related-research-involving-humans/

Cleaton-Jones, P. (2010). Process error rates in general research applications to the Human Research Ethics Committee (Medical) at the University of the Witwatersrand: A secondary data analysis. *South African Journal of Bioethics and Law*, *3*(1), 20–24. https://www.ajol.info/index.php/sajbl/article/view/69944

Cleaton-Jones, P., & Vorster, M. (2008). Workload of a South African University-based Health Research Ethics Committee in 2003 and 2007. *South African Medical Journal*, *1*(2), 38–43. https://www.ajol.info/index.php/sajbl/article/view/41795

Committees and Council National Health Research Ethics Council. (2019). *Agenda parts 1 and 2 – Selected general issues from audits and annual report*. Presentation, National Health Research Ethics Committee.

Constitution and Code of Conduct of the National Health Research Ethics Council (2017). https://www.health.gov.za/wp-content/uploads/2022/05/NHREC-Constitution-2017.pdf

Curran, D., Kekewich, M., & Foreman, T. (2018). Examining the use of consent forms to promote dissemination of research results to participants. *Research Ethics*, *15*(1), 1–28. https://doi.org/10.1177/1747016118798877

Davies, S. (2020). The introduction of research ethics review procedures at a university in South Africa: review outcomes of a social science research ethics committee. *Research Ethics*, *16*(1–2), 1–26. https://doi.org/10.1177/1747016119898408

Dawson, A., Lignou, S., Siriwardhana, C., & O'Mathúna, D. (2019). Why research ethics should add retrospective review. *BMC Medical Ethics*, *20*(1). https://doi.org/10.1186/s12910-019-0399-1

Department of Health. (2006). *Guidelines for Good Practice in the Conduct of Clinical Trials with Human Participants in South Africa*. Pretoria, South Africa. http://www.kznhealth.gov.za/research/guideline2.pdf

Department of Health. (2004, 2015). *Ethics in Health Research: Principles,Processes and Structures. Pretoria, South Africa* (2) https://www.ul.ac.za/research/application/downloads/DoH%202015%20Ethics%20in%20Health%20Research%20Guidelines.pdf

Department of Health and Human Services. (2018). *FY 2018 Agency Financial Report*. https://www.hhs.gov/sites/default/files/fy-2018-hhs-agency-financial-report.pdf

Dickert, N., & Sugarman, J. (2005). Ethical goals of community consultation in research. *American Journal of Public Health*, *95*(7), 1123–1127. https://doi.org/10.2105/ajph.2004.058933

Dixon-Woods, M., Angell, E., Tarrant, C., & Thomas, A. (2008). What do research ethics committees say about applications to do cancer trials? *The Lancet Oncology*, *9*(8), 700–701. https://doi.org/10.1016/s1470-2045(08)70184-0

Dyck, M., & Allen, G. (2012). Is mandatory research ethics reviewing ethical?. *Journal of Medical Ethics*, *39*(8), 517–520. https://doi.org/10.1136/medethics-2011-100274

Emanuel, E., Wendler, D., Killen, J., & Grady, C. (2004). What makes clinical research in developing countries ethical? The benchmarks of ethical research. *The Journal of Infectious Diseases*, *189*(5), 930–937. https://doi.org/10.1086/381709

Federman, D., Hanna, K., & Rodriguez, L. (2002). *Responsible research*: *A systems approach to protecting research participants*. National Academies Press. https://www.ncbi.nlm.nih.gov/books/NBK43555/

Fernandez Lynch, H. (2020). The right to withdraw from controlled human infection studies: Justifications and avoidance. *Bioethics*, *34*(8), 833–848. https://doi.org/10.1111/bioe.12704

Fost, N., & Levine, R. (2007). The dysregulation of human subjects research. *JAMA*, *298*(18), 2196. https://doi.org/10.1001/jama.298.18.2196

Fouka, G., & Mantzorou, M. (2011). What are the major ethical issues in conducting research? Is there a conflict between the research ethics and the nature of nursing? *Health Science Journal*, *5*(1), 3–14. https://www.researchgate.net/profile/Marianna-Mantzorou/publication/233959936_What_are_the_Major_Ethical_Issues_in_Conducting_Research_Is_there_a_Conflict_between_the_Research_Ethics_and_the_Nature_of_Nursing/links/09e4150d581afbed0c000000/What-are-the-Major-Ethical-Issues-in-Conducting-Research-Is-there-a-Conflict-between-the-Research-Ethics-and-the-Nature-of-Nursing.pdf

Freedman, B. (1987). Scientific value and validity as ethical requirements for research: A proposed explication. *IRB*: *Ethics and Human Research*, *9*(6), 7. https://doi.org/10.2307/3563623

Frimpong, H. (2016). *An evaluation of ethical concerns of an institutional research ethics committee in Ghana, using the Emanuel et al. (2004) principles and benchmarks*. [Unpublished master's thesis]. University of KwaZulu-Natal.

Geoff, D. (2016). *Werner Bezwoda and his fraudulent breast cancer research*. Dr Geoff. https://drgeoffnutrition.wordpress.com/2016/04/21/werner-bezwoda-and-fraudulent-breast-cancer-research/comment-page-1/

Goodwin, F., Fireman, B., Simon, G., Hunkeler, E., Lee, J., & Revickie, D. (2003). Suicide risk in bipolar disorder during treatment with lithium and divalproex. *JAMA*, *290*(11), 1467–1473. https://doi.org/10.1001/jama.290.11.1467

Guillemin, M., Gillam, L., Rosenthal, D., & Bolitho, A. (2012). Human Research Ethics Committees: Examining Their Roles and Practices. *Journal of Empirical Research on Human Research Ethics*, *7*(3), 38–49. https://doi.org/10.1525/jer.2012.7.3.38

Gunsalus, C., Bruner, E., Burbules, N., Dash, L., Finkin, M., Goldberg, J., Greenough, W., Miller, G., & Pratt, M. (2006). Mission creep in the IRB world. *Science*, *312*(5779), 1441–1441. https://doi.org/10.1126/science.1121479

IJSSELMUIDEN, C., MARAIS, D., WASSENAAR, D., & MOKGATLA-MOIPOLAI, B. (2012). MAPPING AFRICAN ETHICAL REVIEW COMMITTEE ACTIVITY ONTO CAPACITY NEEDS: THE MARC INITIATIVE AND HRWEB'S INTERACTIVE DATABASE OF RECS IN AFRICA. Developing World Bioethics, 12(2), 74-86. https://doi.org/10.1111/j.1471-8847.2012.00325.x

Kass, N., Maman, S., & Atkinson, J. (2005). Motivations, understanding, and voluntariness in international randomized trials. *IRB: Ethics and Human Research*, *27*(6), 1–8. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3099429/

King, N., & Hyde, M. (2012). *Bioethics, public moral argument, and social responsibility*. Bioethics at Wake Forest University. http://bioethics.wfu.edu/news/bioethics-public-moral-argument-social-responsiblity

Kirimuhuzya, C. (2015). *An evaluation of ethical concerns raised by a Ugandan research ethics committee using the principles and benchmarks proposed by Emanuel et al. (2008)*. [Unpublished master's thesis]. University of KwaZulu-Natal.

Klitzman, R. (2015). Consenting for molecular diagnostics. *Clinical Chemistry*, *61*(1), 139–141. https://doi.org/10.1373/clinchem.2014.223404

Kombe, F., Anunobi, E., Tshifugula, N., Wassenaar, D., Njadingwe, D., & Mwalukore, S. et al. (2014). Promoting research integrity in Africa: An African voice of concern on research misconduct and the way forward. *Developing World Bioethics*, *14*(3), 158–166. https://doi.org/10.1111/dewb.12024

Kruger, P., Ndebele, L., & Horn, L. (2014). *Research ethics in Africa*: *A resource for research ethics committees*. (pp. 21–27). SUN MeDIA. http://www.sun.ac.za/english/faculty/healthsciences/paediatrics-and-child-health/Documents/9781920689315%20Research%20Ethics.pdf

Kuhse, H., & Singer, P. (2009). What is bioethics? A historical introduction. *A Companion to Bioethics*, 1–11. https://doi.org/10.1002/9781444307818.ch1

Madanhire, C. (2018). *An evaluation of the ethical concerns of Zimbabwean research ethics committees* (*RECs)*, *using the Emanuel et al*. (*2004) principles and benchmarks*. [Unpublished master's thesis]. University of KwaZulu-Natal.

Mamotte, N., & Wassenaar, D. (2009). Ethics review in a developing country: A survey of South African social scientists' experiences. *Journal of Empirical Research on Human Research Ethics*, *4*(4), 69–78. https://doi.org/10.1525/jer.2009.4.4.69

Marzouk, D., Abd El Aal, W., Saleh, A., Sleem, H., Khyatti, M., & Mazini, L. et al. (2014). Overview on health research ethics in Egypt and North Africa. *The European Journal of Public Health*, *24*(suppl 1), 87–91. https://doi.org/10.1093/eurpub/cku110

Moghalu, K. (2014). Why has Africa fallen behind the rest of the world's economies? *The Guardian*, 1–4. https://www.theguardian.com/global-development/2014/aug/04/africa-fallen-behind-economies-science-technology

Mokgatla, B., IJsselmuiden, C., Wassenaar, D., & Kasule, M. (2017). Mapping research ethics committees in Africa: Evidence of the growth of ethics review of health research in Africa. *Developing World Bioethics*, *18*(4), 341–348. https://doi.org/10.1111/dewb.12146

Molyneux, S., & Geissler, P. (2008). Ethics and the ethnography of medical research in Africa. *Social Science & Medicine*, *67*(5), 685–695. https://doi.org/10.1016/j.socscimed.2008.02.023

Moodley, K., & Myer, L. (2007). Health research ethics committees in South Africa 12 years into democracy. *BMC Medical Ethics*, *8*(1). https://doi.org/10.1186/1472-6939-8-1

National Health Act 61 of 2003 | South African Government. (2003). https://www.gov.za/documents/national-health-act

Ndebele, P., Mwaluko, G., Kruger, M., Oukem-Boyer, O., & Zimba, M. (2014). History of research ethics review in Africa. In M. Kruger, P. Ndebele & L. Horn (Eds.), *Research ethics in Africa*: *A resource for research ethics committees* (pp. 3–10). SUN MeDIA. http://www.sun.ac.za/english/faculty/healthsciences/paediatrics-and-child-health/Documents/9781920689315%20Research%20Ethics.pdf

Ngongalah, L., Rankin, J., Rapley, T., Odeniyi, A., Akhter, Z., & Heslehurst, N. (2018). Dietary and physical activity behaviours in African migrant women living in high income countries: A systematic review and framework synthesis. *nutrients*, *10*(8), 1017. https://doi.org/10.3390/nu10081017

Noble, H., & Smith, J. (2015). Issues of validity and reliability in qualitative research. *Evidence Based Nursing*, *18*(2), 1–8. https://doi.org/10.1136/eb-2015-102054

Nyika, A., Kilama, W., Chilengi, R., Tangwa, G., Tindana, P., Ndebele, P., & Ikingura, J. (2009). Composition, training needs and independence of ethics review committees across Africa: are the gate-keepers rising to the emerging challenges?. *Journal Of Medical Ethics*, *35*(3), 189–193. https://doi.org/10.1136/jme.2008.025189

Nyström, M., Karltun, J., Keller, C., & Andersson Gäre, B. (2018). Collaborative and partnership research for improvement of health and social services: researcher's experiences from 20 projects. *Health Research Policy And Systems*, *16*(1). https://doi.org/10.1186/s12961-018-0322-0 Onuoha, C. (2007). *Bioethics across borders*: *An African perspective*. [Unpublished doctoral dissertation]. Uppsala University, Uppsala.

Osadsky, C. (2011). Phocomelia: Case report and differential diagnosis. *Radiology Case Reports*, *6*(4), 561. https://doi.org/10.2484/rcr.v6i4.561

Potter, V. (1970). Bioethics, the science of survival. *Perspectives in Biology and Medicine*, *14*(1), 127–153. https://doi.org/10.1353/pbm.1970.0015

Protection of Human Subjects, 45 CFR 46 (2009). https://www.hhs.gov/ohrp/regulations-and-policy/regulations/45-cfr-46/index.html

Protection of Personal Information Act 4 of 2013 | South African Government. (2021). https://www.gov.za/documents/protection-personal-information-act

Rahman, S. (2015). Ethical Issues of Fair Subject Selection in the Research. *Bangladesh Journal Of Bioethics*, *6*(3), 37-40. https://doi.org/10.3329/bioethics.v6i3.27619 Schoeman, M. (2019). Research ethics governance – an African perspective. *Research Ethics Forum*, 1–15. https://doi.org/10.1007/978-3-030-15402-8_1

Selormey, P. (2015). *An evaluation of ethical concerns raised by a Ghanaian research ethics committee using the principles and benchmarks proposed by Emanuel et al*. (*2008*). [Unpublished master's thesis]. University of KwaZulu-Natal.

Seymour, J., & Skilbeck, J. (2002). Ethical considerations in researching user views. *European Journal of Cancer Care*, *11*(3), 215–219. https://doi.org/10.1046/j.1365-2354.2002.00342.x

Shah, P., Thornton, I., Turrin, D., & Hipskind, J. (2021). *Informed consent*. In StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing, 2021 Jan– .https://www.ncbi.nlm.nih.gov/books/NBK430827/

Shah, S., Whittle, A., Wilford, B., Gensler., G., & Wendler., D. (2004). How do institutional review boards apply the federal risk and benefit standards for pediatric research? *JAMA*, *291*(4), 476–482. https://doi.org/10.1001/jama.291.4.476

Silaigwana, B., & Wassenaar, D. (2015). Biomedical research ethics committees in sub-Saharan Africa. *Journal of Empirical Research on Human Research Ethics*, *10*(2), 169–184. https://doi.org/10.1177/1556264615575511

Silaigwana, B., & Wassenaar, D. (2019). Research ethics committees' oversight of biomedical research in South Africa: A thematic analysis of ethical issues raised during ethics review of non-expedited protocols. *Journal of Empirical Research on Human Research Ethics*, *14*(2), 107–116. https://doi.org/10.1177/1556264618824921

Sim, J., & Waterfield, J. (2019). Focus group methodology: some ethical challenges. *Quality & Quantity*, *53*(6), 3003–3022. https://doi.org/10.1007/s11135-019-00914-5

Simwinga, M., & Kabero, C. (2014). Community engagement. In M. Kruger, P. Ndebele & L. Horn (Eds.), *Research ethics in Africa*: *A resource for research ethics committees* (pp. 143–152). SUN MeDIA. http://www.sun.ac.za/english/faculty/healthsciences/paediatrics-and-child-health/Documents/9781920689315%20Research%20Ethics.pdf

Slowther, A., Boynton, P., & Shaw, S. (2006). Research governance: Ethical issues. *Journal of The Royal Society of Medicine*, *99*(2), 65–72. https://doi.org/10.1177/014107680609900218

Small, M., & Newman, K. (2001). Urban poverty after the truly disadvantaged: The rediscovery of the family, the neighborhood, and culture. *Annual Review of Sociology*, *27*(1), 23–45. https://doi.org/10.1146/annurev.soc.27.1.23

South African Constitution. (1996). Constitution of the Republic of South Africa, 1996 – Chapter 2: Bill of Rights. https://www.gov.za/documents/constitution/chapter-2-bill-rights

South African Health Products Regulatory Authority (SAHPRA). (2018). *Clinical Trial Participant Time, Inconvenience and Expense* (*TIE*) *Compensation Model*. https://www.sahpra.org.za/wp-content/uploads/2020/02/7_Clinical-Trial-Participant-Time-Inconvenience-and-Expense_TIE_Compensation_Model_May18_v1-1.pdf

Strode, A., Singh, P., Slack, C., & Wassenaar, D. (2018). Research ethics committees in a tight spot: Approving consent strategies for child research that are *prima facie* illegal

but are ethical in terms of national guidelines. *South African Medical Journal*, *108*(10), 828–832. http://www.samj.org.za/index.php/samj/article/view/12436

The Belmont Report. (1979). http://www.hhs.gov/ohrp/humansubjects/guidance/belmont.html

The Nuremberg Code (1947). *BMJ* 1996, *313*(7070), 1448–1448. https://doi.org/10.1136/bmj.313.7070.1448

Tolich, M. (2008). The principle of caveat emptor: confidentiality and informed consent as endemic ethical dilemmas in focus group research. *Journal of Bioethical Inquiry*, *6*(1), 99–108. https://doi.org/10.1007/s11673-008-9124-3

Tsoka-Gwegweni, J., & Wassenaar, D. (2014). Using the Emanuel et al. framework to assess ethical issues raised by a biomedical research ethics committee in South Africa. *Journal of Empirical Research on Human Research Ethics*, *9*(5), 36–45. https://doi.org/10.1177/1556264614553172

Turcotte-Tremblay, A., & Mc Sween-Cadieux, E. (2018). A reflection on the challenge of protecting confidentiality of participants while disseminating research results locally. *BMC Medical Ethics*, *19*(S1). https://doi.org/10.1186/s12910-018-0279-0

Vanclay, F., Baines, J., & Taylor, C. (2013). Principles for ethical research involving humans: ethical professional practice in impact assessment Part I. *Impact Assessment and Project Appraisal*, *31*(4), 243–253. https://doi.org/10.1080/14615517.2013.850307

Vanderslott, S., Van Ryneveld, M., Marchant, M., Lees, S., Nolna, S., & Marsh, V. (2021). How can community engagement in health research be strengthened for infectious disease outbreaks in Sub-Saharan Africa? A scoping review of the literature. *BMC Public Health*, *21*(1). https://doi.org/10.1186/s12889-021-10348-0

Vijayananthan, A., & Nawawi, O. (2008). The importance of good clinical practice guidelines and its role in clinical trials. *Biomedical Imaging and Intervention Journal*, *4*(1). https://doi.org/10.2349/biij.4.1.e5

Wassenaar, D., & Mamotte, N. (2012). Ethical issues and ethical reviews in social science research. In M. Leach, M. Stevens, G. Lindsay, A. Ferrero & Y. Korkut (Eds.), *The Oxford handbook of international psychological ethics* (pp. 268–282). Oxford University Press.

Wassenaar, D., & Slack, C. (2016). How to learn to love your research ethics committee: recommendations for psychologists. *South African Journal of Psychology*, *46*(3), 306–315. https://doi.org/10.1177/0081246316654348

Wasunna, C., Tegli, J., & Ndebele, P. (2014). Informed consent in an African context. In M. Kruger, P. Ndebele & L. Horn (Eds.), *Research ethics in Africa*: *A resource for research ethics committees*. SUN MeDIA.

http://www.sun.ac.za/english/faculty/healthsciences/paediatrics-and-child-health/Documents/9781920689315%20Research%20Ethics.pdf

Weigmann, K. (2015). The ethics of global clinical trials. *EMBO Reports*, *16*(5), 566–570. https://doi.org/10.15252/embr.201540398

Weijer, C., Goldsand, G., & Emanuel, E. (1999). Protecting communities in research: current guidelines and limits of extrapolation. *Nature Genetics*, *23*(3), 275–280. https://doi.org/10.1038/15455

Wemos in 2017: *Our annual overview – Wemos*. Wemos. (2021). https://www.wemos.nl/wp-content/uploads/2017/07/JH_Wemos_Clinical-Trials_v5_def.pdf

White, M. (1999). Guidelines for IRB review of international collaborative medical research: A proposal. *Journal of Law, Medicine & Ethics*, *27*(1), 87–94. https://doi.org/10.1111/j.1748-720x.1999.tb01440.x

Whitehouse, P. (2003). The rebirth of bioethics: Extending the original formulations of Van Rensselaer Potter. *The American Journal of Bioethics*, *3*(4), 26–31. https://doi.org/10.1162/152651603322614751

Wiener Klinische Wochenschrift. (2018). *Medical Ethics in the 70 Years after the Nuremberg Code, 1947 to the Present International Conference at the Medical University of Vienna*. https://europepmc.org/article/med/29926188

WMA. (1964). *WMA's Declaration of Helsinki serves as guide to physicians*. *JAMA*, *189*(13), 33–34. https://doi.org/10.1001/jama.1964.03070130073046

WMA. (2013). *Declaration of Helsinki – Ethical principles for medical research involving human subjects*. https://www.wma.net/policies-post/wma-declaration-of-helsinki-ethical-principles-for-medical-research-involving-human-subjects/

APPENDICES

Appendix 1: UKZN BREC Class Ethics Approval

UNIVERSITY OF
KWAZULU-NATAL
INYUVESI
YAKWAZULU-NATALI
RESEARCH OFFICE
Biomedical Research Ethics Administration
Westville Campus, Govan Mbeki Building
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26 April 2019

Prof D Wassenaar
Discipline of Psychology
School of Applied Human Sciences
wassenaar@ukzn.ac.za

Dear Prof Wassenaar

Protocol: Ethical issues raised by African Research Ethics Committees.
Degree: Class approval for MSocSc (Health Research Ethics) students
BREC reference number: BCA342/16 *(HSS/1450/014CA)*

RECERTIFICATION APPLICATION APPROVAL NOTICE

Approved:	21 June 2019
Expiration of Ethical Approval:	20 June 2020

I wish to advise you that your application for Recertification received on 26 February 2019 for the above protocol has been noted and approved by a sub-committee of the Biomedical Research Ethics Committee (BREC) for another approval period. The start and end dates of this period are indicated above.

If any modifications or adverse events occur in the project before your next scheduled review, you must submit them to BREC for review. Except in emergency situations, no change to the protocol may be implemented until you have received written BREC approval for the change.

The committee will be advised of the above at its next meeting to be held on 14 May 2019.

Yours sincerely

Prof V Rambiritch
Chair: Biomedical Research Ethics Committee

cc: postgraduate officer: khanyilet@ukzn.ac.za

Appendix 2: Permission from study REC

Permission obtained from the study REC to access their REC minutes.
This letter has been withheld to ensure confidentiality of the study site. The letter will be provided on request.

Appendix 3: Data Collection tool

Emanuel et al. (2008) principles and benchmarks	**Frequency -**	**Percentage**
Principle 1: Collaborative partnership		
Community representatives		
Responsibility sharing		
Principle 2: Social value		
Research beneficiaries		
Impact on health systems		
Principle 3: Scientific validity		
Appropriate design and methods		
Applicability of results		
Impact on provision of health care services		
Study design feasibility		
Principle 4: Fair selection		
Suitable study population		
Risk minimisation		
Benefits to participants		
Vulnerability		
Principle 5: Favourable risk-benefit ratio		
Risk identification and minimisation		
Principle 6: Independent review		
Regulatory compliance		
Minimisation and reconciliation of multiple reviews		
Principle 7: Informed consent		
Recruitment and incentives applicability to local context		
Appropriate disclosure documents and processes		
Presentation and accuracy of information		
Legally authorised representatives		
Gatekeeper's permission		
Context of consent process		
Principle 8: Respect for participants		
Monitoring health and well-being		
Confidentiality and privacy		
Voluntariness		
Other ethical issues not accommodated by the framework		
Grammatical errors		
Typographical errors		
Abbreviations		
Curriculum Vitae		
Ethics training		