Promoting research integrity through the lens of virtue ethics and deontological approach

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Issues pertaining to research misconduct and/or breach of research norms and standards have recently come to occupy a central place in research activities. In this article, we argue that a moral character-based approach (Aristotelian virtue ethics) and a self-regulating approach (Kantian deontology) can play a vital role if incorporated in health research ethics training workshops for research ethics committees (RECs) and researchers. We are of the view that on top of what institutions can develop as their best ethics guidelines, policies and regulatory framework, they should also prioritise capacitating their RECs and researchers on virtue ethics to make them appreciate the primacy of virtuous character when reviewing protocols and during the conduct of research. We, therefore, suggest that capacity building through research ethics training should incorporate the moral theories focusing on self-regulating and acquisition of moral character because these moral theories provide the underpinnings of the moral basis in respect of humanity and dignity, integrity, attainment of virtues and development of moral character.

Keywords. Moral character, self-regulation, autonomy, integrity, research misconduct.

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Research misconduct practices and/or breaches of research norms and standards have occupied a central place in research activities for some time. In this article, 'research misconduct' refers to any proven intentional distortion of the research norms and standards, and/or serious deviations from accepted standards.[1] Types of research misconduct include but are not limited to fabrication, falsification, plagiarism and guest authorship. Fabrication is the invention of data or information. Falsification is the alteration of the observed result of a scientific experiment. Plagiarism is taking someone else's work without attributing the source and claiming it to be one's own. In addition, guest authorship refers to people who are listed as authors but who did not make any contribution to the research.[1] These types of research misconduct are performed intentionally by those who choose to use unjustifiable means to achieve their targeted end results.

We acknowledge institutions' efforts in offering research ethics training and awareness sessions on ethics guidelines, ethical concerns associated with study designs and informed consent processes and the use and sharing of data or authorship issues. However, we argue that a moral character-based approach (Aristotelian virtue ethics) and self-regulating (Kantian) deontology can play an imperative role during training in health research ethics for Research Ethics Committee (REC) members and researchers. These moral theories provide the underpinnings for respect for humanity and dignity, the acquisition of virtues and the development of moral character. Furthermore, we suggest that research ethics training approaches within research institutions should aim to help researchers develop appropriate virtues and moral character to foster research integrity. Therefore, we consider character as a cause of consequences because the motive behind an act emanates from one's character. Some scholars argue that 'a character-based model is more important than a model determines obligation, because right motives and character tell us more about moral worth than do right actions performed under the prod of obligation'.[2] We are of the view that Kantian deontology also contributes to one's character because of its emphasis on the autonomy of the will, which promotes the good motives behind one's actions. However, we argue that inasmuch as the motive for an act matters, the very same act ought to conform with relevant stipulated principles and ethics guidelines that oblige everyone to follow when conducting research.

Research ethics training

Multiple cases of misconduct in health research present an urgent need to revisit laws, policies and all research instruments that are intended to guide researchers towards the production of reliable and genuine results. With specific reference to the South African (SA) context, Ballyram and Nienaber[3] assert that even though over the past 20 years the country has experienced exponential research output by seasoned scientists, there have been instances of research misconduct that are mostly engendered by pressure and temptations. This challenge seems to undermine the existing research ethics enforcement strategies. This is why character and duty-based training are presented as viable approaches intended to mould a researcher's traits to constantly demonstrate virtue throughout the research process.

Sustaining and enhancing research ethics requires focusing beyond mere compliance and investing more in instilling virtues, such as honesty and trustworthiness.[3] With a specific focus on the profundity of trustworthiness as underpinning confidentiality in research, the World Health Organization (WHO) underscores its indispensability towards protecting the interests of research participants.[4] Premised on Aristotelian discourse on virtue as building on nature, by encouraging health researchers to adopt virtues, such as trustworthiness, honesty, justice and fairness, their characters and professional outlook will be moulded by these virtues, leading them to exhibit these qualities in their research undertakings. This view underscores the importance of virtue training in health research.

The observation that research ethics training is vital for promoting research integrity and responsible conduct of research has been discussed in several studies.[5-12] Furthermore, there is a need in some countries to train researchers on bioethics and capacitate an Institutional Review Board (IRB), as a reliable mechanism towards ensuring that their research initiatives are compliant with international standards, while also being cognisant of their own contexts, 'the developing world needs both, bioethics training and Institutional Review Board (IRB) capacity reinforcement to ensure research conducted in each country is compliant with international standards, while at the same time, sensitive to the needs of the local populations'.[10] We also agree with the view that research ethics training is necessary; however, we argue that it should incorporate a character-based (Aristotelian) approach and self-regulating model (Kantian) into the training workshops. Banks[13] refers to cases of research misconduct that involve child abuse and renowned scientists' misrepresentation of research results as overt encroachments of professional integrity by the researchers. Cases of this nature reflect deficiencies in the entirely prescriptive and regulatory approach that has been adopted by RECs. This underscores the argument for cultivating virtue ethics and a profound sense of duty among health researchers, encouraging them to act from a place of conviction rather than merely meeting compliance demands.

Aristotelian underpinnings of virtue ethics in research

Aristotle regarded 'virtues and vices as not innate but acquired. Qualities of character (such as self-control or honesty) are acquired. From this it is plain that none of the moral excellences or virtues is implanted in us by nature; for that which is by nature cannot be altered by training'.[14] Aristotle also contended that virtues do not naturally proceed from human nature but are built on human nature through training. He further stated, 'Virtues then, come neither by nature nor against nature, but nature gives the capacity for acquiring them, and this is developed by training'.[14] Since virtue ethics is an approach to moral theory that emphasises the development of moral values and character, it is fundamental for researchers and scholars to be given ethics training. However, the modelling of ethics workshops should not only focus on health research ethics issues, ethics guidelines and statements on ethical research but also ought to include virtue theories that place greater emphasis on the development of good character traits for a (morally) flourishing human life.

In Aristotle's view, since a human character is developed through repeated acts that transmute into habits that permanently cause a moral agent to act in a persistent manner, it is cogent to infer that character is a product of voluntary repeated human acts; those who routinely do or say unjust actions tend to produce in themselves an unjust character. If individuals are aware of the long-term effects their actions will have on their character, then if they ultimately acquire a permanent disposition to act unjustly, it can be reasonably argued that they acquired this disposition voluntarily.[15] An unjust character in this case is not determined but people deliberately choose to develop such unacceptable characters mainly because they perceive end results to justify their unjust means. 'A morally good person with the right configuration of desires and motives is more likely than others to understand what should be done, more likely to perform attentively the acts required and act on moral ideals. A person we trust is one who has an ingrained motivation and desire to perform right actions'.[2] A similar argument was raised by Alasdair MacIntyre who is regarded as a key figure in the recent surge of interest in virtue ethics. His approach seeks to demonstrate that good judgment emanates from good character. Being a good person is not about seeking to follow formal rules, but an exhibition of moral character traits.[16] Virtues and moral character play a cardinal role in research; hence, a need to advocate for clear strategies intended to capacitate RECs and health researchers about their importance in maintaining a vibrant ethical culture in undertaking research activities.

Deontology underpinnings on research integrity

This section discusses in detail Kantian deontology. We first examine Kantian deontology together with the categorical imperative rules. We examine the kingdom of ends formulation of the categorical imperative as well as that of autonomy of the will and how they have influenced respect for research participants' dignity and public trust.

Kantian deontology has a strong role to play in research integrity issues. It must be pointed out that Kantian deontology is one form of deontology and that there are other forms. Beauchamp and Childress assert that David Ross has developed a pluralist deontology, which regards all moral principles' obligations to be prima facie. For Ross, 'Kant is wrong to think that the rightness or wrongness of an individual act can be inferred with certainty from its falling or not falling under a rule capable of being universalised. Kant is also wrong to think that moral rules have absolute authority admitting of no exception'.[2] We contend that Ross' view against Kant's argument on moral rules having absolute authority is not cogent because it creates room for ambiguity and confusion. If there is no absolutism in moral laws, grey areas will emerge and morality will be reduced to a porous enterprise. For instance, if moral principles are not prima facie, the implication is that honesty during the report of the research results will sometimes be ignored if ever it is in conflict with another moral principle. We therefore confine our focus only to Kantian deontology.

Obligations of truth-telling and being honest about research results have been motivated and supported by Kantian deontology as a fundamental element that enhances public trust and respect for humanity. Telling a lie is always considered to be evil because it uses others as the means to an end and it violates the dignity of human beings. Kant's argument on the duty not to lie conforms to a rule of categorical imperative that disallows lying because it cannot be universalised, for by such a law there could properly be no respect to research participants' rights that ought to be treated as ends and not as mere means. According to Kant, 'respect for another human being entails the element of allowing persons to choose what they want

without any coercion. Someone who makes a false promise in order to get some money treats others' reason and capacity for making decisions merely as an instrument for his or her own use'.[17] In addition, Kant considers all rational agents to be respected unconditionally because he argues that 'humanity itself is a dignity because human beings cannot be used as the means by any human being'.[17]

Self-regulating and autonomy of the will in research

Kantian deontology specifies constraints on what we can or cannot do to other human beings. The first formulation of the categorical imperative states, 'act only according to that maxim by which you can at the same time will that it should become a universal law'. The second rule of categorical imperative states, 'act so that you treat humanity, whether in your own person or in that of another, always as an end and never as a means only'.[17] The first rule of categorical imperative stipulates clearly how researchers ought to self-regulate themselves when conducting their research. This formulation promotes an honest character within the researchers' responsibilities towards the participants and when reporting the research results. For example, even if individual researchers may be tempted not to report negative research results, their orientation to virtue will become an intrinsic enabler that compels them to uphold a virtuous decision to report honest and genuine results. In this case, it defies logic for a human being to will that the fabrication of research results should become a universal law. Doing so would treat human beings as mere means to an end, which violates intrinsic human dignity. The first formulation of the categorical imperative also imposes a moral obligation to self-regulate ourselves so that our research activities conform with the stipulated ethics guidelines, policies and legal frameworks.

The second rule or formulation of categorical imperative plays a vital role in the promotion of research integrity, respect for human dignity and the practice of informed consent. This rule specifies constraints on what the researchers can do to their research participants. The Health Professions Council of South Africa (HPCSA) paragraphs 2.2 and 2.6.4 state that:

> Patients and research participants must be treated with respect for their individual autonomy, freedom of choice, dignity, and human rights. Informed consent is a vital element to respecting the right to individual autonomy. It is necessary to obtain the informed consent from the research participant prior to commencing research. This requirement is based on the fundamental moral duty that we do not act against the wishes of a person and that human dignity and integrity should be respected.[18]

This is further heightened by the Constitution of SA, s10: 'Everyone has inherent dignity and the right to have their dignity respected and protected' and s12: 'Everyone has the right to bodily and psychological integrity'.[19] The South African National Health Act 17, section 71, also states that research or experimentation on a living person may only be conducted with the informed consent of that person.[20] Department of Health South Africa Ethics in Health Research: Principles, Structures and Processes (2015) further fosters respect for the human dignity of the participants by respecting their informed consent.[21]

In addition, international guidelines on research ethics, including the World Medical Association's Declaration of Helsinki, the Council for International Organisations of Medical Sciences (CIOMS), and the International Ethical Guidelines for Biomedical Research Involving Human Subjects, emphasise the importance of obtaining ethical and legally valid consent in research. The proposition is that the rules of categorical imperative provide the basis for respecting patients' informed consent and dignity.

Plausibility and practicality of virtue and deontology in research

The value of the espoused ethical approach in research should be reflected in its translatability into the conviction of the researchers; for it is only when the researchers are convinced of the intelligibility and practicality of the embraced ethical and legal approach that optimal compliance and adherence can ensue. The argument for complementarity between virtue ethics and deontology is premised on their unique potential to protect the interests of persons and all other elements that deserve protection in research. This complementarity will also have a positive influence on sustaining research integrity. It is under these moral theories that the dignity of the human person is protected against all possible threats. These theories compel a researcher, as a moral agent, to guard against all threats that may subject this dignity to jeopardy.

Virtue ethics

As it has been argued throughout the paper, a character-based approach to ethics in research becomes an indispensable asset because virtue ethics being an agent-centred moral approach disposes a moral agent to tenaciously exhibit virtuous acts in all morally demanding circumstances. This theory encourages researchers to pursue ethics as the only avenue through which sustainable, reliable and valid research can be realised. It is in their subscription to virtue that researchers will also strive to maintain integrity so that consistency, honesty and objectivity between research processes and outputs prevail.

For Aristotle, virtue is a character trait that disposes a moral agent to act virtuously with the objective being 'how should I be?' as opposed to 'what should I do?'.[22] Therefore, health research ethics training should mainly focus on capacitating the researchers to become the embodiment of virtue. In addition, other scholars corroborate this view by arguing that profound ethical decision-making reflects the character of a moral agent.[23] It can be inferred therefore that a researcher's exposure to various guidelines and policies, without a morally strong nurtured character, would still create a substantially deficient moral approach.[24] The profundity of virtue implies an appreciation of a morally right attitude that empowers a moral agent to embrace a morally upright trait and repel a vice.[25] Exposing a researcher to virtue ethics helps them to develop appropriate traits that will not betray regulatory frameworks that are meant to sustain morally and legally compliant research. It takes courage to always be willing to uphold research values and principles.

One of the greatest challenges that should be carefully dealt with in an attempt to mainstream virtue ethics in health researchers' training programmes is a long-standing issue of whether virtue is teachable.[26] The greatest proponent of virtue ethics, Aristotle, argued that both intellectual and moral virtues are acquired. Aristotle argues that the former is acquired by teaching while the latter is acquired by habit.[27] Furthermore, while his argument may sound intelligible on the basis that human nature is endowed with the capacity to

develop virtues at these two levels, some opponents consider virtue unteachable, especially when human beings reach a certain advanced adult stage.[28] Unlike subjects like arithmetic, medicine and astronomy, which have experts to teach them, there are no experts to teach virtues, such as honesty and honourableness. This view has also engendered an ethical myth in professions that professionals cannot learn ethics because moral values and principles can only be learned at the childhood stage.[29] The kernel of this argument is that it is almost impossible for an adult to cultivate new habits that dispose them to virtuous acts. Against this view, experience relays the perpetual thirst for human nature to acquire new knowledge, values and principles. The dynamism that characterises human life reflects a self-evident reality: human life progresses through acquiring new knowledge that embodies values and requisite principles. Without researchers cultivating strong character traits that impel them to perform morally acceptable acts, their compliance with regulatory frameworks will largely depend on expediency. As such, persuasion of moral conviction is likely to cease being an ideal objective of ethics in research. If researchers' conduct does not ensue from a profound sense of virtue, it is likely to be swayed to meet the envisaged results.

Deontology

From the arguments advanced on the profundity of a deontological approach in research ethics, it can be cogently inferred that virtue ethics becomes an asset to the deontological approach for researchers. At face value, for a researcher to meaningfully act in conformity with the expected duty in the promotion of human dignity in research, they must be driven by virtue. Virtue ethics has an integral role to play in guiding the decisions of professionals in their compliance with the codes and other regulatory frameworks so that in as much as their decisions are derived from the deontological codes, they also reflect professionals' willingness to pursue virtue.[27] The integration of virtue into deontological conduct will help a moral agent not to construe the good to be done as mere fulfilment of the duty as prescribed by deontology but as the moral duty of the professionals.[27] Thus, respect for a research participant's informed consent and human dignity cannot just be considered a mere fulfilment of duty but a researcher's intrinsic desire to treat them as autonomous and dignified human persons.

Conclusion

Research misconducts continue to be very costly not only due to the limited resources allocated but, in some instances, they soil the reputation of research organisations and researchers. While there have been concerted efforts to keep misconduct at bay through ethics training, the paper infers that their persistence is among others owed to an overly prescriptive approach that is intended to attract compliance without focusing on moulding researchers' character. Ethics training that is not focused on influencing the character traits of a researcher becomes detached and remains largely wanting towards convincing a researcher to be faithful to regulatory frameworks. The approach that emphasises a well-motivated disposition whereby a moral agent acts in self- and other-benefiting ways[30] is likely to compel a researcher to maintain objectivity and respect for individuals' autonomy in research.

The paper also attempted to demonstrate complementarity between virtue ethics and deontology. The overarching premise is that virtuous acts must conform to the prescribed codes. This thwarts virtue ethics from degenerating into subjective morality, which has no recourse to acceptable standards. Ethical training that is informed by virtue ethics and deontology nurtures a researcher's character to embrace virtue thus empowering them with the conviction to comply with deontological regulatory frameworks.

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