

JPNPEP
Journal of Practical Nurse Education and Practice

Journal of Practical Nurse Education and Practice

Volume 3 - Issue 1

September 2023

Journal of Practical Nurse Education and Practice

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Journal of Practical Nurse Education in Practice is supported
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Editorial support provided by NorQuest College's Department of Curriculum (Nicholle Carriere assisted with edits for this issue)

Editor's Note

It is with great pleasure that our journal is publishing its third volume. We continue to meet our objective of publishing content that is relatable and easily accessible to our readers and stakeholders. The **editorial board** appreciates the support we have been receiving from all our reviewers who dedicate their time to provide critical feedback to the authors. A special thank you goes to Dawn Witherspoon, Manager, Curriculum Development at NorQuest College for providing editorial support to the journal.

In this issue's first manuscript is by Dr. Cindy Ko who provides a thoughtful reflection on artificial intelligence (AI) in healthcare settings. Given the rise in use of AI, Dr Ko opens a discussion on whether the use of AI is a potential solution to human resource shortages in healthcare. Dr Ko reflects on some pros and cons of the use of AI. The paper encourages readers to reflect on legal, ethical, and some social implications that are relevant to the use of AI in health care.

The second manuscript by Dr. Susan Fowler sheds some light on the concept of 'whole health' in the Veteran's Administration (VA) - a holistic approach to health and well-being. Dr Fowler interviewed 'whole health' coaches as they shared their personal and professional experiences as they provide services to their clients. Dr Fowler elaborated on how the coaches use their knowledge and skills to assist their clients in a balancing act of recognizing the needs of their clients and the expectations of 'whole health' holistic approach.

The *Journal of Practical Nurse Education and Practice* (JPNEP) would like to thank the authors who share their work and contribute towards the success of the journal. JPNEP is an open access platform that relies on volunteers to keep it going. Please help us disseminate the **link** with your peers so that they can contribute as authors or reviewers. Thank you for your support!

Sincerely,

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Practice Implications of the Increasing use of AI in Healthcare: A Reflective Contemplation through the Lens of Relational Ethics

Cindy Ko

Abstract

There has been an increase in the implementation of machines that use artificial intelligence (AI) in healthcare settings. This paper explores the application of AI such as care robots and anchors the discussion in relational ethics. The use of AI is an emerging potential solution to the current human resources shortages. However, increasing AI function may pose the question of whether the notion of care is compatible with designs that focus on data and efficiencies. There are interests regarding the potential negative impacts of AI such as employment replacement and ethical issues. Using a reflective writing approach and a relational ethics lens, this paper grapples with some practice, legal, ethical, and social implications that could be relevant regarding the use of AI in health care. It is important to consider the implications of AI and establish guidelines for its responsible development and applications. If AI is to be used to care for humans, then its operators may want to keep relational elements in mind.

Key words: artificial intelligence, healthcare, ethics, social implications

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The increase in the use of AI in health care, while potentially providing a cost-effective means of dealing with data and filling gaps in staffing, also raises issues of ethics, quality of care, and bias. Matheny et al. (2019) in their National Academy of Medicine (NAM) report acknowledged that although there are immense possibilities for AI to improve healthcare outcomes, cost, and population health, there are challenges such as biased data, training, and the patient-clinical relationship. Given the current shortages in human resources, from support staff to nurses and physicians, the idea of care robots and other AI supportive systems is an emerging potential solution. AI care robots such as PARO, the plush social robotic seal developed in Japan in 1993, are useful in assisting with dementia and Alzheimer's patients, and supporting the emotional healing of Ukrainian children in the current war (Jiji, 2022; Vaswani, 2020). PARO is widely used in over 30 countries, and the United States Food and Drug Administration (FDA) certified it as a biofeedback medical device in 2009 (Costescu et al., 2014; IEEE, 2022; Lazarewicz, 2021; Moyle et al., 2017). However, AI such as care robots pose the question of whether the notion of care is compatible with designs that focus on data and efficiencies. The increasing use of AI in health care will inevitably impact therapeutic relationships and accountability. Using a reflective approach through the lens of relational ethics, this paper explores the applications of AI in the healthcare setting and addresses some practice, legal, ethical, and social implications.

Literature Review

The discussion applies Bergum and Dossetor's (2005) seminal work on relational ethics. The literature review is not exhaustive but aims to provide a contextual overview regarding the increasing use of AI in health care and the evolution of therapeutic relationships. The interest to research this topic with a relational ethics lens originates from the books by Christof Koch,

Consciousness: Confession of a Romantic Reductionist (2012) and *The Feeling of Life Itself: Why Consciousness Is Widespread but Can't Be Computed* (2020), and Susan Schneider, *Artificial You: AI and the Future of Your Mind* (2019). Although Koch and Schneider applaud the abilities of AI, they caution researchers and policymakers to place more emphasis on practice implications and “consciousness engineering” (Schneider, 2019, p. 4). That is, AI should not be designed for situations where it could cause harm or outsmart humans. All the references from Koch and Schneider led to other resources for further review. The citations of each article and website in this paper were also gleaned for additional information.

Searches from the Cumulative Index to Nursing and Allied Health Literature (CINAHL), PsycINFO, Medline, PubMed, and Google Scholar using the terms “artificial intelligence in health care,” as well as “in nursing,” “AI and therapeutic relationships,” and “AI and relational ethics,” as well as grouping the terms in various combinations did not generate any articles that specifically applied relational ethics to discuss the use of AI in healthcare settings and its potential impact on therapeutic relationships. McCradden and Kirsch (2023) are Canadian researchers who wrote a brief correspondence piece that recommended relational ethics as a framework to avoid algorithmic paternalism and automation bias with respect to using AI in health care. However, the authors did not elaborate on any specific format, detail the components of relational ethics, or cite the ethicists who developed it. Birhane and Cummins (2019), in their preprint, under-review, two-page paper, used the term “relational ethics” in the title.

Unfortunately, the writers did not discuss any application aspect of relational ethics but used aphorisms such as relational ethics “emphasizes that we shift the focus towards gaining deeper contextual understandings ... encourages us to view the task as part of the practice of creating

and reinforcing certain types of norms and social order ... proposed solutions as partially open” (Birhane & Cummins, 2019, p. 2).

Examples of authors who asked thought-provoking questions include Bao et al. (2022), who wrote about the social impact of increasing AI use; Gallagher et al. (2016) and Sharkey and Sharkey (2012), who discussed some ethical questions regarding nurses using robots to care for the elderly, but did not mention relational ethics or any other ethical framework; Nundy et al. (2019) and Tucci et al. (2022), who debated the notion of trust between patients and physicians in the era of AI; Surden (2020), who presented several basic questions in the ethics of AI in law; and the World Health Organization (WHO), which issued recommendations on digital interventions for healthcare systems and a guide for ethics and governance for AI for health with cursory mention of therapeutic relationships (2019, 2021). Coeckelbergh (2022) was the only author who specifically wrote about intercultural robotics and considered a relational framework but did not apply relational ethics.

A tribute must also be paid to Veruggio (2005), who presented a summary of the birth of roboethics at the 2005 Institute of Electrical and Electronics Engineers (IEEE) International Conference on Robotics and Automation workshop on roboethics in Genoa, Italy. Veruggio’s document confirms that the human race has a duty to consider the ethical and social implications of AI technological advancement, and their applications must be governed by the respect for: a) human life, b) human dignity, c) integrity of the person, d) democracy, e) the rule of law, f) cultural, religious and linguistic diversity, g) the freedom of arts and research, h) health care, i) consumer protection, j) the rights of the child, the elderly, and the handicapped, h) environment, k) privacy, l) liberty and security (p. 3).

Veruggio (2005) recommends that the healthcare field needs to anticipate new bioethics issues and be aware of the potential to inadvertently move attention away from patient-centred care to technology. Veruggio and Operto (2017) continue to emphasize the urgency to fine tune roboethics to be human-centred in a follow-up book chapter to an article they published in 2006. In all his work, Veruggio implies the importance of the relational aspects of patient care.

The next section begins with some simple definitions of AI, and the paper aims to serve as a brief and digestible springboard for healthcare providers and students to apply relational ethics to contemplate the impact AI may have on their relationship with patients. The global society is at a point where there is an immense need to balance the fast adoption of effective AI in health care yet maintain humanness in care. If AI such as care robots are to care for humans, then its operators may consider keeping relational elements in mind.

Defining Artificial Intelligence in Brief

There are numerous definitions of AI, and it is generally accepted that AI is any intelligent computer program (WHO, 2021). It is beyond the scope of this paper to differentiate, classify, or elaborate on the various spectrums, levels of sophistication, and computational complexity of existing AI programs in terms of their deep-learning abilities, analytics, types of data, or algorithms. Van Duin and Bakhshi (2017) offer a few detailed definitions and specific categories of AI that could assist in navigating the complex intricacies of the range of AI applications in today's technologically driven healthcare environments. Notwithstanding, the authors assert that a simple definition of AI is a multifaceted field of science with a common theme of using computers or machines to complete tasks that are normally performed by human intelligence. The authors also cite a mirroring definition by the pioneering computer scientist

Alan Turing, who defined AI as “the science and engineering of making intelligent machines, especially intelligent computer programs” (Turing, 1950, as cited in van Duin & Bakhshi, 2017, para. 2). Both descriptions are aligned with the WHO definition.

In addition, Davenport and Kalakota (2019) and Meskó and Görög (2020) compendiously summarize the types of AI that are commonly used in health care as an essential part of the ongoing development of precision medicine. According to these experts, the machine learning of AI programs has many versions and levels of statistical and algorithmic ability to learn and apply data to predict treatments. The scientists define a *neural network* as a more complex category of machine learning that could determine the likelihood of disease development in patients, whereas *deep learning* is the most complex form of machine learning in which an AI could predict outcomes or present diagnoses. Other AI applications include *natural language processing*, which is used to comprehend human language and is useful in clinical documents and research publications; “*if-then*” *rule-based expert systems*, which assist in clinical decision support and electronic health records; *physical robots* and *robotic process automation*, which involve robots such as surgical robots; and *robotic computerized automation* for repetitive tasks (Davenport & Kalakota, 2019).

Furthermore, van Duin and Bakhshi’s (2017) categories that best fit with the notion of AI and/or care robots in health care are *cognitive analytics* and *smart machines*. *Cognitive analytics* permits AI to acquire contextual and unstructured information, as well as to reason, learn, and communicate with humans. That is, the system has human-like intelligence such as the ability to recognize images and objects, understand context in speeches and semantics, and make predictions or anticipations of human responses. *Smart machines* include robots that are autonomous, intelligent, and capable of continuing to learn new information (deep learning). The

ability for smart machines to keep learning is an ongoing improvement process in their capacity to reason, problem solve, and make decisions. They learn and improve over time as new data becomes available. That is, the system can identify enormous volumes of data and make immediate projections that may not be immediately obvious to humans. Using the succinct definitions and categories of van Duin and Bakhshi (2017), Davenport and Kalakota (2019), and Meskó and Görög (2020) in conjunction with a relational lens helps to frame the discussion on the potential impact AI has on therapeutic relationships, as well as some legal and ethical implications that will be discussed in this paper.

Van Duin and Bakhshi (2017), Bao et al. (2022), Davenport and Kalakota (2019), Matheny et al. (2020), Meskó and Görög (2020), and Mikalef et al. (2022) note that the way society thinks about AI is rapidly evolving as AI becomes more ubiquitous. These authors' postulation may prompt the reminiscence of Dostoevsky's (1866/1914) *Crime and Punishment*, where he warns humankind to be careful because "man gets accustomed to anything" (p. 28). Dostoevsky's statement is poignant and adds educational and ethical value here because most people no longer marvel at the efficiency of basic AI such as Siri or Google Home. If it is assumed that Dostoevsky was right, then the future abilities and applications of AI are concerning from a relational perspective. Price et al. (2019) cautions that with the speed in which AI advances in health care, lagging legal and legislative guidance will continue to be a major challenge while practitioners and regulators balance safety and liability. It is debatable whether law, policies, and regulations will be able to keep up with the constant advancement (Fernandez, 2022, as cited in Patel, 2022). Therefore, it may be wise to pause and consider the possible danger of a slippery slope when new technologies are simply accepted without questioning the intertwining practice and ethical concerns.

AI in Health Care

Many types of indirect patient care AI already exist that assist to improve logistical efficiency from hospital transfers to bed assignments and patient flow (Davenport & Kalakota, 2019; Keating, 2021). Complex machines such as surgical robots, exoskeletons, prosthetics, artificial organs, pharmacy and hospital automation robots (care robots), and social robots are also in use (Kerr et al., 2017; Zemmar et al., 2020). According to the Mayo Clinic (2023), robots can assist surgeons to perform complex operations by offering a three-dimensional magnified view of the surgical site, thereby improving precision and minimizing invasion of the patient's body. In November 2022, the first total hip replacement with robot assistance was successfully performed in Nova Scotia, Canada, at Dartmouth General Hospital. The orthopaedic surgeon who performed the surgery, Dr. Jennifer Leighton, stated that this new technology will improve overall surgery and recovery time, decrease length of stay, and lower the rate for revisions (Laroche, 2023). Another example, PARO, the aforementioned social robotic seal that responds to human touch and sound, has proven to improve the mental health of elderly patients and Ukrainian refugee children (Costescu et al., 2014; Jiji, 2022; Vaswani, 2020).

The IBM Watson health system, which was praised at its inception in 2004 for its potential for using structured and unstructured medical data to successfully diagnose lung cancers, is mainly used today for marketing, customer service, and other adaptations of its software abilities (Steadman, 2013; Lohr, 2021). One of the reasons the Watson system is not used in oncology as initially hoped is because physicians wanted something user-friendly that they could trust. Watson was too complicated, and physicians became exasperated because they were grappling with its technology instead of caring for patients (Lohr, 2021). Since 2022, IBM

Watson Health has been known as Merative and offers AI products and services for medical clinical research and other healthcare advanced technology supports (Merative, 2023).

Based on the abovementioned examples, the overarching question is no longer whether AI should be used in health care; rather, there are numerous ethical questions that arise as the abilities of AI continue to advance. Bryson (2018) asks crucial questions such as how much is too much AI in terms of its potential to replace humans? How does the healthcare system sufficiently ensure patient safety, and who is ultimately accountable and liable when errors occur—the practitioners who are the operators or the AI engineers and scientists who created the machines? In addition, Henderson et al. (2022) and Birhane and Cummins (2019) recommend caution because of the potential for algorithmic biases that could result in discrimination. Given the existing healthcare inequities, it is advisable to ascertain equity and inclusivity in the creation and implementation of AI for health care. Almost two decades ago, Veruggio (2005) and Veruggio and Operto (2006/2017) promoted the blueprint for roboethics to be fair and equitable with cross-cultural considerations, as well as being human-centred. Coeckelbergh (2022) concurs by echoing the importance of ensuring cross-cultural diversity and sensitivity of robotics in the way they interact with patients. Furthermore, Chesterman (2020) entertains the possibility of ascribing a kind of philosophy of mind and personhood to machines, especially to robots that are human-like in terms of intelligence. Based on Chesterman's analysis, there is a brief discussion on the notion of AI personhood in a later part of this paper as it pertains to relational ethics. Indeed, humanity needs to be careful to not become complacent and “accustomed to anything” that AI has to offer, as Dostoevsky suggested (1866/1914, p. 28). Relational ethics could assist in grappling with some of these questions to ensure that humans are not removed in the increasingly technological healthcare setting.

Relational Ethics and Care Robots

Relational ethics is a branch of healthcare ethics that was developed by Vangie Bergum and John Dossetor (2005). The inherent traditional therapeutic relationship between healthcare providers and patients is relational. Relational ethics endorses the existing moral space between the self and others that offers humans the humility to respect and understand others' perspectives, circumstances, lived experiences, and intersecting factors of the social determinants. Relational ethics helps healthcare providers care for and interact with each unique individual patient, however similar their medical diagnoses may be (Bergum & Dossetor, 2005; Oberle & Bouchal, 2009). Western medicine can successfully treat many illnesses, and the purpose of relational ethics is to ensure that healthcare providers do not treat every patient as a cookie-cutter-diagnosed case. The chief tenets of relational ethics are embodiment, mutuality, engagement, non-coercion, autonomy, and consideration for the environment (Bergum & Dossetor, 2005). The next sections will elaborate on mutual respect, engagement, autonomy, and embodiment with respect to the application of AI such as care robots and consider whether they can position themselves within the context of caring for human beings, who are relational, and within a healthcare practice setting that is situated in relationships.

Mutual Respect and Engagement

The two central elements in relational ethics are *mutual respect* and *engagement* because they coexist in tandem. Bergum and Dossetor (2005) affirm that authentically meaningful engagement with others can only happen when there is mutual respect. Mutuality, that is, mutual respect, is the space where individuals share and experience differences empathetically and objectively in giving and receiving interactive ways. The authors emphasize that ethical decisions and actions are always made within the context of mutual relationships because people

are interconnected; therefore, a care robot's ability to intrinsically respect a patient's choice is questionable, if not altogether impossible. There is an absence of an inherent relationship and authentic engagement between the robot and the patient, and if there is a relationship, one could argue that it is imagined for those patients who lack full capacity. For example, Gus Newman is an autistic boy whose mother Judith Newman authored the book *To Siri with Love*. In her 2017 interview with journalist Piya Chattopadhyay, Newman shared that Gus seems to view Siri as a friend, and it helped Gus's family gain insights into Gus's mind based on the questions he asked Siri. Newman indicated that nobody knows whether Gus understands that Siri is not a real person, nor do they really care because the artificial friendship has offered the family a kind of mental-health respite. In this example, Siri is not exactly a care robot but serves a kind of assistive purpose. It is important to note that there is no genuine mutual relationship or engagement between Gus and Siri. Newman stated that Siri is always polite and calm because it is programmed to be diplomatic. Siri only knows its programmed role to be courteous regardless with whom it is interacting; thus, its civility does not constitute mutual respect because Siri does not have the autonomy to recognize what it means to be mutually respectful.

Similarly, the anthropomorphism of PARO is effective when used with humans who do not have full capacity or with those who have full capacity and understand that it is an assistive device. PARO is programmed to respond to human touch and assist in reducing anxiety and agitation for dementia patients, patients living with cancer, war veterans, and others who have post-traumatic stress disorders, such as refugee children from Ukraine (Lazarewicz, 2021; Vaswani, 2020). PARO would likely be effective in comforting a dying patient who has dementia or an individual who has experienced trauma, but it does not have the emotional intelligence to understand empathy, even though it is programmed to say empathetic words and

perform empathetic actions. That is, PARO cannot express genuine mutual respect via its programmed ability to engage.

Nelson et al. (2020) explored patient perspectives on the use of AI for skin cancer, and revealed that the most common theme in their study was participants' apprehension of AI potentially replacing humans. The researchers concluded that 94% of the participants expressed the importance of reciprocal human interactions, though they appreciated the benefits of using AI as a tool as long as the AI was "implemented in a manner that preserves the integrity of the human physician-patient relationship" (p. 511). Although the assumption that all human caregivers are caring and competent is false, it is probably correct to assume that no machine is capable of genuine caring because caring is a human trait. It is debatable whether cognitively sound patients could engage with a robot in the same mutually emotional-therapeutic relationship as they would with a human caregiver regardless of the level of caring and clinical competency the human carer possesses. Cognitive patients may recognize the benefits of AI tools to increase diagnostic efficiency, access to care, and the potential to reduce healthcare costs (Nelson, et al. 2020). They may also enjoy the robotic company as a form of amusement or a means of mental stimulation equivalent to art therapy, and the robot can assist as part of psychotherapy with patients who have experienced trauma (Cooney & Menezes, 2018; Seo et al., 2022). However, these interactions are not entirely relational because there is no mutual engagement, nor is there the quality of interactive mutuality based on authentic connection. Topol (2019) claims that it is unlikely any AI will completely replace humans in health care, albeit he states, "over time, marked improvements in accuracy, productivity, and workflow will likely be actualized, but whether that will be used to improve the patient-doctor relationship or facilitate its erosion

remains to be seen” (p. 44). Hence, the notions of mutual respect and engagement in relational ethics are apropos when considering how AI will impact therapeutic relationships.

Legal Personhood

It was established earlier that mutual respect and the engagement between human beings are key elements in relational ethics. Therefore, it is relevant to briefly acknowledge the problematic notion of endowing AI with legal personhood, though it is outside the limit of this paper to expand on this topic in greater depth. A plethora of legal and ethical scholars have debated the question of whether some AI systems should be granted legal personhood as they become more sophisticated and human-like (Brown, 2021; Chesterman, 2020; Gordon, 2021; Gunkel & Wales, 2021; Schneider, 2019; Wojtczak, 2022). The general consensus of these authors is that it is ethically objectionable, and the law continues to be slow to catch up with the speed of technological advancement, which renders the actualization of granting legal personhood to AI essentially impossible. The application of relational ethics could help to settle the score insofar as disqualifying AI to have legal personhood because it is incapable of mutual and genuine engaging relationships. AI can be an effective imitator that necessitates humans to input its functions, which it then carries out without disagreement because people neither seek nor require mutual respect from AI. For example, Chesterman (2020) posits that natural personhood is legally recognized by the fact of being born and does not require passing the Turing Test, a method of determining whether a machine can demonstrate human intelligence. Basically, if a machine can engage in a conversation with a human without being detected as a machine, it has demonstrated human intelligence (Turing, 1950). Chesterman argues against it for the sake of discussion, albeit acknowledges “judicial persons” such as corporations, church organizations, and governments as legal entities (p. 4). Chesterman also clarifies that the legal

system could grant AI legal personhood, but the more important question is whether it should. Authors such as Schneider (2019) and Wojtczak (2022) infer the sentiment that it will become inevitable to consider the legal subjectivity of AI; unfortunately, they do not explicitly address what the process may entail. The slippery slope presented is that if AI could become equal to human beings, then the next plane of debate is whether AI could reciprocate to recognize human rights and personhood, as well as the moral questions of their consciousness and free will (Koch, 2020; Schneider, 2019). In addition, if AI is permitted to have legal personhood as does a natural person, then all human rights components such as the ability to mutually respect others could also apply to AI.

A new example was the unveiling of the AI ChatGPT on November 28, 2022, by OpenAI, which claimed that ChatGPT was able to mimic a human in its responses (Patel, 2022). It is predicted that ChatGPT will prove itself useful in many areas, from improving productivity to customer service and beyond. Nevertheless, Patel interviewed several experts such as Osh Momoh, chief technical advisor for MaRS, an innovation hub in Toronto, Canada; Melanie Mitchell, a computer scientist at the Santa Fe Institute; and Sheldon Fernandez, CEO of Darwin AI, a visual quality inspection company based in Waterloo, Ontario, and all cautioned that there is a need to consider the potential negative impact and limitations such as the shift in employment opportunities, privacy concerns, perpetuation of societal biases that result in discrimination, and the delay of legislative bodies in keeping up with the technology to develop responsible law and regulations. Thus, for now, it is valid to sustain agreement with Chesterman (2020) and other scholars who are opposed to granting AI legal personhood.

Nonetheless, some robots, such as surgical robots, are undeniably helpful in assisting with tasks in the healthcare setting that do not require building rapport or forming mutual respect

with patients. Keeping relational ethics in mind, anthropomorphizing any robot is unwise; rather, they should be named appropriately to deter the notion of assigning them legal personhood, however sophisticated they may be (Tanibe et al., 2017). Tanibe et al. discuss the fact that it is humans who perceive a mind in a robot by the way they interact with it; thus, people do the anthropomorphizing, not the other way around. Humans are relational beings; therefore, it is human nature to ascribe human characteristics to non-human objects and creatures. It is interesting to note that Tanibe et al. are Japanese psychologists from the University of Tokyo who are familiar with this concern because PARO is a Japanese invention. They caution against forming unnatural bonds with robots as they become more human-like. Most people are not emotionally attached to their cell phones or computers because these are assistive entities; hence, perhaps a robot that has an administrative function should be referred to as a *desk-bot* or one that functions as a porter as a *gofer-bot*.

It is also noteworthy to reflect on Chesterman's (2020) example of the New York State Supreme Court case *People ex rel. Nonhuman Rights Project, Inc. v. Lavery* regarding the personhood of chimpanzees when Judge Fahey stated, "Ultimately, we will not be able to ignore it. While it may be arguable that a chimpanzee is not a 'person,' there is no doubt that it is not merely a thing" (p. 18). AI is a thing. No matter how much data humans input for it to respond with emotional words, it will never appreciate the meaning of being emotional, nor will it ever be able to empathize (Martínez-Miranda & Aldea, 2005). Siri or PARO could never actually *feel* sad, no matter how well programmed they are to say, "I am sorry to hear you are sad." Furthermore, AI (a thing) can live forever, whereas humans do not, so no care robots could fully appreciate the meaning of death and dying. Some may even consider it insulting to a dying patient's dignity to be cared for by a care robot (Sparrow, 2016). Although computer scientists

began working to create affective AI in 1995 (Picard, 1995), no one has yet created an AI that could authentically demonstrate emotions and mutual respect, though they can generate emotionally correct and respectful responses. Therefore, although the debate of whether or not to provide AI with a kind of legal personhood may continue, chances are that AI could not and probably should not be considered a person (Brown, 2021; Chesterman, 2020; Gordon, 2021; Gunkel & Wales, 2021; Schneider, 2019; Wojtczak, 2022).

Embodiment

The *embodied* element in relational ethics refers to the notion that an authentic therapeutic relationship encompasses people's emotions and their subjective lived experiences, as well as scientific knowledge (Bergum & Dossetor, 2005). There are no strict rules in terms of how people achieve embodiment other than the concept that human knowledge is multidimensional and must be inclusive of people's lived experiences and interactions with others. In addition, it requires healthcare professionals to embody their medical knowledge as a way to value the connections with patients in order to understand their experiences. Bergum and Dossetor suggest that within embodied knowledge is the embodied commitment to care and a willingness to participate in a therapeutic relationship. It is reasonable to assume that the data stored by AI and its ability to retain and learn new information is not a true form of embodied knowledge and lived experience, at least not in the relational sense. AI tools such as robots are not physically alive, so they cannot have lived experience. AI programs and tools are mechanically operational devices that are able to process computed information; they do not, in fact, think and feel as humans do from a phenomenological sense, thus are merely "instrumental" (Svenaesus, 2017, p. 99).

The juxtaposition of the existential elements of human life and AI is distinguishable by the fact that AI lacks real autonomy and consciousness. Thus far, there is a recognition of the functional presence of AI; however, if its lived experience is acknowledged, then the notion of an ontologically in-between space surfaces where humans may need to determine whether the existence of AI beyond that which is strictly instrumental should be valued. Lived experiences require consciousness (Hegel, 1807/1977; Heidegger, 1927/2010; Koch, 2019). The interpretation of Hegel and Heidegger suggests that the *self* is conscious because of humans' ability to be aware of and value the individual self and distinguish the self (being) from others. Hegel also states that the nature of a *thing* (object) is only as it analogizes and collates to other things, and people understand it by the ways they constitute it. That is, humans ascribe the thing its character or personality and anthropomorphize it because it could not independently recognize itself without a person telling it what it is. Hegel and Heidegger discuss the German terms *Dasein* (being or existence) and *Fürsichsein* (being for oneself). These philosophers elaborate that humans' *being for oneself* is only possible for humans because the conscious mind has the awareness of its own state of being in the world. AI has no consciousness, or, at best, its consciousness is assigned by humans; hence, it cannot embody knowledge and emotions the same way humans do. Thus, from the perspective of relational ethics, no AI can empathize or appreciate patients' lived experience and their circumstances in meaningful ways because it does not have consciousness or the ability to value itself; rather, it only has the capability to process the emotionless data it has received. An AI's knowledge is not embodied but is a reservoir that possesses the capacity to retain, maintain, and regurgitate data; therefore, computers cannot experience life or consciousness, except the fake consciousness that is their data. Computers are utilitarian entities designed for doing and are incapable of being.

Perhaps an argument could be made for embodiment pertaining to exoskeletons, prosthetics, and surgical robots because they could be perceived as literally being embodied by the human operators who merge with the machines (Kerr et al., 2017). Physically assistive, wearable robots can enhance the lives of amputees and those living with disabilities, and work symbiotically with surgeons to improve patients' health outcomes (Laroche, 2023; Zemmar et al., 2020). However, one might dispute that there is no mutuality in such embodiment because once again it is the human, as the operator, who possesses the act of embodiment. The machine has no autonomy, so cannot *perform* the embodiment itself.

Furthermore, trust is embodied within relational ethics as a pertinent component. How do humans define a robot's trust in them? Is a robot capable of trust in its interactions with the patient or the operator? If an agitated patient or operator dismantles its parts, has the robot's trust in humans been violated? Humans assert that AI has no consciousness and cannot value itself or others because it cannot process trust or distrust (Bryson, 2018). Therefore, a more likely assumption is that people trust the robot's ability to perform its functions because humans designed it, but the robot is incapable of returning the sentiment.

Another important question to consider is whether there is a potential risk for the erosion of trust between the patient and healthcare professionals if more and more tasks are outsourced to machines (Kerasidou, 2020). Might patients consider the machines the experts and stop trusting their human care providers? Bryson (2018) discusses trust from the perspective of accountability and posits that trusting AI is not a requirement because there should always be a human or a company behind the machine that would be accountable. Bryson calls for a global governance of AI to ensure that regulations are in place so that people or corporations could never evade liability by blaming the AI they created. Bryson also claims that AI has no

consciousness; thus, AI should never be held accountable as “legal entities in and of themselves” and disagrees with the notion of AI legal personhood (para. 8). Therefore, patients’ trust should continue to be placed in the human caregivers with whom they can have genuine therapeutic relationships. Bryson supports the position that AI is an instrument to enhance learning, communication, and social services, but trust should remain with the humans who develop the AI and are ultimately accountable.

AI such as care robots are tools that may render the healthcare system more efficient and cost-effective (Nelson et al., 2020; Tong & Sopory, 2019; Topol, 2019). However, the embodiment of caring, knowledge, and commitment is personal and relational. The gift of genuine human bonding is grounded in trust, empathy, compassion, and affective communication; these are the essence of the clinical presence embodied by healthcare professionals and cannot be replaced by computing machines (Tong & Sopory, 2019; Topol, 2019). Moving forward, one of the main questions that must be addressed is how AI will impact the traditional notion of the therapeutic relationship as technology becomes even more prevalent in the healthcare space. No AI system could embody deep and authentic emotions in meaningful ways; therefore, the affective-communicative component of care is still part of the role of the healthcare provider. The findings of Nelson et al. (2020) echo this sentiment as the participants indicated they valued human verbal, nonverbal, and emotional communication, and none of them envisioned AI as a physician replacement. Tran et al. (2019) and Tong and Sopory (2019) concur and report a collective patient perspective that technology should not impair the human aspect of care, even though most patients acknowledged the benefits of technology and expected the ongoing expansion of AI use in the future. Tong and Sopory also emphasize the importance of affect as a factor in future designs and applications of AI in health care while underscoring that

healthcare providers should continue to be responsible for the integral affective communications with patients.

Practice Considerations

Cutillo et al. (2020) discuss perspectives on the trustworthiness, explainability, usability, and transparency of machine intelligence in health care. The authors do not specifically address the use of care robots, and they use the term “machine intelligence (MI),” which perhaps is more fitting because the word *machine* is definitively nonhuman. Cutillo et al. define the use of any machine in health care as the “ability of a trained computer system to provide rational, unbiased guidance in such a way that achieves optimal outcomes in a range of environments and circumstances” (p. 1). This definition is aligned with the others aforementioned. Coincidentally, the manner in which the authors define trustworthiness, explainability, and usability in the context of health care is remarkably complementary to relational ethics. Cutillo et al. describe *trustworthiness* as the ability of healthcare professionals to evaluate the limitations of MI in terms of its validity and reliability. The authors acknowledge that in the healthcare setting, trust is subjective, and users must confidently trust the computing system. They assert that although a patient could trust a machine to be functional, pure mutual trust cannot exist because of the lack of an authentic therapeutic relationship. Thus, Cutillo et al. reinforce the relational notion of mutual respect that produces trustworthiness and that it must be established by humans.

Furthermore, healthcare providers continue to be hesitant to trust any sophisticated AI because there are still so many unknowns as far as individual physicians’ ability to understand the technology (Davenport & Kalakota, 2019; Fenech et al., 2018; Juravle et al., 2020; Lohr, 2021; Nundy et al., 2019; Ogilvie & Eggleton, 2017; Tucci et al., 2022). IBM’s Watson is a good example to illustrate physicians’ lack of trust in embracing its initial intended usage because it

was much too complicated (Lohr, 2021). Trust in AI would require more than faith and fascination on the users' part to establish. Therefore, to facilitate trust in AI for healthcare professionals, especially in devices such as direct-care robots that have higher-stakes functions and operations, more training, education, and consultation would be required in terms of the AI's explainability and usability (Davenport & Kalakota, 2019; Juravle et al., 2020; Nundy et al., 2019; Tucci et al., 2022). Ahmad et al. (2021) emphasize the importance of training surgical fellows by using virtual reality platforms for robotic surgery and conclude that surgeons will require ongoing training to ensure proficiency. Hence, Ahmad et al. (2021) and others confirm the relevance of relational ethics with respect to the need for healthcare professionals to embody the knowledge of AI in order to trust it, or at least understand enough of the technology so that they can engage in using it in meaningful ways (Bergum & Dossetor, 2005; Gadow, 1999; Kunyk & Austin, 2012; Lohr, 2021; Olmstead et al., 2010). Similarly, with diagnostic AI, physicians need to have sufficient training to understand how the AI comes to a diagnostic conclusion, similar to how they would engage in consultation with their human colleagues (Davenport & Kalakota, 2019; Juravle et al., 2020; Nundy et al., 2019; Tucci et al., 2022). It is unrealistic to expect anyone to fully understand the intricacies of the AI computer algorithms as well as the engineers who designed them; however, a certain level of knowledge embodiment by the operators is required to establish trust, otherwise PARO or the administrative-clerical form of lower-stakes AI may be as far as the technology can go for the time being in terms of trust.

Cutillo et al. (2020) insist that *explainability* must be in "human terms" (p. 1), so the accountability for explaining falls on the human. Notwithstanding, the authors suggest that the applications of machines need not always be explainable if there is a high-level of established trust in their efficacy. That is, trust may mean that the AI has been built ethically, adequately

tested using research ethics approaches, validated, and subjected to regulatory approval and ongoing oversight. This point is significant from a relational ethics perspective because logically, people trust the practitioners who trust the machine that is deemed trustworthy. Therefore, relational ethics necessitates human involvement as the essential factor in the formation of trust. The remaining question is what happens when practitioners are unable to explain the functions of the machine and yet are in some way dependent on the machines' explanations?

Cutillo et al. (2020) identify *usability* as the degree to which any computing machine is able to achieve its intended goals of ensuring patient safety and satisfaction, and emphasize that no machine should add to the burden of the caregivers and patients. This definition is congruent with the relational ethics lens because ultimately, a machine is ineffective if it prevents a genuine therapeutic relationship between the healthcare provider and the patient. Regardless of how useful AI is, no AI could ever replace the pure patient-centredness of human caregivers from a relational standpoint. Therefore, the key points of usability include the importance of user-centredness and benefits to the healthcare system. Nundy et al. (2019) agree and discuss the importance of competency on the user end to ensure that the AI is accurate, unbiased, and explainable, and is not mistakenly in conflict with physicians' judgement or compromises patients' autonomy. Ahmad et al. (2021) concur when they underscore the comfort level in which the surgical oncology fellows were able to use and practise with the surgical robotics at the University of Pittsburgh Medical Center before they operated on live patients. Likewise, in Canada, while the length of time Dr. Jennifer Leighton trained to operate the robotic assistant to perform the first total hip replacement in November 2022 was not reported, it is evident in the embedded video that she and her colleagues are practising and embodying the knowledge by learning to operate the machine (Laroche, 2023).

The practice implications of AI are vast and will continue to be so. Therefore, keeping the components of relational ethics in mind, it is imperative to ensure that healthcare providers' physical clinical presence is never taken out of the process. Relational ethics is not against AI in health care but simply asks healthcare professionals and computer scientists to be intentional in the creation of AI with respect to ensuring collaboration and communication as part of the integral-relational stakeholder dynamic to achieve trustworthiness and appropriate implementation.

Social Implications

AI holds great potential to improve health and healthcare systems, though the social implications are extensive and complex. The WHO supports the advancement of using AI for health and provides realistic strategies in their *Guideline Recommendations on Digital Interventions for Health System Strengthening* (2019). The intent of the guideline is to implore healthcare leaders to assess the “benefits, harms, acceptability, feasibility, resource use, and equity considerations” (p. 7). Notwithstanding the support of the WHO guideline, some scholars are concerned that the increased application of AI in health care may further worsen the existing patterns of health inequities because not all nations could afford the use of AI and its ongoing development (Vinuesa et al., 2020). Many Global South nations are still facing challenges to implement digital health records and do not have the financial or research resources to keep up with Global North nations' rapid adoption of AI applications. The technological gap between nations presents numerous social inequity issues. In Global North nations where healthcare systems are either private or Bismarck, and even in Beveridge or public systems such as Canada and the United Kingdom, inequality and inequity exist in terms of access (Lameire et al., 1999). For example, the two orthopaedic robotic assistants in Dartmouth General Hospital cost

\$2 million CAD, which was paid by the Dartmouth Hospital Charitable Foundation (Laroche, 2023). Until hospitals in other provinces receive funding and orthopaedic surgeons are trained, it is questionable how equitable access for Canadians is ascertained. Similarly, if companion robots are widely used in Canada, how does the healthcare system ensure fair and equitable access for everyone? Can companion robots be justified as being medically necessary so they would be covered by the provincial governments? How should priority for access be determined?

Specifically pertaining to care robots, the scoping review conducted by Murphy et al. (2021) emphasizes many practitioners' concern for the social isolation of care recipients should robots ever replace human care because, at minimum, they will reduce the level of human contact. This is already known to be true with the increased use of technologies by children; psychologists are concerned that today's children and youth are not learning adequate socialization skills (Oswald et al., 2020). At best, children do parallel play with friends while each is using their own device, or when they are playing video games, they play side-by-side but do not, in fact, interact (Oswald et al., 2020). Hence, it might be possible that if people become too reliant on companion robots, the robots would be used as patient babysitters and visitors, and those that could perform basic tasks such as bathing or feeding would replace the most basic human interaction activities in health care. It is often during meals or bath times that caregivers can assess patients' mental health status or skin integrity and develop a rapport with their patients. Many of the tasks that nurses and other care providers perform are tasks that embody meaningful human mutual connections and engagement.

In addition, the preservation and promotion of human dignity is integral in healthcare system delivery. For those patients who are not fully cognitively intact—for example, those with dementia, severe head injuries, or brain tumours—it is possible that the use of care robots

("carebots") or companions is a kind of deception to the patient and thereby disrespects their dignity (Sharkey & Sharkey, 2012). There is also the potential for unintended consequences and the moral hazard of objectifying and infantilizing patients to consider (Gallagher et al., 2016; O'Brolcháin, 2019). Although some may argue that while robots are incapable of reciprocating emotions, unfortunately, humans may fail to provide emotional support entirely (Kisorio & Langley, 2019). Is it better and more dignifying to have a carebot than an uncaring human or inadequate human care because of staff shortages (Hegney et al., 2018)? Relational ethics would challenge the concept of competent health care as conditional to care that is provided by humans who can by virtue of attentiveness and presence preserve and promote dignity (Bergum & Dossetor, 2005; Oberle & Bouchal, 2009). Therefore, relational ethicists would disagree that a machine is better than human care.

Other components of promoting dignity include healthcare providers' competency in honouring cultures, diversity, and inclusivity. Although the technology is capable of programming AI to respond in a culturally appropriate manner, such responses cannot be categorized as genuine and authentic from a relational sense. There is a concern with respect to the potential algorithmic biases, which could result in discrimination in health care (Birhane & Cummins, 2019; Henderson et al., 2022; McCradden & Kirsch, 2023). The engineers may have prior conscious or subconscious biases and then inadvertently build their biases into the AI algorithm, which could perpetuate or even worsen discrimination (Henderson et al., 2022). Coeckelbergh (2022) recognizes that the discussion of cultural diversity in robots is still a niche area in technology and computer ethics and argues that the move towards robots that are more culturally diverse and relational is possible in the future. Coeckelbergh also contends that there is a possibility to use social robots to educate humans about issues in diversity, equity, and

inclusivity, which could evoke a deeper sense of understanding and the coming together of commonalities. It is difficult to entirely disagree with Coeckelbergh if the purpose of some social robots is to assist in shifting the societal culture towards a more just world. The question is, can AI in health care ever achieve perfect anti-discrimination unbiased behaviours?

The notion of autonomy in health care is of great value, which is another embedded element in relational ethics. An argument can be made that care robots may, in fact, threaten the autonomy of patients and practitioners if the technology is too complicated to operate or if providers become so dependent on them that they automatically believe the AI has been programmed to make the best care decisions. It is debatable whether or not it is possible to program AI to promote or respect the operators' autonomy because that would be an inherent contradiction of the purpose of their existence; that is, to provide or suggest the best care and decision making. Nonetheless, according to the 2017 United Nations (UN) World Population highlights, by 2050, approximately 2.1 billion people will be aged 60 and above, and 152 million will be diagnosed with dementia. Also, countries such as Japan are running out of young people to take care of the elderly because of the low birth rate (Dooley & Ueno, 2023; Matsuda, 2019). Therefore, those who are cognitively sound enough to exert their autonomy to choose care robots may argue that they do not believe using AI is a potential infringement of their autonomy, and perhaps the alternative is worse—staff shortages and no care at all.

It is imperative that in contemplating AI with respect to the social implications of potential social isolation and poor socialization, the reduction of autonomy, and social equality and equity, a balanced reflection should be made on the fact that many people had the same concerns when the radio and the telephone were first invented. Television and personal computers soon followed. Are people more isolated? Communication methods and socialization

have definitely evolved, but has it all been negative? Relational ethics promotes human engagement and authentic-meaningful relationships but does not dictate how these should take place. The caveat is in finding ways to ensure that the relational aspects of care are not lost when implementing more AI.

Legal Implications

For the purposes of this paper, the legal implications with respect to privacy and accountability are highlighted. The collection and use of patient data is a major concern for many because there is no complete guarantee that the data will never be lost, hacked, or misused. For example, although most people may be comfortable with ubiquitous surveillance for their personal devices such as cellphones to locate them or track search histories for marketing purposes, many people were leery when Canadian Prime Minister Justin Trudeau announced the COVID app in 2020 because personal health information would be used and therefore could be compromised. The concern is not unfounded because there have been many incidents of healthcare system cyberattacks in Canada, such as the attack in Newfoundland and Labrador in 2021, and the Code Grey issued by the Hospital for Sick Children and the University Health Network in Toronto for cybersecurity events in December 2022 and January 2023, respectively (Burke, 2020; Casey & Mostead, 2023; Mosleh, 2023; Tutton, 2021). There may likely be less security risk with the use of care robots because they are task oriented; however, human healthcare workers occasionally confuse one patient with another, so it is not impossible that a care robot may malfunction and use incorrect patient information (Meskó & Görög, 2020).

Therefore, it is timely for the Office of the Privacy Commissioner of Canada (OPC) to issue the *Policy Proposals for PIPEDA* [Personal Information Protection and Electronic Documents Act] *Reform to Address Artificial Intelligence*, prepared by Dr. Ignacio Cofone,

assistant professor at McGill University's Faculty of Law (OPC, 2020). Cofone's recommendations are aimed at allowing responsible AI innovation and socially beneficial uses while protecting human rights. Cofone emphasizes that stricter legislation is required to ensure Canadians' fundamental right to privacy while keeping up with the rapid development of AI to benefit civil society. Cofone's call for the amendment of PIPEDA includes six important points, two of which are implicitly harmonious with relational ethics in the healthcare setting:

1) authorize AI use within a rights-based framework that would entrench privacy as a human right and a necessary element for the exercise of other fundamental rights; and 2) require organizations to design AI systems from their conception in a way that protects privacy and human rights (para. 80–87). Both points are complementary with the notions of human engagement and autonomy that are emphasized in relational ethics.

Moreover, Cofone (2020) insists that law and regulations should use a human rights–based approach that would ensure responsiveness towards the responsible innovation and application of AI and the protection of human rights. Cofone indicates that protecting people's privacy underpins the protection of other human rights in numerous contexts. Thus, it is imperative that privacy is upheld no matter how low the risk an AI system poses. For example, if a greeter-bot is able to perform facial recognition, could it jeopardize patient privacy? The technology already exists, so there is no reason to assume this is impossible.

With respect to accountability and AI, the overarching question continues to be the burden of responsibility when errors occur in the clinical or homecare setting (Meskó & Görög, 2020; Murphy et al., 2021). If practitioners do not have sufficient knowledge of the AI they are using, how are they expected to explain any errors, especially as it is incumbent upon the providers to disclose mistakes to the patients? This also leads to the next logical question of who

is responsible for AI errors—the practitioners or the computer scientists or manufacturers (Meskó & Görög, 2020)? Cautiously, Gail Tomblin Murphy, the Vice President of Research, Innovation and Discovery for Nova Scotia Health, stated in the same interview where Dr. Leighton was featured for using a robotic assistant to perform the first hip replacement in Canada, “We don’t get it 100 percent, and in fact, we test and try new technologies, some of them work and some of them don’t work so well” (Laroche, 2023, para. 11). Tomblin Murphy’s statement is a clear indication that the accountability is on the human end to “get it” in order to use AI properly.

According to the *Robotics Business Review’s Healthcare Robotics: 2015–2020* research report, robots have botched numerous surgeries in the United States. The increasing use of AI presents new challenges such as potential harmful incidents, the rearrangement of traditional surgical processes and procedures, and operating room team dynamics. Patients and practitioners need to be able to trust the AI (Martinello & Loshak, 2020; Torrent-Sellens et al., 2020). The implication is that although assistive AI undoubtedly enhances physicians’ abilities and expertise, there is an inherent element that is beyond the control of the operators, which contributes to the perennial debate between trust and accountability (Meskó & Görög, 2020). Bryson’s (2018) call for global governance of AI is valid to ensure that regulations are in place to prevent people from blaming the AI they created. Likewise, Cofone (2020) addresses accountability from the privacy perspective and underscores that ensuring accountability is far-reaching because it “encourages organizations to consider the totality of their practices and enhances public trust,” which is also emphasized in relational ethics (para. 74).

Nursing and Education Implications

Nurses and other healthcare practitioners will have to work with all types of AI moving forward. The challenge is in the practice applications because the capability of AI has been proven. AI is expensive and requires regulations, integration with other systems, constant upgrading, and ongoing user education. This means the standard in nursing care must simultaneously evolve alongside AI. Therefore, there are educational and research opportunities to discover new practice interventions or obtain further improvement for current interventions. For example, the image-recognition ability of AI could assist in skin and wound assessment or recognize nonverbal cues for pain and other affects (Davenport & Kalakota, 2019). By virtue of being the largest group of healthcare professionals internationally, and with their close proximity to patients, nurses impact every aspect of care, so there are also possibilities to engage in the revision and development of protocols, policies, and projects, and to identify gaps related to practice, education, and leadership (Ronquillo et al., 2021).

None of the authors cited in this paper, such as Davenport and Kalakota (2019), Bryson (2018), Coeckelbergh (2022), Juravle et al. (2020), Matheny et al. (2020), and Topol (2019), believe that AI will replace humans anytime soon in healthcare settings but advise practitioners to continue to rely on authentically human skills such as empathy regardless of the role of AI. Ronquillo et al. (2021) underscore the importance for nurses to be part of the vanguard of AI in healthcare systems and to contribute to each stage of AI innovation, development, and implementation. Nurses are in a unique position to advocate for AI integration and regulatory governance that could limit negative outcomes. Furthermore, as AI continues to advance in health care, it is no longer possible to ignore the accompanying ethical issues; thus, nurses have an active role in ensuring they embody the knowledge to effectively manage human-machine

integration in the nursing process. Nurses need to continue to contemplate the question of where and how they situate themselves ethically in their collaboration with AI to achieve ideal relational care for their patients.

Conclusion

This paper was written with a reflective attitude by applying relational ethics to explore the application of AI in the healthcare setting. Essential relational ethics elements of mutual respect, engagement, embodiment, and trust were applied to anchor the paper and examine some of the potential legal, ethical, social and practice implications. Perhaps one day, an authentic, mutually respectful therapeutic relationship with AI could be achieved. Until the time comes when we can definitively say that AI is as sentient as the human mind, we cannot treat it like an autonomous agent. For now, the use of AI should be framed outside the direct care context to ensure that AI has a solid boundary, which is to function strictly in an assistive capacity. Presently, most people trust the healthcare professionals who have embodied enough knowledge to operate assistive AI. It is evident that ongoing research and discourse are required to address the issues of privacy, accountability, and regulations. Internationally, the innovation and utilization of AI in all sectors is happening at such high speed that there is an urgent need to consider ways to reach the vulnerable populations so that the advancement of AI is not only for the benefit of the privileged. As Cofone (2020) indicates in the OPC policy proposal that makes recommendations to amend PIPEDA, AI has immense potential to improve health outcomes and social, and economic inequities; hence, it is of paramount importance that providers and the healthcare system adequately understand the implications of AI use, ensure appropriate training, establish practice guidelines, and address ethical concerns.

In March 2023, the non-profit Future of Life Institute (FLI) posted a timely open letter to call on all international AI leaders and researchers to urgently pause for at least six months the training of any AI systems that could be more powerful than GPT-4. The FLI advised that there must be improved safety protocols that are audited by independent experts before any more AI development should continue and cited and warned about potential risks to society and humanity in case of misuse, disinformation, and cybercrime (Castaldo, 2023). Subsequently, on April 1, 2023, Italy was the first Western country to ban ChatGPT while the Italian data-protection authority conducts their investigation regarding privacy concerns (McCallum, 2023). In Canada, the Artificial Intelligence and Data Act (AIDA) is due to be in force in 2025; however, nearly 100 computer science researchers and experts, as well as startup CEOs signed an open letter in April 2023, calling for MPS to pass AIDA before the summer (Castaldo, 2023). The most significant announcement was from British-Canadian Dr. Geoffrey Hinton, Professor Emeritus at the University of Toronto, also known as the Godfather of AI, who resigned from Google in order to speak freely and stated on May 3, 2023, that he is severely concerned because the technology is developing far too fast and fears it could potentially manipulate humans (Korn, 2023). Hinton declared that he is blowing the whistle on the technology, called for stricter regulations, and admitted that there is no solution now, albeit it would be impossible to stop progress. Thereafter, on May 16, 2023, Sam Altman, the CEO of OpenAI, the company that created ChatGPT spoke before the United States Senate Judiciary Subcommittee in Washington on Privacy, Technology and the Law hearing on AI stated the “industry could cause significant harm to the world... if this technology goes wrong, it can go quite wrong” (O’Brien, 2023). Altman proposed “the formation of a U.S. or global agency that would license the most powerful AI systems and have the authority to take that license away and ensure compliance with safety

standards” (O’Brien, 2023). Professor Emeritus Dr. Gary Marcus from New York University also testified in the same congressional hearing and concurred with Altman’s proposal that there should be an international regulatory agency for standardized policies and safety standards to ensure compliance.

We are at a crossroad with the ongoing AI development and its governance. No AI should replace human care; therefore, relational ethics may serve to assist the healthcare system while moving forward as more AI are being implemented. Many healthcare decisions require human assessments, and the therapeutic relationship requires empathy and understanding to achieve a shared decision that is respectful of patients’ autonomy. Although it is indisputable that AI enhances healthcare services in countless ways, it should be supplementary and complementary to humans, not a replacement. Dostoevsky’s “man gets accustomed to anything” should serve as a cautionary note. Healthcare professionals should not become complacent.

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A Qualitative Description of the Role of a Whole Health Coach

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Abstract

The objective of this study was to explore the experiences and roles of ‘whole health coaches’. This qualitative, descriptive study used semi-structured interviews with seven informants. Transcriptions were coded with words, phrases, and themes identified. The overarching theme was a “balancing board,” with the client as the board and the whole health coach as the fulcrum. The “job” of being a whole health coach grounds the experience. The coach serves as the fulcrum, capitalizing on seven skills and a core of personal beliefs. The client engages in a “balancing act” as they move forward connecting with the whole health coach. The whole health coach experience is personal and professional. Coaches use the foundation of the job and skills to assist clients in moving forward on a path of balance with the client as the driver/pilot.

Keywords: health, coach, research, qualitative

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ACKNOWLEDGEMENTS. This material is the result of work supported with resources and the use of facilities at the Orlando VA Healthcare System (Orlando, Florida)

DISCLAIMER. The contents of this publication do not represent the views of the Department of Veterans Affairs or the United States Government

Introduction

The concept of whole health in the Veterans Health Administration (VHA) began in 2011 with the creation of the Office of Patient Centered Care & Cultural Transformation (OPCC&CT) with the primary goal of transforming the healthcare system from the traditional model of health care to a personalized, proactive, patient-driven model that focuses on developing and advancing whole health for veterans and employees (VA, 2021).

Whole health in the Veteran's Administration (VA) is a holistic approach to health and well-being. It aligns with a commitment to evidence-based disease management with the engagement of physical, emotional, mental, and spiritual aspects of care (Kligler, 2022). The focus is on the person and "what matters" to them (VA, 2022). The process of whole health starts with a personal health inventory self-assessment and the creation of a personal health plan.

Whole health programs can consist of wellness groups with a peer facilitator, one-on-one personal coaching, health education opportunities, and complementary and alternative medicine modalities. Regarding groups with facilitators, 15 veterans participating in a peer-led, group-based, whole health program, Taking Charge of My Life and Health (TCMLH), were interviewed, and the findings indicated positive experiences of internalizing the value of health engagement, making healthy lifestyle changes, forging social connections, and taking on an active role in health care (Anderson et al., 2022). Additionally, Abadi et al. (2022) found positive gains after a nine-week, 90-minute, TCMLH program in self-care attitudes and behaviors, motivation, meaning and purpose, mental health, stress, progress towards goals, and goal-specific hope using program evaluation surveys in 77 veterans. Research on VA Whole Health, which included personal one-on-one coaching in 65 veterans, demonstrated significant

improvements in mental health and perceived health competence from baseline to three months (Purcell et al., 2021).

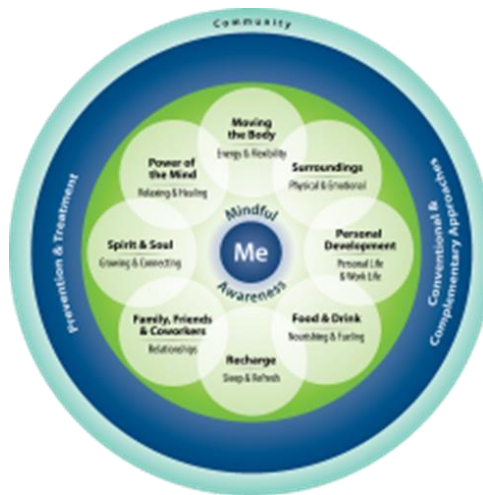
According to the VA (2019), there are nearly 2,300 VA-trained whole health coaches working in VA medical centres and clinics. Licensed practical nurses (LPNs) were the first whole health coaches at the VA where this study was conducted. The functional statement, or job description, of the whole health coach stresses facilitation and empowerment of clients in achieving self-determined health and wellness goals. Whole health coaches in the VA complete an approved whole health coaching program and subsequent certification. Health coaches have identified increased preparedness, self-efficacy, and use of health coaching skills following course completion (Collins et al., 2015). Additionally, whole health coaches must be certified in mind-body skills. The whole health coach performance plan focuses on clinical visits, documentation, customer service, professional development, and confidentiality. Whole health coaches are extended members of primary care Patient Aligned Care Teams (PACT).

Research on the personal and professional experience of the role of a whole health coach is limited. Whole health coaches working with veterans in rural settings during the COVID-19 pandemic ($N=14$) were interviewed and identified themes centered around leveraging technology, addressing social factors, redirecting self-care modes, and being flexible (Hale-Gallardo et al., 2022). Three health coaches were interviewed regarding their experiences in a novel, 12-week, whole person care intervention and validated participants' perception of the value of the program, including increased health awareness and motivation, goal setting and accountability, self-efficacy, individualized support, and coaching (Nelson et al., 2020).

A whole health program is not only available for veterans but for clinicians as well, applicable to both their personal and professional lives. The “me” in the center of the Circle of Health can apply to the veteran or the clinician (see Figure 1).

Figure 1.

Circle of Health (VA 2022).



The purpose of this study was to explore the role of being a whole health coach in the Veteran’s Administration healthcare system. The research question that guided this investigation was “What is the experience of being in the role of a whole health coach?”

Theoretical Framework

Whole health and its processes align with Pender’s Health Promotion Model. The model is based on two theories—Bandura’s social learning theory and Fishbein’s theory of expectancy-value. The model focuses on helping people achieve higher levels of well-being and identifies background factors that influence health behaviours (Khoshnood et al., 2018). The model was

proposed as a framework for integrating nursing and behavioral science perspectives on factors that influence health behaviors.

The three main concepts or domains of the theory include 1) individual characteristics—prior related behavior and personal factors; 2) behavior-specific cognitions and affect—perceived benefits of action, perceived barriers to action, perceived self-efficacy, activity-related affect, interpersonal influences, and situational influences; and 3) behavioral outcomes—commitment to a plan of action, immediate competing demands and influences, and health-promoting behaviours (Aqtam & Darawwad, 2018; Khoshnood et al., 2018; McEwin & Wills, 2019). It is assumed that individuals take an active role in shaping themselves and their environment to achieve health.

Healthcare professionals, including nurses, can explore patient/client factors that positively and negatively affect health behaviors such as past health-related experiences, barriers to engaging in health promotion, interpersonal resources, and competing demands. These experiences help shape behavior. Nurses can collaborate with other healthcare professionals such as dietitians and physical therapists in creating and implementing interventions that influence health-promoting behaviors through patient/client empowerment for self-care. Empowerment includes self-efficacy, as noted in behavior-specific cognitions, and the capability to regulate behaviors and surroundings to achieve a healthy lifestyle (Aqtam & Darawwad, 2018).

Methods

The study used a qualitative descriptive design. A qualitative descriptive approach results in a comprehensive, straightforward description of the data reflective of experiences and perceptions (Sandelowski, 2010, as cited in Doyle et al., 2020). This design is used when seeking

an uncomplicated description focusing on details of the ‘what, where, when, and why’ of an experience or event. A qualitative descriptive design aligns with the research question “What is the experience of being in the role of a whole health coach?” It is one of five other qualitative designs, including historical study, phenomenology, grounded theory, ethnography, and case study (Gray & Grove, 2021). The study was approved by the Institutional Review Board as exempt. An information sheet was used to explain the study and read to the participant before the interview began. Subjects’ willingness to proceed with the interview served as their consent to participate.

Participants

Purposeful sampling was used to recruit subjects. Veteran Affairs Medical Center employees at a facility in the Southeast who identified themselves as whole health coaches were extended an invitation through email by their department manager. Sample size was not determined a priori. Data was saturated after seven whole health coaches were interviewed, including five females and two males. They included six licensed practice nurses and one registered nurse; six subjects indicated their age as being between 50 and 59 years, and one was between 60 and 69 years of age. Five coaches had three and one-half years’ experience as a whole health coach.

Data Collection Procedures

Semi-structured interviews, lasting 35 to 45 minutes, took place on Microsoft Teams and were audiotaped using a tape recorder and transcribed verbatim. Subjects were asked five demographic questions and eight targeted questions about their experience as a whole health

coach, coaching effectiveness, the impact of coaching, whole health in their personal life, and challenges.

Data Analysis

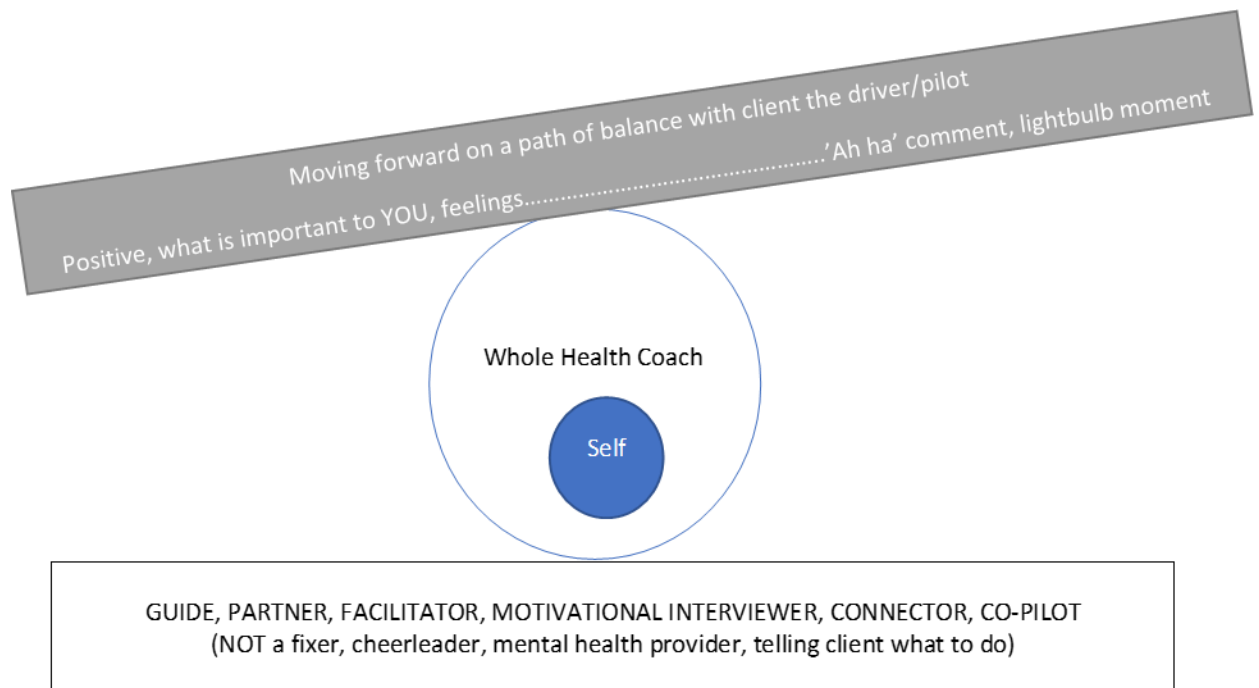
A summative content analysis was conducted in which words and phrases were summarized and a descriptive, interpretive summary generated based on the frequency and interrelatedness of the words and phrases (Hsieh & Shannon, 2005). To ensure the scientific integrity of the project, the researcher sought trustworthiness. Credibility was demonstrated by prolonged engagement with the subjects, comprehensive field notes, saturation of data, and member checking (Polit & Tatano Beck, 2018). Dependability ensures stability of data over time and conditions and was achieved by careful documentation and member checking (Polit & Tatano Beck, 2018). Findings were sent to three subjects, who acknowledged agreement with the investigator for validation of themes. Transferability or applicability in other settings was ensured by keeping comprehensive field notes, saturation of data, and detailed, vivid descriptions (Polit & Tatano Beck, 2018). Finally, the researcher sought to achieve authenticity by portraying the experiences and context of the participants (Polit & Tatano Beck, 2018). These strategies ensured that decision making and interpretation were grounded in data and not a priori thoughts or biases.

Findings

Findings are depicted as a balancing board with a board (the client) and fulcrum (the whole health coach) positioned on the ground (the job as a whole health coach) (see Figure 2). To protect their identities, participants in this study were numbered S1-S7.

Figure 2.

Pictorial Depiction of Findings



Theme 1: Ground – Foundation of the “Job” as a Whole Health Coach

Whole health coaches were clear about what the role or job is and what it is not. Words to describe the role include *guide, partner, facilitator, motivational interviewer, connector, and co-pilot*.

“We help them with accountability. We help with brainstorming” [S4].

When describing the role, subjects were clear that they do not correct client behaviors, function as a cheerleader, provide services such as mental health, which they are not licensed to provide, or tell or direct the client what to do.

“It is important to set boundaries” [S1, S2, S7].

“Providers will fix things for the veteran, telling them what to do. They come to whole health coaching expecting us to do the same. We don’t” [S5].

“Don’t call out the results; let them see it” [S3].

“We do not set the goals. We encourage them to set their own. Then they are vested’ [S7].

Theme 2: Fulcrum – Being a Whole Health Coach Professionally and Personally

The whole health coach is the contact for the client from the beginning to the end of whole health services. Subjects identified the critical skills of a whole health coach. A whole health coach needs to be an active communicator, true to themselves, an active listener finding the meaning behind a client’s words, empathetic, patient, and open-minded.

“You take time to listen. We have the time to listen. Providers do not” [S5].

“You need to hear the words and the meaning behind the words—what this means to that individual” [S6].

“You need a human factor. Be empathetic. Put yourself in their shoes” [S5].

The whole health coach is an individual, a person who seeks, on a personal level, to be human, mirroring the challenges clients face, practicing what they preach, and setting an example.

“I try to show that I have a real-life person image” [S3].

“We are not always great, but we make changes. We are human too” [S6].

“You have to walk and walk. You can’t just talk” [S4].

“You can’t help people if you don’t set an example” [S5].

The role can transform whole health coach themselves: “The job affects my life in a positive way” [S3]. They may even “put pressure” on themselves. Just like guiding the client in SMART goals, they set personal goals. “I want to be healthy” [S7] noted one whole health coach. Either overtly or covertly, clients seem to expect a whole health coach to practice whole health modalities.

Theme 3: The Board – A Balancing Act: The Client Moving Forward Connecting with the Whole Health Coach

The path of engaging in whole health for the client starts with planting a seed that sprouts or grows as they progress. A whole health coaching session begins with positive reflections and seeking a response to “What is important to you?” Underlying feelings are explored. When exploring feelings, whole health coaches are cautious and remark that “You can’t push it.”

“We follow their leads” [S6].

“We assess where the patient is at. Then we plant a seed” [S6].

“We get them to see themselves for who they are” [S5].

Along this path of balance for the client, the whole health coach taps the client’s strengths, which can result in the client building accountability for themselves and their health. “We give them the tools. They need to take the tools and hold themselves accountable” [S3].

Whole health coaches stressed that clients need to find it within themselves in identifying and making changes that are self-initiated, often trying new modalities for health. The client is the driver or pilot on this path, with the whole health coach as the co-pilot.

When clients begin to discover themselves and engage in new processes of self-care, they see their progress as a result of changes in themselves. Whole health coaches stressed the need for early client successes in this journey, with small increments.

“Small changes can have a big impact” [S3, S4].

“Seeing results is a motivating factor” [S3].

“They see that work does work” [S3].

“If they undertake too much, they feel defeated” [S4].

Success in integrating whole health practices often comes at “ah-ha!” moments in clients. This might be called a “lightbulb moment.” These moments reflect some kind of growth in the seed that the whole health coach planted at the beginning of whole health services.

“These ‘ah-ha!’ moments are when the veteran’s self-discovery hits home” [S2, S3, S5, S6].

Theme 4: Challenges to Whole Health Coaching

Whole health coaches identified client-related challenges to whole health coaching. Clients often have chronic health conditions, both physical and psychological. This challenge impacts the power of the mind, another challenge. People outside whole health coaching can bring negative opinions or lack of support to the role of the whole health coach.

Discussion

This study sought to answer the question “What is the experience of being in the role of a whole health coach?” The whole health coach experience is a job or position focused on connecting with clients as they move forward in holistic self-care. Whole health coaches connect

with themselves as they, too, find holistic balance “practicing what they preach.” Whole health coaches encourage clients to set their own goals and make changes that are self-initiated, demonstrating accountability. Goal setting and accountability are values of whole health as noted by coaches interviewed in this study and by Nelson et al. (2020).

Whole health coaches engage in exploring clients’ feelings in an effort to identify factors, including social aspects (Hale-Gallardo et al., 2022), that might influence health behaviors, a key aspect of Pender’s Health Promotion Model. When whole health coaches identify clients’ strengths, they support the clients’ self-efficacy, or can-do attitude, supported by previous research (Purcell et al., 2021; Nelson et al., 2020). When clients begin to see results from their whole health efforts, their motivation increases, which may confirm their commitment to their health plan, another element of Pender’s Health Promotion Model.

Whole health coaching is both a professional job and a personal experience. In some ways, whole health coaches also coach themselves into creating their own health plan according to the Circle of Health. Living the personal experience of whole health positively impacts the whole health coach’s skill and knowledge as well as clients’ perception of the coach.

Barriers to acting is a component of a health promotion model (Aqtam & Darawwad, 2018; McEwin & Wills, 2019). When applied to the actions of whole health coaches, study participants acknowledged that clients’ chronic health conditions, including mental health issues, can be challenging for both the coach and the clients, themselves, in health promotion behaviours. Barriers or challenges come from outside the whole health coach–client partnership, with colleagues, spouses, and others expressing negative opinions of whole health and its coaches. Study participants did not identify reasons for this negativism.

Strengths and Limitations

A strength of this research is the focus on whole health coaches themselves, both professionally and personally. There was a gap in the literature on the personal aspects of being a whole health coach. There is always the possibility of the researcher introducing bias during the interviews or interpretation of the interview data despite the use of bracketing. It is recognized that different interview questions may have resulted in different findings although the first global question asking participants to “tell me about your experience of being a whole health coach” provided an opportunity for open, unlimited sharing. The study was conducted at a specific government healthcare facility with continuity of the role throughout the Veterans Affairs Medical Centers. The whole health coach role may be articulated differently outside government healthcare facilities. All whole health coaches interviewed were nurses and the majority were LPNs who may have a different perspective of the role compared to other disciplines in the same role.

Implications for Practice

A holistic approach to health is referred to as whole health in Veterans Affairs in the United States but may be called by different names in other countries. Study findings added to the understanding and appreciation of the role of the whole health coach in Veterans Affairs (VA) but may be applicable to similar roles in other countries, including Canada. Study findings highlighted the “job” or role of the whole health coach, professional and personal aspects of the role, and client support, which align with the role of the LPN in Canada in promoting health and preventing illness (CIHI, 2023). Standard 3 of the *2020 Standards of Practice for Licensed Practical Nurses in Canada* (CCPNR, 2021) speaks to the therapeutic relationship LPNs establish with their patients and families. Study findings support this relationship, which focuses

on patient or client accountability, setting boundaries, listening, and tapping the strengths of patients or clients.

The results of this study support previous research on whole health and whole health coaches in the VA. Existing whole health or holistic health programs in and outside the United States and those in development may use study findings to recruit and “grow” whole health coaches, especially LPNs and other disciplines.

Conclusion

This study sought to explore the experience of being in the role of a whole health coach in the VA. Data was saturated after seven subjects, who provided rich descriptions of their professional and personal experiences as a whole health coach, and resulted in four major themes. The overarching pictorial is a balancing board consisting of the job, the professional and personal aspects of being a whole health coach, the client, and challenges. The findings add to the body of knowledge of whole health coaching in the VA.

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