Examining Successful Management Practices Among Senior Women Using Artificial Intelligence Technology

Leslie Gilliam
Walden University

Teresa Lao
Walden University

Chikwendu Nweke
Walden University

Artificial intelligence (AI) technology innovations can intensify the digital ecosystem affecting management practices and the quality of life for female senior business leaders in the United States. The purpose of this qualitative, transcendental phenomenology study was to examine the lived experiences that some female senior business leaders, ages 55 - 95, face using AI technology in decision-making. The conceptual framework are Technology Acceptance Model (TAM) and the Mindspace Model. Data was collected through interviews with 12 successful female senior business leaders from nine industries in the US. The Van Kaam method, supported by Moustakas' theoretical process, was used to analyze the data. Descriptive and inductive coding was used to categorize the themes: (a) AI technology is beneficial, (b) leadership and change management, (c) technology adaptation and acceptance, (d) decision-making and communication, and (e) information sharing and privacy. This study contributes to positive social change as a benefit to seniors by strengthening their AI technology decision-making practices, leadership, and community awareness in addition to influencing positive social change across management platforms.

Keywords: artificial intelligence (AI) technology, decision-making, emerging technologies, fourth industrial revolution (4IR), information systems (IS), information technology (IT), innovation, leadership, machine learning, management technology, phenomenology, senior business leaders, successful business organization process, procedures transcendental phenomenology

INTRODUCTION

In this digital information technology age, managers and leaders exist in a virtual, rapidly shifting world. AI technology, defined as intelligent transformative technologies, could emulate human intelligence at the epicenter of technological information developments (Venturini, 2022). That is why the use of AI should be encouraged in organizations because they enhance and support the quality of life for senior female business leaders because these innovative technology platforms have the potential to increase general knowledge and display creative problem-solving skills using knowledge sharing and technology utilization.

In fact, robots have physically supported humans with multiple organizational processes and procedures (Cooper, 2019), which contributes to operational efficiency and effectiveness in completing the daily work tasks. Because technology has reduced workforce involvement in business, seniors using technological advancements, such as AI, have successfully embarked on more ambitious business ventures.

Although AI has proven to be an effective tool for technological advancement, its application often needs to be improved for seniors because of the devices' complexity, making them difficult to use (Davenport & Kalakota, 2019). For example, many technological devices have many features making them difficult to understand the precise mechanisms of operation (Davenport & Kalakota, 2019). These devices are not always designed in "simple" terms where a click of the button will simply turn the device on and off. While considering various modifications, older adults' usage and adaptability to new technologies are more comprehensive (Alexandru et al., 2019). Older adults need more explanation when it comes to using technology. The use of these devices is not always second-nature; they have to rely on manual instructions and assistance from colleagues to operate different technologies. This is the reason why this study is needed: To explore the phenomenon some female senior business leaders aged 55 - 95 years old face while using AI technology in decision-making. The study is significant because AI technology innovations rapidly have advanced performance and routine tasks seniors perform, thus transforming their experiences (Huang et al., 2019).

This study will also delve into the lived experiences of some female business leaders using AI technology because they are vital components for this study. This purpose is in alignment with Huang's et al. (2019) study, who indicated that the capabilities of AI technologies have emerged from expanding repetitive analytical thinking and decision-making strategies for seniors. According to Vagle (2018), another potential implication when adopting perspectives of phenomenological philosophy, Husserl (transcendental) and Heidegger (hermeneutic) are the two frameworks used to describe the theory as the essence of something and how it functions in lived experiences or how it moves in consciousness as an object of reflection. Phenomenology is a research approach used to essentially understand the everyday experiences of others, and guard against ideas that involve a process of understanding aging by simply placing oneself in the shoes of another to understand and interpret aging meaningfully through a phenomenological lens (Pickard, 2018).

As part of the vision of this study, the scope of this research blends into existing AI technology with emerging human-computer interaction systems to assist leaders in decision-making, which is essential simply because of the vastness of choices we face today in this modern world (Haste & Dawes, 2010). In addition to decision-making, leadership must deal with the overall operations of managing an organization. According to Wright (2013), leadership must revolve around vision, ideas, and direction, which has more to do with inspiring people to achieve focus and goals through management. Both management and leaders need to scan situations, define options, and then thoroughly drive the essence of their thought processes, using all opportunities for creating change. This study is timely because the opportunities to use AI in a productive and positive way could enable many senior leaders to feel comfortable with the devices; thus, they could encourage similar age-group to be open to the idea of exploring AI more in their everyday business operations.

BACKGROUND

AI technology has emulated human intelligence in information technology (Anandakumar & Ashwinkumar, 2012). Although decision-making and problem-solving skills are still done by people, we can't help but accept the positive presence of AI in business today especially in helping leaders analyze data, streamline communications, complete written reports, etc. There seems to be a debate amongst scholars as regards the impact of AI on human society. While some scholars believe that AI can transform the world by revolutionizing the industrial, social, and political economy of the human environments (Schwartz et al., 2019; Park 2018 & Checco et al., 2021), some other scholars view AI as an attempt to subdue the order of nature (Arntz et al., 2016; Belisle-Pipon et al., 2021).

The idea of "thinking machines" has existed since the 1930s; Turning was credited with developing a computing machine (The Enigma) that executed algorithms and is considered intelligent (Sejnowski, 2018). However, McCarthy was credited with being the father of AI technology, thus coining the term in the late 1950s (Sejnowski, 2018). This included a platform of knowledge and creative problem-solving skills for an experience through knowledge sharing and technology used for older adult users.

Understanding the history of AI technology is essential (Campolo et al., 2018). In 1951, AI technology exposed the need for research capabilities, the possibilities of AI techniques, how AI technology has worked, and how information must be processed at lightning speed in the future (Gawdat, 2021). During the 1956 Dartmouth Conference, the U.S. Military AI researchers historically influenced AI technology parameters that work with complex social realities (Campolo et al., 2018).

This fourth industrial era was fueled by multiple AI technology innovations for individuals, society, businesses, government, and other organizations (Talwar & Koury, 2017). AI technology consists of any tool or system that contains microprocessor chip technology. The COVID-19 pandemic influenced the everyday life of people, and the perceptions towards technology use, benefits, developments, and use of technology have increased (Verma et al., 2021). This is consistent with new modern innovative software applications with emerging AI technologies that have maintained growth and promotion in the marketplace among older adults.

AI technology has focused on creating intelligent software tools to replicate critical human faculties (Talwar & Koury, 2017). According to Kadylak and Cotten (2020), specific hardware emerging AI technologies have appeared in the market and are applicable for successfully aiding and maintaining aging adults. AI technology is currently in the space of physically supporting humans with multiple organizational processes and procedures. Talwar and Koury (2017) noted AI technology must learn from humans, although one day, it can reach an iteration where expert involvement will no longer be required.

The future potential use of AI technology is the detection of internal threats and growth, which has allowed the AI system to learn and predict the behavior of humans (Talwar & Koury, 2017). The development of AI technology reached giant steps during the last decade, influencing people and society, thus shaping the future of intelligent services (Gaggiolo, 2017). Demographics often drive the advancement of AI technology. The United States' aging community was slower to adopt due to a lack of resilience and unrealistic expectations of how AI technology knowledge must be applied to real life (Gessl et al., 2019).

Older Adults are Still Working

Marston and van Hoof (2019) indicated that people are in better health and living longer than in previous generations, which is consistent with the Organization for Economic Co-operation and Development (OECD), understanding that the population share of those adults aged 65 years old and over is expected to rise to 25.1% in 2050. Also noted, 43.2% of older populations live at home, and this increase in our aging society is a positive yet challenging phenomenon (Marston & van Hoof, 2019). Although the United States statically does not appear to be aging as fast as some other countries, America's 65 years and overpopulation are projected to make up about one out of four Americans and will nearly double by 2060 (United States Census Bureau, 2021).

According to the United States Department of Labor (2021), older adult seniors 55 years or older are still working at their jobs. Although seniors are embracing technology more, around 16% of Americans 65 years of age and older have faced obstacles using practical and straightforward AI technologies, and 57% are females 65 - 74 years of age and older (Pew Research Center, 2017). In consonance with Zhou (2020), many seniors must learn to use AI technology to assist them in the workplace and at home. According to the United States Census Bureau (2021), in 2025, it is projected that there will be twice as many workers aged 50 years or older, and the number of elderly persons will reach about 85 million by 2050; additionally, many are expected to live beyond age 85 years old (Manh Do et al., 2021; Mercadal, 2021).

Decision-Making Capabilities

Historical precedents of decision-making have existed, and using AI technology is crucial for the decision-making process in organizations today. According to Fox (2022), in the 1770s, Franklin wrote

about comparing options, making choices, and solving problems through morals and mathematics. During World War II, the measured weight of possibilities in an uncertain future, statisticians observed probabilities that improved quality control in the manufacturing industry that safely routed ships to resolution through decision analysis (Fox, 2022). Fox (2022) indicated that this logical, statistical approach transformed other fields by comparing options and making choices through problem analysis by listing a course of action and possibilities and then systematically assessing each option.

According to Fox (2022), in 1964, Howard coined the action and process of decision-making. Howard applied decision-making theories by introducing General Electrics (GE) nuclear power plant by combining Bayesian statistics computer modeling with an engineering utility technique (Fox, 2022). Additionally, Fox reported that the evolution of decision-making over the past half-century demonstrated that humans interact and make essential and influential decisions with AI technology. Today, the likelihood of guiding systematic probabilities with sound choices in times of uncertainty has encouraged the participation of workers to create better outcomes and solutions, to problem solving from decision-making, and to make pivotal decisions using AI technology.

AI has been a pervasive concept represented in various forms ranging from a process to a technological object or even as an ideology that captures a meaningful analysis by processing diverse and vast amounts of media documents Akkılıç (2020). In the 1940s, Lovelace was among the first women to use AI technology and develop natural intelligence through observations and decision-making. Many viewed this as the predecessor to modern computer programming. According to Flair (2021), women in technology did not achieve full integration into technology fields and decision-making positions until 1925. Flair stated that the programming for the electronic numerical integrator and computer (ENIAC) was successfully pioneered and completed in computer technology by six women dedicated to making decisions for calculations needed for artillery used by the Ballistic Research Laboratory of the U.S. Army. Later those six women decided to change the purpose of the ENIAC to solve computational problems for the hydrogen bomb development (Flair, 2021).

During the Industrial Revolution, the social stratification for women in society was not reached in social perception; therefore, to enrich, many advances were made (Flair, 2021). Women had to use AI technology to think about situational aspects for decision-making through defined options. When all possibilities are used to derive a decision, all innovative decisions are made through advancements when considering parameters while faced with AI technology opportunities (Flair, 2021). According to Flair (2021), traditionally, discrimination against women who have made decisions using technology continues to raise barriers for women in business; however, the integration of AI technology in business processes resulted in the reshaping of business. Women excel using AI technology and succeed in their businesses through patience, focus, efficiency, and decision-making (Flair, 2021).

Knowledge Gap

This study fills a significant gap by contributing to the body of literature and addressing the current knowledge gap. Very little has been known about the senior adult communities in the United States and the factors influencing their usage of emerging technologies (Bennett, 2019; Yao, 2020). According to Bennett (2019), older adults have no influence or use for emerging technologies, and community outreach programs need to become influencers for older aging adults in the knowledge to understand the benefits and potential affordances of AI technologies that increase possibilities of living an enhanced or independent lifestyle. AI technology has affected the United States aging older adults and is used to make decisions (Campolo et al., 2018). This study addresses AI technology management experiences among senior business leaders, aiding in understanding technology acceptance, technology adaptation, and decision-making. AI technology may be capable of going beyond human capabilities, freeing organizations from impossible tasks (Talwar & Koury, 2017).

PROBLEM

The problem in the field of management is that despite the success in business practices for some female senior business leaders ages 55 - 95 years old, who use AI technology, there are still other female business leaders who have difficulty adapting to AI technology in their professional and personal lives. According to Shrestha et al. (2019), business organizations must make decisions everyday to attain goals and satisfy their stakeholders' needs. The key in this competitive environment is to accomplish these organizational goals with efficiency and satisfaction. To meet these demands, the use of AI technology can ease the process for these senior leaders.

Robotic structures in the age of AI technology already physically support humans in multiple organizational processes and procedures (Shrestha et al., 2019). As technology innovation advances, it can be challenging for the aging individual to learn and adapt to technology (Lenhoff, 2018). As part of an effort to assist people with living longer, Lenhoff (2018) argued that AI technology enhances the quality of life for the aging population and increases their success as they age.

According to Petrovcic et al. (2019), a gap exists in the research literature in terms of how AI can truly assist older adults with their business operations. AI technology has increasingly become necessary to perform important everyday tasks. Seniors have to adapt and face the many technologies available to them; however, the senior service industry has not prepared to cater to seniors' shifting lifestyle requirements to maintain a quality lifestyle (Eckstein, 2017). Eckstein (2017) suggested that technological advances will help seniors bridge the gap with the rise in social change to address leadership, workforce decision-making, technology adoption, and technology education programs.

This phenomenological qualitative research contributed significant research and relevance to the large body of research about AI technology in the workplace, particularly for older adults who are still working today. While society is well into the 21st century, female business leaders between 55 - 95 years old illuminate different experiences using AI technologies to manage their everyday lives. The difficulties of using AI technology in the workplace has often created problems that need to be solved. Based on broad concepts of the problem, the social impacts of AI technology depend on the technological product and the social environment in which it is used. Integrating or preparing embedded innovative AI technologies is always possible for anyone willing to learn and use these devices at work.

The Aging Population

The U.S. population is aging, and an increasing number of older adults (aged 65 and older) are experiencing chronic health issues (Kadylak & Cotton, 2020). Despite the market's progress and increase, AI technological products, solutions, and services have shaped society. The framework and methods of technology development and technology governance must develop for integrated technologies' considerations, including positioning positive social value, bold action, and driving the management of new innovative technologies (Brey, 2018).

Although many researchers like Alexandrakis et al. (2020), Alexandru et al. (2019), De Juan Pardo et al. (2018), Duan et al. (2019), Eckstein (2017), Gessl et al. (2019), Hafezi (2020), Huang et al. (2019), Lenhoff (2018), Liu et al. (2017), Shih and Lang (2020), Smith (2014), and Weick (2015) investigated this current issue, the topic was not explored in this way. After completing a thorough investigation of over 150 articles related to older people's difficulty adapting to AI technology and the acceptance of AI technology by older people, it was clear that a gap existed in the academic literature regarding the successful business management practices for some female business leaders who use AI technology (Lenhoff, 2018). The study by Smith (2014) positioned a significant gap in the literature, as senior leaders expressed challenges in managing technology decisions. Decision-making is essential simply because of the vastness of choices we face today in the modern world (Hastie & Dawes, 2010). Consequently, in Smith's study (2014), senior leaders were pressured to make clear and consistent decisions. Smith (2014) invited future research ideas for a decision-making model and integrated technology innovation that will contribute to senior leadership strategies.

The specific research problem addressed in this study included the lived experiences of female senior business leaders, ages 55 - 95, who have had to use AI technology in decision-making. Shih and Yang's (2020) study identified a critical gap in the research that influenced seniors' willingness to embrace AI technology in their lives. Most people have inevitably started using AI technology for their daily activities, and there has been considerable growth in AI technology in emerging markets to change people's lifestyles radically (Shih & Yang, 2020). Individuals who adapt to AI technology can benefit their management practices, technology adoption, and replication strategies.

The gap in the literature for the study motivated the overarching central research question: What are the lived experiences that some female senior business leaders, ages 55 - 95 years old, face using Artificial Intelligence (AI) technology in decision-making? The study's specific qualitative phenomenological central research question was limited to the lived experiences of female senior business leaders managing AI technology successfully. The research question did not assume an experience exists (see Peoples, 2020). However, it fulfilled a gap in the research with the possibility of assisting seniors in facilitating management practices and making decisions while using AI technology. Phenomenological research are inquiries about lived experiences (Peoples, 2020). Research questions developed for the interview are part of the unresolved puzzle, the problem statement, or the unanswered concern that motivates the participant(s) during the interview (Rubin & Rubin, 2012).

This study's specific phenomenological research question is limited to the experiences of female senior business leaders ages 55 - 95. Through this phenomenological methodology, the qualitative research's significance filled the gap by illuminating concepts and relationships in how those in retirement will have a clear or concise way to make decisions on managing the use of AI technology innovation during retirement. AI technologies influence behaviors in older seniors' environments and belonging to older adults beyond retirement. Research questions are facilitated to expand views and visions through a qualitative methodology.

Research Methodology and Design

This study is a qualitative transcendental phenomenological framework demonstration aligned with theory and methods for enhanced research credibility for the study. The strength of the research method and design was derived from the process theory of the inductive approach, which focused on the world in terms of people, situations, events, and the processes that connect substantially, contributing to goals (see Maxwell, 2013; Moustakas, 1994). This research study approach to a problem correlated by communicating a story and mindfully adding value to relatable questions to an identified community. Leadership through voice, trust, and inspiring others has done more than influence or gain support from others; it has initiated decisions and provided people space to develop and make the right decisions (Wright, 2013). Wright (2013) recommended that business leaders not view transformation as adversarial but consider change as the source igniting personal growth and management solutions.

Leaders continue to reconstruct management by applying improvement techniques developed from theories (Alexander Di Pofi, 2002). Society has quickly moved with the world, whereas innovative solutions are critical for improving the quality of life, initiating leadership, and creating social change. Detailed theory descriptions of a central phenomenon emerge at the end of this qualitative study research design as a visual concept among relationships with an endpoint (a pattern or a generalization) (Bloomberg & Volpe, 2019; Leavy, 2017). Some qualitative studies do not employ explicit theory (Patton, 2015), and building an empirically grounded theory requires a reciprocal relationship between data and theory. According to Bloomberg and Volpe (2019) and Babbie (2017), data must be allowed to generate propositions logically to permit the use of a priority theoretical framework, which consequently keeps a separate framework from becoming the container into which the data is provided.

A research design is purposeful for asking a series of questions and then initiating a systematic way to obtain the answers required (Meltzoff, 1988). This qualitative phenomenological study was aimed to understand the lived experiences phenomenon of female senior business leaders living in the United States; the phenomenological research study question was analyzed through multiple phenomenological questions (both research and interview questions) that are limited to experiences. According to Leavy (2017), the

research study describes each step in the research design used for the study to answer the research questions, using instruments or materials to safeguard against any potential biases and errors. A theoretical framework was used in the research design for the qualitative study (Bloomberg & Volpe, 2019).

Relevant interview questions developed for the interview were part of the research design to answer the unresolved puzzle appropriately, the problem statement, or the unanswered concern or questions that motivated participant(s) during the interview (see Peoples, 2020; Rubin & Rubin, 2012). The research design for this study as phenomenology, justified the lived experience for the literature review, and most importantly, methods and analysis (see Garvey & Jones, 2021; Peoples, 2020; van Manen, 2017a, 2017b). The conceptual framework guided the research and interview questions for this qualitative study related to the topic. According to Dziak (2020), phenomenology is the study of individual human's subjective life experiences describing their experiences and reactions to determine how they relate not only to individuals but also to humanity and the nature of reality. The research unraveled patterns and developed theories from the elements of lived experiences to gain meaning and understanding (see Babbie, 2017).

Phenomenology is one type of qualitative research design focused on discovering the essential meaning of a phenomenon through the participants' lived experiences of a study (Adu, 2019; Larsen & Adu, 2021; Peoples, 2020; van Manen, 2017a, 2017b). van Manen (2017a, 2017b) distinguished phenomenology from other qualitative research inquiries such as case studies, ethnographies, narrative questions, or empirical studies that generalize findings to a specific group or population. The word phenomenology comes from the Greek expression phainomenom, which means to show itself or what looks like something, and is also derived from the verb phainestha, which implies the self-showing or what shows itself (Heidegger, 2013; Krell, 2008).

The transcendental phenomenological approach to this research study was limited to the stated phenomenon exploration of the lived experiences of female senior business leaders who have successfully managed AI technology. Selecting a transcendental phenomenological approach was the best option for this study to analyze the disparity in the research with the possibility of assisting other seniors in making management practice decisions while using AI technology. According to Bloomberg and Volpe (2019), Moustakas (1994), and Peoples (2020), phenomenological value focuses on deep lived meanings, including the lived human relations, lived body, and an individual's lived space that guides actions and interactions. In this study, the lived experiences are regarded as a phenomenon of female senior business leaders using AI technology in decision-making.

The descriptive theories of TAM and MM are related to the decision-making problem that some female senior business leaders face and serve as the framework for the study. According to Bloomberg and Volpe (2019) and Ravitch and Carl (2016), qualitative research frames are the work of dynamic and interactive processes that this study used to understand individuals, groups, and phenomena in their natural settings in ways to contextualize and reflect the meaning people make out of their own experiences. A qualitative research methodology begins with interest, problem, or question (Ravitch & Carl, 2016). This qualitative research study was dynamic and formed the foundation for understanding the methods and rationality of thought; it began with deciding on or choosing qualitative research.

The qualitative approach was chosen because it is related to the study and aligned with the research problem statement. The qualitative research analysis was collected, and the data was analyzed from the lived experiences of senior female business leaders using AI technologies to incorporate the philosophical groundwork within the examination. Perception in the outlook on the future and the perspective of humans and AI technology working together was valuable to understand (Ertel, 2017). According to Ertel (2017), AI technology was conjoined in three diverse fields of work for social change: virtual environments, teamwork, and working together in our communities on the grand scale of our world.

De Juan Pardo et al. (2018) highlighted the experiences of seniors who face problems adapting to age as a process with functional decline as they age, limiting their independence. The light of 'being' essentially constitutes Heidegger's hermeneutic consciousness experience, for example, consciousness awareness in the most general sense of being and time (Barnett, 2023; Suddick et al., 2020). Apostolescu and Serban (2022) noted that Husserl's transcendental phenomenology describes the experience as an analysis of intentional consciousness confirmed by an essence of the conscious experience, which includes feelings

and emotions as they enter an experience. The strategy of this study focused on transcendental phenomenology research, which detailed the lived experiences of female senior business leaders and complete depictions of their experiences from the frame of reference of the experiencing participant. The selected theory provided a theoretical and critical direction and a practical orientation in hands-on, shared change-oriented, and reliable methods of inquiry (see Patton, 2015).

The content of interviews, the quality of data, analysis from the data sets, detailed sample size choices, data saturation, and theoretical saturation was an explorative process. When the phenomenon was being studied, an attempt was made to determine which experiential structures make up these experiences (see Errasti-Ibarrondo et al., 2018). Subsequently, this research was essential to my study because it was my professional task and responsibility to interpret what was explored for the study by describing management practices with AI technology among seniors and making sense of their lived experiences.

RESULTS

Within the framework, results of the findings contributed to the literature through the exploration and analysis of female senior business leaders' (ages 55-95) lived experiences using AI technology successfully. According to Bloomberg and Volpe (2019) and Ravitch and Carl (2016), dissemination of the finding through data saturation in qualitative research is referred to as the point at which a researcher no longer finds new themes in the data points. In consonance with Burkholder et al. (2016), saturation happens when continued data collection does not add new themes or patterns but reinforces prior data analysis already derived from a study. However, two criteria must be achieved to reach this saturation: (a) continued analysis yields no new information and (b) there are no unexplained phenomena. The data collection process reached data saturation with 12 participants.

The research data was organized and processed for this study in the following five major themes emerged resulting from the data coding and analysis (see Table 1):

- AI technology is beneficial.
- Leadership and change management.
- Technology adaptation and acceptance.
- Decision-making and communication.
- Information sharing and privacy.

TABLE 1
TABLE OF THEMES

Theme	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12
AI technology is beneficial.	x	x	x	x	x	x	x	x	x	x	x	x
Leadership and change management.	x	x	x	x		x	x	x	x	x	x	x
Technology adaptation and acceptance.	x	x	x	x	x	x	x	x	x	x	x	x
Decision-making and communication.	x		x		x		x	x	x	x	x	x
Information sharing and privacy.	x	x			x	x	x	x	x	x	x	x

Theme 1: AI Technology is Beneficial

The first theme that emerged from analysis of the data was that AI technology is beneficial. The first theme supports Pugliese (2019) that AI will impact business and society within the next 10 years. Business professionals must be more proactive concerning AI and increase competencies with advanced technologies (Pugliese, 2019).

This theme supports Prada et al. (2018) because AI technologies rely on a dedicated problem-centered approach to examine the many ways technology benefits older adults, focusing on challenges, solutions, and perspectives for their quality of life. Participants stated that AI technology is beneficial because it provides an opportunity to be more productive and efficient in getting work done quicker, faster, and more effortless through communication and management tools. In addition, the participants mentioned that AI technology had been a positive attribute in growth in the community, business, residential, and personal lives when they can learn more through partnerships for training, business, and personal relationships. Gaggioli (2017) stated that partnerships on AI technology benefit people and society, and these initiatives improve public awareness and expand their knowledge of how AI shapes the future of intelligent services. Berente et al. (2021) stated that AI technologies learn from data sets and feed on all kinds of data for the effectiveness of humans for AI technology collaboration with algorithms that demonstrate basic operations to augment tasks and decisions, particularly as tasks become more complicated, which can have detrimental consequences.

The findings are consistent with additional AI technology research amidst alliances formulated from best practices that advance society with increased awareness and comprehension of AI technology (Berente et al, 2021; Gaggioli, 2017; Prada et al., 2018). They also serve as an open platform for discussion and engagement about AI, influencing people and society (Gaggioli, 2017). Since all participants interviewed were female senior business leaders who used AI technology, their responses about AI technology being beneficial in their personal and business lives were the main factors that have reshaped their expectations of using AI technology as older persons. This study produced results that corroborate the findings of the previous work and the concepts of AI technology as thought to positively contribute to an older individual's well-being and healthy aging (see Camp et al., 2021; Huang & Huang, 2020; Jokisch et al., 2020; Liu et al., 2021; Tsai et al., 2019).

Computers, tablets, smartwatches, smartphones, assistive devices, mobile apps, and medical alert systems can work together to transform an aging society, keeping seniors safe and increasing their independent living at work or home, even should their health needs alter (Akinola, 2021; Redding, 2023). AI technology is beneficial to older adults, and AI technology can help more senior adults benefit as they live independent lifestyles (Redding, 2023). Redding (2023) provided examples of the potential benefits:

- Connects them to their business obligations.
- Connects them with friends, family, and healthcare providers.
- Provides access to entertainment, transportation, and food.
- Monitors health and wellness.
- Keeps seniors safe.
- Informs about the latest news and trends.
- Generates alerts if something is irregular or if a notification is needed.
- It provides peace of mind.

Theme 2: Leadership and Change Management

Leadership and change management were the second themes found. The second theme accentuates the idea that effective leadership remains respectively more than guiding or influencing a team or an individual to achieve a specific goal. In consonant with Leadership Charlotte (2021), Stewart stated that successful leadership and management strategies serve as the foundation for mentoring strong relationships, workforce organizational objectives, community direction courses of action and masterminding personal life.

According to Pugliese (2019), AI disrupts professional business models. Leaders must be more proactive with AI technologies and increase the advancement of their business through AI technology. It is essential to focus on facilitating leadership growth opportunities. Critical leadership and structural elements

for creating a successful action plan address themes to guide and serve as a pathway for managers to develop strategies. A successful program connects to the public, private, and independent sectors through decisive leadership with stakeholder involvement and accountability for adopting AI technology systems based on solutions that can touch all business areas of the aging life experience. Marimuthu et al. (2022) agreed that learning is possible since older people have initiative, determination, and a desire to increase their educational pursuits.

Theme 3: Technology Adaptation and Acceptance

Based on the findings of this study, technology adaptation and acceptance for female senior business leaders in the United States were found to be essential aspects. Amidst growing business complexities and competition, business leaders must expand their knowledge to remain relevant in the future (Pugliese, 2019). According to Pak and Mclaughlin (2018), demographic shifts can result in an increasing number of older adults who face challenges with AI technology acceptance supports in daily life.

Despite concerns and challenges, using AI technology as a lens examines issues of technology adaptation, acceptance, and value tied to fundamental human factors related to aging and usability, privacy, trust, and automation. According to the Pew Research Center, seniors hold relatively positive views of technology and are less inclined than other age groups to try new technology; however, some seniors strongly prefer to adopt AI technology early (as cited in Pew Research Center, 2017). AI technology is accepted and adopted across various business sectors and industries, driving business growth and demand for products, services, and experiences enhanced by AI technology (Pugliese, 2019). In consonance with the Pew Research Center, most older adults report that using AI technology, has positively impacted their life in society (Pew Research Center, 2017).

This theme is comparable to findings by Yao (2020) and Yasin et al. (2019) that decision-making and expectations for older people are influenced by how other people view them. According to Pew Research Center, one-in-five American older adults aged 65 and older (21%) aspire to use innovative AI technology products, and two-thirds of those are early adopters (as cited in Pew Research Center, 2017). Many seniors remain relatively removed from our digital society (Pew Research Center, 2017). Since all participants interviewed were female senior business leaders who use AI technology, their responses about technology adaptation and acceptance in their personal and business lives were the main factors that have reshaped their expectations of using AI technology as older persons.

Consistent with Marimuthu et al. (2022), there is a digital divide factor with the adoption and acceptance for seniors, and bridging this gap to educate digitally will require a combination of efforts from multiple stakeholders to understand the challenges and for others to adopt technology solutions. Advances in technology are a realistic option for American seniors to continue working successfully in business, remain connected with friends and family, or enjoy living independently in their golden years (Akinola, 2021; Redding, 2023). Pugliese (2019) agreed that with deep learning, seniors can learn and take advantage of AI technology that will positively contribute to society with relevant learning programs to fill knowledge gaps. Positioning and empowering aging adults as valued and needed members of their community impacting older adults adopting and adapting to new technologies can counteract some obstacles of social isolation and loneliness.

Theme 4: Decision-Making and Communication

Based on the findings of this study, decision-making and communication for female senior business leaders in the United States were found to be essential aspects. Each participant stated that they use AI technology to make decisions to manage banking transactions, communicate and reach broad audiences, and give quick responses for immediate feedback. They use apps on their mobile phones for connectivity and quick decisions for processing management transactions to run their business efficiently, and this allows them the ability to live an improved life. Pugliese (2019) noted that before embarking upon and deciding the benefit of an AI technology initiative, businesses need to understand which technologies perform what type of tasks, in addition to the strengths and limitations of each.

In the case of decision-making and communication, this theme is synonymously supported by reports from the United States Department of Labor (2021) and the United States Census Bureau (2021), indicating an increase in older adults working beyond retirement age. AI technology increases managerial decision-making timeframes across countries as it enables personnel the opportunity to face problems and challenges directly to solve issues in the work environment through quick broadband communications on a global scale. Tomaszewski et al. (2020), Yao (2020), and Yasin et al. (2019) stated that decision-making and expectations for older individuals' lived experiences are focused on the nature and meaning of their experience and described and influenced by how other people view them, which had similarities to the data gathered from the study participants.

Theme 5: Information Sharing and Privacy

The fifth theme emerged from the findings relative to the analysis and interpretation of the data from 12 semi structured interviews, document reviews, and notes. Based on the results of this study, information sharing and privacy for female senior business leaders in the United States were found to be essential aspects. AI technology has been successful in the sharing of information across the management of technologies and various platforms. Machine learning has a massive role in the world; however, it is heavily influenced by cybersecurity, and many businesses are using it to fight cybercrimes, saving billions in revenue (Ghimire, 2020).

Older adults are a growing population, living longer, and female senior business leaders are adaptive in shaping the world with AI technology through the sharing and transferring of relevant data and information in their business and personal lives; however, they have share disdain and concerns about their privacy on the internet. A communication and information-sharing strategy through partnerships will concretely address AI concerns on safety, support, and responsibilities that are tied to potential damage caused by AI to humans (Gaggioli, 2017). Developments in AI technologies are shining a spotlight on both challenges and opportunities, which can reshape services and solutions.

This theme is also supported by Marimuthu (2022) who indicated that communication infrastructures, computer availability, and Internet access are all critical indicators for monitoring learning, management processes, and privacy. Learning through information-sharing programs for the older population is a unique phenomenon that must be considered in designing educational AI technology programs for older adults. The academic and curricular characteristics necessary to facilitate learning among older adults have been explored by looking at physical and mental changes, memory loss, the decline in cognitive abilities, and life experience (Marimuthu et al., 2022).

Conformity of Findings

The five findings within the context of the framework of the TAM and the MM and literature review determined the alignment of the five themes that contribute to the findings and include the following: AI technology is beneficial, leadership and change management, technology adaptation and acceptance, decision-making and communication, and information sharing and privacy. AI technology has increased the number of different ways for consumers to use technology across platforms (see Intel Newsroom, 2021). Overall, five findings were composed from the study, and all five represented congruities parallel to the five themes supported by the conceptual framework and literature review.

Husserl's transcendental phenomenology offered the foundation for this qualitative study. The conceptual framework of the TAM and MM aligned with the findings, which has positively influenced female senior business leaders' use of various AI technologies, impacting their acceptance, adoption, and decision-making experiences, transforming their successful business experiences and their daily lives.

Conformity of TAM

This study aligned with the concepts of the TAM (technology acceptance and adoption), describes the effects of older adults' experiences and is related to offering ease of use to others who have difficulty adapting to AI technology. Organizations that adapt to AI technologies can accelerate their productivity to develop, innovate, and empower others to increase their enrichment in learning and to live independently

with a good quality of life (see Intel Newsroom, 2021). Older adults aspire to enjoy the benefits and use of digital opportunities that can help with staying socially connected, extending personal care, and remaining independent (see Haan et al., 2021). AI is beneficial, leadership and change management, technology acceptance, and adaptation align to the TAM model, which has positively influenced female senior business leaders' ability to leverage AI technology in social networks and to become active learners, which drives successful innovative experiences in their businesses and personal lives.

Conformity of Mindspace Model

The findings align with the key concept of the MM (decision-making and communication, and information sharing and privacy) aligned with the decision-making approach to behavior for establishing the ground rules for making improved decisions and choices to achieve better outcomes for female senior business leaders when making strategic decisions. Older adults are very optimistic and find comfort in learning and using AI technology because it offers connectivity to their families (see Haan et al., 2021). Business owners often face immense pressure to identify revenue opportunities and innovative solutions to remain robust in the market (see Intel Newsroom, 2021). Older adults in society value AI technology to make decisions and communicate with others to share information, which improves their learning experiences to foster successful independent living (see Haan et al., 2021). The female senior business leaders saw AI technology as a way of putting them in control of their future by making them feel safe and secure. The MM model was selected because it motivates learning, which allows greater insights aligned with being positive in society, helpful, and influential, supporting expectations through decision-making and communication in addition to information sharing and privacy.

The conclusiveness of the TAM and the MM was positively in alignment with the interview themes. The themes aligned with the views of Fox (2022), Jerath and Beveridge (2018), Jokisch et al. (2020); Liu et al. (2021), and Liu et al. (2017). The female senior business leader participants effectively overcome challenges by making contingency plans by addressing successful management strategies they have adopted, which demonstrates acceptance of AI technology innovation to make decisions and to support their quality of life. Since all participants interviewed were female senior business leaders utilizing AI technology, their responses about information sharing and privacy in their personal and business lives were the main factors that have reshaped their expectations of using AI technology as older persons.

According to Bennett (2019); Marston and van Hoof (2019); Wang et al. (2019), and the United States Department of Labor (2021), roughly 70% of Americans aged 65 and older will need at least some help as they age, and forward-thinking will be a step in the right direction to develop a master plan for aging. Communities experiencing a greater demand for AI technology, and new emerging technology innovations ensure that an aging population has the capability to live with dignity in the settings of their choice. Some people face limitations with less access to support or collaboration than previous generations (Graham et al., 2020).

Limitations

The qualitative research study ensured trustworthiness of the data was evident throughout the process as they are the required variables of the research design, model, analysis, and results. The first limitation that unfolded with the participants for the study was limited to the interview process and procedures that were shared by female senior business leaders. The purposive sample size of 12 participants was determined to achieve the point of data saturation; however, was limited to 10 - 15 participants located within the continental United States. All participants expressed interest in the study; however, they preferred that the interview process take place before the holidays because their pre-set holiday travel plans was a barrier to them being able to commit to the study.

The second limitation to trustworthiness that arose from execution of the study was the 5 potential study participants who considered participating in the study that were unable to pursue a commitment due to time constraints. However, providing the study participants with open access to my calendar to select a suitable day and time around their plans permitted brisk data collection completion within in 9 days. Coordinating

the participants' interviews around their work schedules, travel during the holidays, and considering different time zones made data collection challenging.

However, another limitation for this study was that the female senior business leaders age group was a sensitive and delicate group during the Covid-19 pandemic era, although all female senior business leaders for this study were cognizant, and none were interviewed from the hospital, assisted living facilities, or from nursing homes. As the researcher for the study, trust and reliance was on the participants to be truthful and honest in sharing the essence of their lived experiences as female senior business leaders. To confirm this, each participant's lived experience was accurately documented; and, to complete, the member checking process was facilitated by requesting that each participant review and verify their individual interview transcripts for trustworthiness and authenticity. Relative to personal biases, as the researcher for this study, being truthful, cognizant and transparent with the participants in the recruitment, interview, and reporting process was administrated. Therefore, adhering to ethical processes established by the Walden IRB and all international review board laws, guidelines and regulation were followed.

RECOMMENDATION

Rich data emerged from the data collected from the female senior business leaders who were utilizing AI technology; thus, recommendations for researchers and other organizations were developed to ensure contributions to the body of research for future researchers interested in a similar study. The results of this study revealed a range of factors for female senior business leaders to consider the presence of role-modeling their successes to change lives by influencing other seniors to embrace change in adapting and adopting AI technology innovations, which can predispose them to live a successful lifestyle. The two highest-ranked themes by the participants improve the quality of life for older adults which emerged from the data, thus enhancing the quality of life for older adults: AI technology is beneficial, and technology adaptation and acceptance.

AI technology provides the ability to achieve intelligent behavior and make better decisions with AI technology with a computational system modeling process through human intelligence. Vogels (2019) agreed that there had been significant growth in tech adoption since 2012 among older generations – notably from Gen Xers and Baby Boomers. Vogels (2019) stated that while respective age groups in American society differ in their use of various AI technologies, Baby Boomers continue to trail both Gen Xers and Millennials on most measurements of technology adoption. Still, adoption rates for this group have been proliferating in recent years (Vogels, 2019).

Numerous factors have precipitated the following: Advancing leadership, adult learning through information sharing, and AI technology adaptation. AI technology was grounded for this study in the conceptualizations of decision-making as the foundation of leadership with data-driven evidence from informed and value-based decision-making using AI technology. AI technology benefits most female senior leaders; however, additional qualitative research is recommended to understand and unravel why some female senior business leaders feel that AI technology can lead to notable adaptation and privacy challenges, which potentially could impact their ability to proactively lead. The findings of this study may help other seniors to face challenges by advancing in business through deep learning and machine learning techniques to adapt and adopt innovative technologies.

Recommendations for further research are grounded in the limitations of the current study. Leadership is vital to the business world, and there is a remarkable scarcity of rigorous theoretical and empirical research on the design and delivery of leadership teaching and education (Allen et al., 2022). The findings for this study may help other seniors accept AI technology to expand their decision-making skills, have a high sense of leadership and management practices, and share information, which can enhance quality of life. Having a list of what needs to be resources, funded, and collectively nothing could stop the growth and opportunity of a person, except for themselves. Based on the combination of a brilliant mind, resources, and infinite possibilities, society may continue advancements and change with AI technology. AI technology allows us to work with a blueprint that could solve problems.

The principles of qualitative research methodology focused primarily on the analysis method (Shkedi, 2019). This transcendental phenomenological qualitative research study was to examine the lived experiences that some female senior business leaders, ages 55 - 95, face using AI technology in decision-making. A branch of computer science called AI technology in leadership was used to assess intelligent human behavior through algorithms, computerized systems, and decision-making computation (Wang et al., 2018). The phenomenon that all participants had in common acquired and applied knowledge through decision-making using AI technology with the faculty of thought and reason through applied concepts in problem-solving, memory, logical reasoning, planning, and the ability to learn and adapt.

Recommendations for further research in leadership and management approaches to resolve problems by advancing knowledge and skills through education and training. First, a qualitative study can be considered to sufficiently explain behavior changes in technology adaptation and acceptance for senior business leaders. Secondly, a quantitative analysis may provide insight into what factors contribute to female senior business leaders' self-efficacy in the education and training industry. The investment in such approaches may help set the precedence to consciously increase decisions skills that could create an avenue to seamlessly embrace, adopt, and adapt to AI technology.

People are often looking for expansion externally and outside of themselves. The only leadership needed is the expansion from within our energetic selves and to be highly comfortable with the journey of taking imperfect actions to decision-making. A management or leadership process could be to place the responsibility collectively on everyone to encourage and support the use of AI technology. A deep level reset to adopt and adapt to AI technology by releasing algorithms of thought patterns related to fear and focusing instead on internal validation for increasing synergic learning. Focusing on the experience of thoughts that respond to internally validating growth in technology competitiveness may confirm workplace decisions and support everyday life to generate and co-create positive social change.

CONCLUSION

The purpose of this transcendental phenomenological study was to examine the experiences that some female senior business leaders, ages 55 - 95, may face using AI technology in decision-making. The phenomenon for this study was the use of AI technology delivering critical benefits for decision-making to support and improve the way female senior business leaders make choices for improvements in business and their personal lives. This study revealed a range of factors for female senior business leaders to consider the advancement of AI technology for business management processes and to set the tone in information technology management. AI technology management involves communication, leadership, and controlling business processes that can evolve into advancing computational advancements that reference human intelligence to close gaps in learning and decision-making.

The fundamental essence of the study findings of this transcendental phenomenological study extended the knowledge in the discipline of AI technology management to enhance and support less experienced seniors to delegate tasks and set goals with a platform of knowledge and creative problem-solving skills from other seniors who are business owners and managing their personal experiences through technology and knowledge sharing through a repeatable process. Seniors see the outlook of their futures prosperously and that AI technology will assist with delivering continued use critical benefits for decision-making support. This type of support helps improve how they make choices, optimize those choices, and be of value to society.

AI technology is an intelligent digital technology that science discovered through quantum physics and imagined as a century of deep human connections, expanding the awareness of energetic waves of change. It takes energy to evaluate, develop a temple of neutrality, and align to change into a single human experience of the mass appeal of the human intellect. The alignment of female senior business owners sharing knowledge with other seniors not using AI technology is critical; however, it accelerates business growth and profits which outperforms the intelligence for creative thinking and decision-making used when seniors are willing to integrate AI technology into their daily lives. Giving value to the future is about

embracing the ability to cross index information in providing a roadmap that can influence the opinions of others for an increase in learning technology and to make better decisions.

Five themes emerged from the data analysis for this study, which were: AI technology is beneficial, leadership and change management, technology adaptation and acceptance, decision-making and communication, and information sharing and privacy. Recommendations are to further expand the scope of this research to various management functions with a different methodology to implement successful strategies and manage processes with AI technology that drives innovation for organizational creativity and benefits to enhance the lives of others.

Successfully managing AI technology as a leader is about being creative and having the creativity to lead by example. It's not about discussing what a leader does but to focus on putting effort behind values, loyalty, unspoken honor, what they do to manage and execute processes. Sometimes leaders can hold aggressive goals; however, identifying challenges and adopting solutions may take time; however, following through confidently motivates and inspires others. It is important to lead by example by always having someone who can inspire you and support your dreams coming true.

Senior business leaders are investing in AI tools and technologies that deliver business goals by enabling collaborative efficient business enterprise through solutions. The future of businesses long term will be to maintain a competitive edge through the critical importance of AI technology use and adaptability (Intel Newsroom, 2021). Senior business leaders embody the passion for harnessing AI technology as the foundation and force for their growth and success. AI technology capabilities fundamentally enable the world's leading ecosystem to ignite and inspire the next generation of seniors.

AI technology in an organization is a business phenomenon that can support the growth of businesses and communities worldwide, providing new opportunities for decisions and supplying the gateway to solutions. Female senior business leaders are working as world-class problem solvers, invested and inspired each day to make shaping the future of business with AI technology a success. This study contributes to positive social change through setting goals inspired by dreaming big promoting the importance of lived experiences and successful management strategies that inspire seniors who have not adapted to AI technology.

REFERENCES

Adu, P. (2019). *A step-by-step guide to qualitative data coding*. Routledge.

Akinola, S. (2021). What is the biggest benefit technology will have on ageing and longevity? *World Economic Forum*. Retrieved from https://www.weforum.org/agenda/2021/03/what-is-the-biggest-benefit-technology-ageing-longevity-global-future-council-tech-for-good/

Akkılıç, S. (2020). Understanding the representation of artificial intelligence and methodology across disciplines. *Interactions: Studies in Communication & Culture, 11*(1), 109–113. https://doi.org/10.1386/iscc_00011_7

Di Pofi, J.A. (2002). Organizational diagnostics: Integrating qualitative and quantitative methodology. *Journal of Organizational Change Management*, *15*(2), 156–168. https://doi.org/10.1108/09534810210423053

Alexandrakis, D., Chorianopoulos, K., & Tselios, N. (2020). Older adults and Web 2.0 storytelling technologies: Probing the technology acceptance model through an age-related perspective. *International Journal of Human-Computer Interaction, 36*(17), 1623–1635. https://doi.org/10.1080/10447318.2020.1768673

Alexandru, A., Coardos, D., & Tudora, E. (2019). Acceptance of the technologies deployed for the development of online public services and systems used by elderly. *2019 11th International Conference on Electronics, Computers and Artificial Intelligence (ECAI),* pp. 1–4. https://doi.org/10.1109/ECAI46879.2019.9042058

Altschuller, S., & Benbunan-Fich, R. (2010). Trust, performance, and the communication process in ad hoc decision-making virtual teams. *Journal of Computer-Mediated Communication, 16*(1), 27–47. https://doi.org/10.1111/j.1083-6101.2010.01529.x

Anandakumar, K.R., & Ashwinkumar, U.M. (2012). A web-based patient support system using artificial intelligence to improve health monitoring and quality of life. *2012 Second International Conference on Advanced Computing & Communication Technologies*, pp. 101–105. https://doi.org/10.1109/ACCT.2012.16

Apostolescu, J., & Serban, C. (2022). *Husserl, Kant, and transcendental phenomenology* (1st Ed.). De Gruyter.

Arntz, M., Gregory, T., & Zierahn, U. (2016). The risk of automation for jobs in OECD countries: A comparative analysis. *OECD Social, Employment and Migration Working Papers, No. 189*. OECD Publishing. https://doi.org/10.1787/5jlz9h56dvq7-en

Babbie, E. (2017). *Basics of Social Research* (7th Ed.). Cengage Learning.

Barnett, D. (2023). Martin Heidegger. In *Salem Press Biographical Encyclopedia*. Retrieved from https://searchworks.stanford.edu/articles/ers__88801982

Bélisle-Pipon, J.C., Couture, V., Roy, M.C., Ganache, I., Goetghebeur, M., & Cohen, I.G. (2021). What makes artificial intelligence exceptional in health technology assessment? *Frontiers in Artificial Intelligence*, *4*, 736697.

Bennett, B. (2019). Technology, aging, and human rights: Challenges for an aging world. *International Journal of Law and Psychiatry*, *66*. https://doi.org/10.1016/j.ijlp.2019.101449

Berente, N., Bin Gu, Recker, J., & Santhanam, R. (2021). Managing artificial intelligence. *MIS Quarterly*, *45*(3), 1433–1450. https://doi.org/10.25300/MISQ/2021/16274

Bloomberg, L.D., & Volpe, M. (2019). *Completing your qualitative dissertation: A roadmap from beginning to end* (4th Ed.). Sage Publications.

Brey, P. (2018). The strategic role of technology in a good society. *Technology in Society*, *52*, 39–45. https://doi.org/10.1016/j.techsoc.2017.02.002

Burkholder, G.J., Crawford, L.M., & Cox, K.A. (2016). *The scholar-practitioner's guide to research design*. Laureate Publishing.

Camp, N., Lewis, M., Hunter, K., Johnston, J., Zecca, M., Di Nuovo, A., & Magistro, D. (2021). Technology used to recognize activities of daily living in community-dwelling older adults. *International Journal of Environmental Research and Public Health*, *18*(163), 163. https://doi.org/10.3390/ijerph18010163

Campolo, A., Sanfilippo, M., Whittaker, M., & Crawford, K. (2018). *AI Now 2017 report*. AI Now 2017 Symposium and Workshop. New York University.

Checco, A., Bracciale, L., Loreti, P., Pinfield, S., & Bianchi, G. (2021). AI-assisted peer review. *Humanities and Social Sciences Communications*, *8*(1), 1–11.

Cooper, A. (2019). How robots change the world. *Economic Outlook*, *43*(3), 5–8. Oxford Economics. https://doi.org/10.1111/1468-0319.12431

Davenport, T., & Kalakota, R. (2019). The potential for artificial intelligence in healthcare. *Future Healthcare Journal*, *6*(2), 94–98. https://doi.org/10.7861/futurehosp.6-2-94

Davidson, A., & Wood, C. (2021). *Women in business*. Trinity U.

De Juan Pardo, Ma.Á., Russo, M.T., & Roqué Sanchez, M.V. (2018). A hermeneutic phenomenological exploration of living in old age. *Geriatric Nursing*, *39*(1), 9–17. https://doi.org/10.1016/j.gerinurse.2017.04.010

Duan, Y., Edwards, J.S., & Dwivedi, Y.K. (2019). Artificial intelligence for decision-making in the era of big data - evolution, challenges, and research agenda. *International Journal of Information Management*, *48*, 63–71. https://doi.org/10.1016/j.ijinfomgt.2019.01.021

Dziak, M. (2020). Phenomenological psychology. *Salem Press Encyclopedia*.

Eckstein, S. (2017). More seniors to repurpose; caregivers should prepare. *Journal of Business (10756124)*, *32*(16), 17.

Errasti-Ibarrondo, B., Jordan, J., Diez-Del-Corral, M., & Aranzamendi, M. (2018). Conducting phenomenological research: Rationalizing the methods and rigor of the phenomenology of practice. *Journal of Advanced Nursing 4V*, *74*(7), 1723–1724. https://doi.org/10.1111/jan.13569

Flair, I. (2021). Women in technology in the United States. *Salem Press Encyclopedia*.

Fox, J. (2022). Evolution of decision-making (1/3): The rational revolution. *The Decision Lab*. Retrieved from https://thedecisionlab.com/insights/society/evolution-behavioral-economics-rational-revolution-part-1

Gaggioli, A. (2017). Bringing more transparency to artificial intelligence. *CyberPsychology, Behavior & Social Networking*, *20*(1), 68. https://doi.org/10.1089/cyber.2016.29060.csi

Garvey, C.M., & Jones, R. (2021). Is there a place for theoretical frameworks in qualitative research? *International Journal of Qualitative Methods*, *20*. https://doi.org/10.1177/1609s406920987959

Gessl, A.S., Mevenkamp, N., & Schlögl, S. (2019). On the perceptions and acceptance of artificially intelligent robotics and the psychology of the future elderly. *Behaviour & Information Technology*, *38*(11), 1068–1087. https://doi.org/10.1080/0144929X.2019.1566499

Ghimire, A., Thapa, S., Jha, A.K., Adhikari, S., & Kumar, A. (2020). Accelerating business growth with big data and artificial intelligence. *2020 Fourth International Conference on I-SMAC (IoT in Social, Mobile, Analytics, and Cloud)*, pp. 441–448. https://doi.org/10.1109/ISMAC49090.2020.9243318

Graham, S.A., Lee, E.E., Jeste, D.V., Van Patten, R., Twamley, E.W., Nebeker, C., . . . Depp, C.A. (2020). Artificial intelligence approaches to predicting and detecting cognitive decline in older adults: A conceptual review. *Psychiatry Research*, *284*. https://doi.org/10.1016/j.psychres.2019.112732

Haan, M., Brankaert, R., Kenning, G., & Lu, Y. (2021). Creating a social learning environment for and by older adults in the use and adoption of smartphone technology to age in place. *Public Health*, *9*, 568822. https://doi.org/10.3389/fpubh.2021.568822

Hafezi, R. (2020). How artificial intelligence can improve understanding in challenging chaotic environments. *World Future*, *12*(2), 219–228. Sage Publications. https://doi.org/10.1177/1946756719880539

Hastie, R., & Dawes, R.M. (2010). *Rational choice in an uncertain world: The psychology of judgment and decision-making* (2nd Ed.). Sage Publications.

Heidegger, M. (2013). *The questions concerning technology and other essays*. Harper Perennial Modern Thought.

Huang, M.H., Rust, R., & Maksimovic, V. (2019). The feeling economy: Managing in the next generation of artificial intelligence (AI). *California Management Review*, *61*(4), 43–65. https://doi.org/10.1177/0008125619863436

Huang, T.Y., & Huang, C.W. (2020). Older people's acceptance of robot-assisted activities of daily living. *Gerontechnology*, *19*(0), 1–1. https://doi.org/10.4017/gt.2020.19.s.69863

Jefferson, R.S. (2019). *More seniors are embracing technology. But can they use it? UCSD researchers suggest asking them*. UC San Diego.

Jerath, R., & Beveridge, C. (2018). Top mysteries of the mind: Insights from the default space model of consciousness. *Frontiers in Human Neuroscience*, *12*(162). https://doi.org/10.3389/fnhum.2018.00162

Jokisch, M.R., Scheling, L., Doh, M., & Wahl, H.W. (2020). Internet adoption among older adults: What role does self-efficacy play in the technology acceptance model? *International Society for Gerontechnology's (ISG) 12th World Conference of Gerontechnology, October 6-9, 2020 (Virtual)*. *Gerontechnology*, *19*(48). https://doi.org/10.4017/gt.2020.19.s.69880.3

Kadylak, T., & Cotton, S.R. (2020). United States older adults' willingness to use emerging technologies. *Information, Communication & Society*, *23*(5), 736–750. https://doi.org/10.1080/136911X.2020.1713848

Krell, D.F. (2008). *Martin Heidegger Basic writings from being in time (1927) to the task of thinking (1964)*. Harper Perennial Modern Thought.

Larsen, H.G., & Adu, P. (2021). *The theoretical framework in phenomenological research: Development and application.* Routledge.

Leadership Charlotte. (2021). Rev. Dr. Major Stewart Leadership Charlotte (LC) Class: LC40. *Encounter Charlotte*. Retrieved from https://leadershipcharlotte.org/2021/11/29/major-stewart/

Leavy, P. (2017). *Research design: Quantitative, qualitative, mixed methods, arts-based, and community-based participatory research approaches*. Guilford Publications.
Lenhoff, A. (2018). The clock is ticking: Toward biomarkers for aging? *MLO: Medical Laboratory Observer*, *50*(2), 4.
Liu, C., Vlaev, I., Fang, C., Denrell, J., & Chater, N. (2017). Strategizing with biases: Making better decisions using the Mindspace approach. *California Management Review*, *59*(3), 135–161. https://doi.org/10.1177/0008125617707973
Liu, R., Li, X., & Chu, J. (2021). More love, more behavioral intention: Understanding elderly's acceptance of smartphone applications. *2021 14th International Symposium on Computational Intelligence and Design (ISCID)*, pp. 181–185. https://doi.org/10.1109/ISCID52796.2021.00050
Manh Do, H., Sheng, W., Harrington, E.E., & Bishop, A.J. (2021). Clinical screening interview using a social robot for geriatric care. *IEEE Transactions on Automation Science & Engineering*, *18*(3), 1229–1242. https://doi.org/10.1109/TASE.2020.2999203
Marimuthu, R., Gupta, S., Stapleton, L., Duncan, D., & Pasik-Duncan, B. (2022). Challenging the digital divide: Factors affecting the availability, adoption, and acceptance of future technology in elderly user communities. *Computer*, *55*(7), 56–66. https://doi.org/10.1109/MC.2022.3172026
Marston, H.R., & van Hoof, J. (2019). "Who doesn't think about technology when designing urban environments for older people?" A case study approach to a proposed extension of the WHO's age-friendly cities model. *International Journal of Environmental Research and Public Health*, *16*(19). https://doi.org/10.3390/ijerph16193525
Maxwell, J.A. (2013). *Qualitative research design: An interactive approach* (3rd Ed.). Sage Publications.
McGowan, L.J., Powell, R., & French, D.P. (2020). How can use of the theoretical domains framework be optimized in qualitative research? A rapid systematic review. *British Journal of Health Psychology*, *25*(3), 677–694. https://doi.org/10.1111/bjhp.12437
Meltzoff, J. (1988). *Critical thinking about research: Psychology and related fields*. American Psychological Association.
Mercadal, T. (2021). Aging and the U.S. workforce. *Salem Press Encyclopedia*.
Moustakas, C. (1994). Transcendental phenomenology: Conceptual framework. In *Phenomenological Research Methods* (pp. 25–42). Sage Publications. https://doi.org/10.4135/9781412995658
Pak, R., & Mclaughlin, A. (2018). *Aging, technology, and health.* Academic Press. https://doi.org/10.1016/C2015-0-06164-0
Park, S.C. (2018). The Fourth Industrial Revolution and implications for innovative cluster policies. *AI & Society*, *33*, 433–445. https://doi.org/10.1007/s00146-017-07775-5
Patton, M.Q. (2015). *Qualitative research & evaluation methods: Integrating theory and practice* (4th Ed.). Sage Publications.
Peoples, K. (2020). How to write a phenomenological dissertation: A step-by-step guide. In *Qualitative Research Methods*. Sage Publications.
Petrovcic, A., Boot, W.R., Burnik, T., & Dolnicar, V. (2019). Improving the measurement of older adults' mobile device proficiency: Results and implications from a study of older adult smartphone users. *IEEE Access*, *7*, 150412–150422. https://doi.org/10.1109/ACCESS.2019.2947765
Pew Research Center. (2017). *Tech adoption climbs among older adults*.
Pickard, S. (2018). Health, illness, and frailty in old age: A phenomenological exploration. *Journal of Aging Studies*, *47*, 24–31. https://doi.org/10.1016/j.jaging.2018.10.002
Prada, G.-I., Nacu, R.M., Kozma, A., & Herghelegiu, A.M. (2018). Gerontechnology: Technology for older people. *Buletin Stiintific*, pp. 117–122.
Pugliese, A. (2019). The impact of AI. *California CPA*, *88*(2), 4.
Ravitch, S.M., & Carl, N.M. (2016). *Qualitative research: Bridging the conceptual, theoretical, and methodological*. Sage Publications.
Redding, M. (2023). *Technology for seniors*. Retrieved from http://seniorliving.org/tech/
Rubin, H.J., & Rubin, I.S. (2012). *Qualitative interviewing: The art of hearing data* (3rd Ed.). Sage Publications.

Schwartz, R., Dodge, J., Smith, N.A., & Etzioni, O. (2019). Green AI. *arXiv*. https://doi.org/10.48550/arXiv.1907.10597

Sejnowski, T.J. (2018). *The deep learning revolution*. The Massachusetts Institute of Technology. Library of Congress. Retrieved from http://lccn.loc.gov/2017044863

Shkedi, A. (2019). *Data analysis in qualitative research: Practical and theoretical methodologies with optional use of a software tool*.

Shrestha, Y.R., Ben-Menahem, S.M., & von Krogh, G. (2019). Organizational decision-making structures in the age of artificial intelligence. *California Management Review*, *61*(4), 66–83. https://doi.org/10.1177/0008125619862257

Smith, W.K. (2014). Dynamic decision-making: A model of senior leaders managing strategic paradoxes. *Academy of Management Journal*, *57*(6), 1592–1623. https://doi.org/10.5465/amj.2011.0932

Suddick, K.M., Cross, V., Vuoskoski, P., Galvin, K.T., & Stew, G. (2020). The work of hermeneutic phenomenology. *International Journal of Qualitative Methods*, *19*, 1–14. SAGE Publications.

Talwar, R., & Koury, A. (2017). Artificial intelligence – The next frontier in IT security? *Network Security*, *4*, 14–17. https://doi.org/10.1016/S1353-4858(17)30039-9

Tsai, H.-Y.S., Rikard, R.V., Cotten, S.R., & Shillair, R. (2019). Senior technology exploration, learning, and acceptance (STELA) model: A longitudinal randomized controlled trial from exploration to use. *Educational Gerontology*, *45*(12), 728–743. https://doi.org/10.1080/03601277.2019.1690802

United States Census Bureau. (2021). *Older population and aging*. Retrieved from https://www.census.gov/topics/population/older-aging.html

United States Department of Labor. (2021). *Older workers*. Retrieved from https://www.dol.gov/agencies/odep/program-areas/individuals/older-workers

Vagle, M.D. (2018). *Crafting phenomenological research* (2nd Ed.). Taylor & Francis.

van Manen, M. (2017a). But is it phenomenology? *Qualitative Health Research*, *27*(6), 775–779. https://doi.org/10.1177/1049732317699570

van Manen, M. (2017b). Phenomenology in its original sense. *Qualitative Health Research*, *27*(6), 810–825. https://doi.org/10.1177/1049732317699381

Venturini, F. (2022). Intelligent technologies and productivity spillovers: Evidence from the fourth industrial revolution. *Journal of Economic Behavior and Organization*, *194*, 220–243. https://doi.org/10.1016/j.jebo.2021.12.018

Vogels, E.A. (2019). *Millennials stand out for their technology use, but older generations also embrace digital life*. Retrieved from https://pewrsr.ch/2A3kD6X

Wang, K.H., Chen, G., & Chen, H.-G. (2018). Understanding technology adoption behavior by older adults. *Social Behavior and Personality: An International Journal*, *46*(5), 801–814. https://doi.org/10.2224/sbp.6483

Wang, S., Bolling, K., Mao, W., Reichstadt, J., Jeste, D., Kim, H.-C., & Nebeker, C. (2019). Technology to support aging in place: Older adults' perspectives. *Healthcare*, *7*(2), 60. https://doi.org/10.3390/healthcare7020060

Weick, R. (2015). Enriching older adult lives through technology. *Grand Rapids Business Journal*, *33*(26), 17.

Wright, L. (2013). Quality improvement and organizational change initiatives: Analysis of the U.S. Army's warrior transition unit (WTU). *Academy of Strategic Management Journal*, *12*(2), 95–111.

Yang, K.-C., & Shih, P.-H. (2020). Cognitive age in technology acceptance: At what age are people ready to adopt and continuously use fashionable products? *Telematics and Informatics*, *51*. https://doi.org/10.1016/j.tele.2020.101400

Yao, J.J. (2020). Elderly seniors vs. youthful seniors: Attributions and reshaping of aging expectations. *The Qualitative Report*, *25*(8), 3047–3066. https://nsuworks.nova.edu/tqr/vol25/iss8/13

Zhou, H. (2020). On the development of continuing education technology in an aging society. *2020 8th International Conference on Orange Technology (ICOT)*, pp. 1–4. https://doi.org/10.1109/ICOT51877.2020.9468732