2022

Successful Strategies to Sustain Practice Changes in Healthcare

Erin Gable
Walden University

Walden University

College of Management and Technology

This is to certify that the doctoral study by

Erin Gable

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

Review Committee
Dr. Gwendolyn Dooley, Committee Chairperson, Doctor of Business Administration Faculty

Dr. WooYoung Chung, Committee Member, Doctor of Business Administration Faculty

Dr. Betsy Macht, University Reviewer, Doctor of Business Administration Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

Walden University
2022

Abstract

Successful Strategies to Sustain Practice Changes in Healthcare

by

Erin Gable

MBA, Royal Roads University, 2010

BA, Royal Roads University, 2007

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

Walden University

October 2022

Abstract

Healthcare managers implement evidence-based practice to meet the growing needs of aging populations. However, many healthcare leaders fail to sustain newly implemented practices. Grounded in the promoting action on research implementation in health services conceptual framework, the purpose of this qualitative interpretative descriptive study was to explore strategies healthcare leaders use to sustain practice changes to meet increasing demands for quality care of the aging population. The participants included eight healthcare managers from Canada and the United States who led strategies to sustain practice change. The four themes that emerged using semistructured interviews and thematic analysis were staff buy-in, staff feedback, roles to support sustainment, and flexibility to change. A key recommendation is for healthcare managers to use organizational structures to engage staff routinely during sustainment. Implications for social change include the potential to improve the quality of care delivered to patients.

Successful Strategies to Sustain Practice Changes in Healthcare

by

Erin Gable

MBA, Royal Roads University, 2010

BA, Royal Roads University, 2007

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

Walden University

October 2022

Acknowledgments

Many individuals contributed to my ability to complete my doctoral journey, including personal, professional, and academic support. Without each of these people, I would not have succeeded. Mom, you taught me that you are never too old to learn, and working should not distract you from achieving academic goals. Dad, thank you for your unwavering support and belief that I could achieve this goal. Jenni, Paul, and Lucy, thank you for your ongoing encouragement and support.

Auntie Maggie, thank you for teaching me to learn differently. Without the time you spent with me so many years ago, I would not have achieved this level of academic study. Sue, thank you for challenging me to return to school. This academic journey is truly all your fault, and I am forever grateful. To all my friends and colleagues, thank you for your unwavering support, willingness to hear me whine, and understanding when school overtook my life.

Thank you for all your support to my first academic committee, Dr. Warren Lesser, Dr. Krista Laursen, and Dr. Yvette Ghormley, and my second academic committee, Dr. Gwendolyn Dooley, Dr. WooYoung Chung, and Dr. Betsy Jean Macht. A huge thank you to Dr. Dooley, who got me back on track and cheered me to the finish line with her energetic, no-nonsense guidance. To team Dooley, thank you for all your help and support in pushing through the final section of my research. Finally, to my participants, thank you for taking the time to share your experiences with me. I am truly grateful. Thank you all!

Table of Contents

List of Tables

Section 1: Foundation of the Study

In this section, I outline the research as follows: the background of the problem, including why there is a business problem, the problem statement, the purpose statement section, and the research questions. Interview questions were used to elicit information sought to answer the research question. The conceptual framework used to guide the study, definitions of terms, assumptions, limitations, delimitations, and significance of the study are also addressed. Finally, I provide a comprehensive literature review of conceptual frameworks and the research problem. I address why the business problem is essential and what researchers have done in this field of study.

Background of the Problem

In the British Columbia (BC) Ministry of Health (2020) *2022/23-2024-25 Service Plan,* the Minister of Health called for healthcare providers to improve the efficiency and effectiveness of senior services. Ministry of Health officials also called for healthcare leaders to deliver improved senior services by (a) advancing technology, (b) introducing new evidence-based care models, and (c) identifying gaps in current service levels within a balanced budget (British Columbia Ministry of Health, 2020). Healthcare leaders face changing patient demographics, advancing practice resulting from technological advances, staffing shortages, and the need to balance budgets while managing public and government expectations (Harvey et al., 2019). Governments are mandating that healthcare leaders transform care delivery to meet growing demands for care (Melder et al., 2022). The Ministry of Health expects leaders to provide quality patient care regardless of increasing demands for service.

The Baby Boomer generation is leading the elderly aging population with complex comorbidities, increasing financial strain on the healthcare system (Coughlin et al., 2019). To transform healthcare, care providers must work with patients and families to implement best practices (Verma et al., 2018). However, healthcare leaders do not implement all the evidence-based practices identified through research (Suárez-Gonzalo & Catalá-López, 2018). When healthcare leaders implement new practices, they often struggle to implement and sustain changes (Flaherty et al., 2021). The potential impacts of unsustained change include wasted clinical resources, organization turmoil, clinician and leadership distress, and suboptimal patient care (Rapport et al., 2018). Healthcare leaders look to evidence-based best practices to improve clinical processes and treatment cost-effectiveness.

Problem Statement

The biggest challenge facing healthcare leaders is managing the advanced care needs of a population aging with comorbidities (Lee et al., 2019). In 2021, 19% of the Canadian population was over the age of 65, of which 2.3% were 85 or older, representing a significant proportion of Canadians living longer who require increased health and social support (Statistics Canada, 2021). Changing patient demographics, multiple chronic illnesses, and growing costs put pressure on the healthcare system (Lee et al., 2019). The general business problem is that when healthcare leaders cannot sustain the most current and advanced practice changes, healthcare clinicians may deliver outdated and potentially unsafe care, especially for patients with complex needs. The

specific business problem is that some healthcare leaders lack strategies to sustain practice changes to meet increasing demands for quality care.

Purpose Statement

The purpose of this qualitative interpretative description study was to explore strategies healthcare leaders use to sustain practice changes to meet increasing demands for quality care. The targeted population includes operations managers responsible for using successful strategies to implement and sustain a practice change in a healthcare setting. Implications for positive social change comprise the potential for healthcare leaders to understand what strategies they can use to sustain the implementation of current and advanced best practices. Healthcare professionals who successfully implement and deliver advanced best practices may improve patient care delivery, resulting in lower costs to the healthcare system and society because of fewer acute care admissions and reduced lengths of hospital stays.

Nature of the Study

I used a qualitative approach to understand why operations managers chose specific strategies to sustain practice change. Researchers conduct qualitative research to explore individual or group experiences, thoughts, and actions within a particular context (Harwati, 2019). I used a qualitative approach to understand why operations managers thought their sustainment strategies were successful. Quantitative researchers collect numerical data to address research questions (Aspers & Corte, 2019), which researchers then scrutinize using statistical analysis (Edwards, 2020). I chose not to address operations managers' choices of sustainment strategies in numeric values and did not use

a quantitative approach. Mixed methods researchers combine qualitative and quantitative methods and use this approach when one method does not answer the research question (Şahin & Ǫztürk, 2019). Using a mixed methods approach can also increase the trustworthiness of results (Kekeya, 2021). I did not use a mixed methods approach because I could gain a deep understanding of participants' experiences involving applying sustainment strategies using a single methodology.

I evaluated four prospective designs for this study: phenomenological, ethnographic, case study, and interpretative descriptive. Researchers use a phenomenological design to examine a phenomenon through participants' lived experiences (Becker & Schad, 2022). Through a subjective lens, a researcher studies the person's reality of an event and better understands the world (Qutoshi, 2018). A phenomenological approach was not appropriate for this study as I was not looking to understand the meanings participants assign to their personal experiences involving sustaining practice change. Researchers use an ethnographic design to conduct real-time observations to see people in social or cultural situations and understand how they behave within environments (Harwati, 2019). An ethnographic study design was not appropriate for this study as the sustainment phase of a practice change has already happened; therefore, observations could not occur. Researchers use a case study design to explore a phenomenon and understand why or how differences occur within various contexts (Sibbald et al., 2021). A case study approach was inappropriate for this study because the research occurred during the COVID-19 pandemic, and healthcare leaders have limited capacity to participate in research; therefore, I used a study design with a broader

recruitment strategy. COVID-19 has put unprecedented pressure on healthcare staff in the United States and worldwide (Pamplin et al., 2021). Researchers use the interpretive description design to provide a detailed description of a phenomenon and participants' interpretive meanings of the event (Timluak & Elliott, 2018). The researcher investigates participants' experiences within a specific context (Doyle et al., 2020). After reviewing potential study designs, I determined that an interpretative description design was applicable for exploring why healthcare leaders chose specific strategies during the sustainment phase of a practice change.

Research Question

What strategies do healthcare leaders use to sustain practice changes to meet increasing demands for quality care?

Interview Questions

I asked participants the following interview questions:

1. What internal factors do you take into consideration when developing your practice sustainment strategies to meet the increasing demands for quality care?
2. What external factors do you take into consideration when developing your practice sustainment strategies to meet the increasing demands for quality care?
3. What type of evidence do you provide to clinicians to inform their adoption of the practice change?
4. What type of internal or external facilitators do you use to support the clinicians to adopt the change into their practice?

5. What specific steps do you take to transition the project from practice implementation to sustainment?
6. What strategies do you implement that did not contribute to or derailed the sustainment of change, thereby impacting your ability to meet the increasing demands for quality patient care?
7. What changes have you made to your sustainment strategies since starting the sustainment phase to ensure you are providing quality care and are there any further changes you anticipate making in the future?
8. As a leader, what is your role in maintaining the clinicians' continued use of the practice change?
9. What additional information you would like to share, regarding strategies used to sustain practice change?

Conceptual Framework

For my doctoral study, I used the promoting action on research implementation in health services (PARIHS) conceptual framework developed by Kitson et al. (1998). Researchers use implementation frameworks to develop strategies and processes to translate research into practice (Moullin et al., 2020). Researchers and change agents use Kitson et al.'s PARIHS framework to assess evidence, context, and facilitation required for successful implementation of practice change (Kitson & Harvey, 2016). Although Kitson et al. developed the PARIHS framework as an implementation model, I selected to use the PARIHS framework because Stetler et al. (2011) used the model to successfully implement and sustain evidence-based practice change in healthcare.

Therefore, the PARIHS framework constructs of evidence, context, and facilitation are appropriate for assessing managers' strategies to sustain a practice change.

Operational Definitions

Champion: A unit staff member with expertise or training in the new practice who supports other clinicians in adopting the change (Li et al., 2018).

Context: The internal and external influences surrounding implementation (Squire et al., 2021).

Culture: people's beliefs and attitudes about their work and workplace (Melnyk et al., 2018).

Evidence: the research, clinician and patient experiences, and local knowledge supporting the efficacy of the practice change (Landes et al., 2021; Wijk et al., 2019).

Evidence-based practice: Development of protocols and guidelines informed by research evidence and amalgamation of research outcomes to achieve positive patient outcomes (Veziari et al., 2022).

Facilitation: the assistance provided to clinicians during the sharing of knowledge, training, and supports to change how clinicians do their work (Kitson et al., 1998).

Sustainment of practice change: A change in clinical practice used by clinicians for 1 year or longer after implementation (Lennox et al., 2018).

Assumptions, Limitations, and Delimitations

Assumptions

Researchers have pre-existing beliefs and values about research that can influence how they conduct the study (Almasri & McDonald, 2021). My first assumption was that

the practice change the manager discussed in the interview is appropriate for the clinical setting. My second assumption was that clinicians have sustained the transformation if they use the new practice for 1 year or more after implementing it. My last assumption was sustainment of the practice change occurred if the participant confirmed the practice is part of clinicians' daily work after 1 year.

Limitations

Limitations are constraints within the study that may affect outcomes (Theofanidis & Fountouki, 2018). Limitations define the scope of the research project. One limitation of this study is that participants came from different healthcare organizations, geographic locations, clinical settings, and countries. Various participants' backgrounds may impact results as participants' experiences reflect different organizational cultures. The second limitation is participants shared their experiences involving sustaining various practice changes. The variety of practice changes limited my ability to delve deeply into managers' experiences involving implementing a single practice change.

Delimitations

Researchers articulate delimitations in the research design to define the research scope and context to help readers determine the study's applicability (Alpi & Evans, 2019). The study involved operations managers who have successfully sustained a practice change for one year or more. I did not include operations managers who operated in clinics where clinicians did not use the practice or had not sustained a change for 1 year or more. Third, I invited operations managers from acute care, community,

ambulatory, or long-term care, settings to participate. I did not include business or support services operations managers in the study. This study's managers' country of origin was not limited as participant recruitment occurred through LinkedIn®.

Significance of the Study

Contribution to Business Practice

A population of aging patients with complex comorbidities increases the demand for advanced medical and technological interventions and raises healthcare costs (BC Ministry of Health, 2020). Health authority leaders must deliver balanced budgets at the end of each fiscal year (BC Ministry of Health, 2020). Healthcare leaders must understand how to sustain practice changes in inpatient units (Fleiszer et al., 2016a). Sustaining evidence-based practice changes is critical to maintaining quality care delivery and decreasing squandered research efforts while allowing future innovation (Cowie et al., 2020). The impact of unsustained practice change is wasted budgets, decreased clinician time for direct patient care, and increased stress on human resources (Berta et al., 2019). This study could provide healthcare leaders with strategies to successfully sustain practice changes, helping leaders and their clinical teams adopt new technologies and innovate more effectively and efficiently while meeting growing demands for care.

Implications for Social Change

I focused on successful strategies healthcare leaders use to sustain practice change in this study. Healthcare leaders who have not successfully maintained practice change can use study results to improve future sustainment strategies, thereby increasing the overall number of sustained practice changes. Improved sustainment of practice changes

will reduce healthcare costs by enabling healthcare leaders to improve care delivery within a balanced budget. Evidence-based care increases the safety of care, results in better patient outcomes, and decreases healthcare costs (Melnyk et al., 2018). The Canadian healthcare system is a socially funded service. By maintaining a balanced budget, healthcare leaders are making a social impact when they sustain the delivery of quality care for the high needs of the patient populations in the face of growing demands for service.

A Review of the Professional and Academic Literature

In conducting this literature review, I focused on three topics. First, I reviewed conceptual frameworks researchers used to implement and sustain change in healthcare settings. My literature review includes an explanation of Kitson et al.'s PARIHS framework. Second, I analyzed the healthcare system globally to set the context for the study and demonstrated the importance of sustaining change to meet current and future healthcare demands. Third, I reviewed implementation and sustainment of innovation, process improvement, and practice change in acute and nonacute care units to address current literature involving the field of sustainment research.

My literature review aligned with Fox et al.'s (2015) statement that there is limited research solely dedicated to sustaining change in healthcare. Therefore, I included the implementation of practice change in the literature search. I focused on relevant articles from peer-reviewed journals published between 2018 and 2022. I conducted the search using EBSCOHost and Google Scholar databases. I used the following search terms to find articles to support the literature review: *conceptual frameworks*, *healthcare*,

implementation, *sustainment*, *sustainability*, *practice*, *practice change*, *change*, *knowledge translation*, *adoption*, *leadership*, *PARIHS*, *iPARIHS*, *conceptual framework for implementation research*, *theoretical domain framework*, *dynamic sustainability framework*, *exploration*, *preparation*, *implementation*, and *sustainment*. An examination of reference lists provided additional source articles for review.

Table 1

Percentage of Articles from 2018 to 2022

Category	Count	Percentage of Total
Peer Reviewed & Published within 5 years from Graduation (2018-2022)	157	86%
Not Peer Reviewed or Published greater than 5 years from Graduation (>2018)	26	14%
Total	183	100%

PARIHS Framework

Researchers and practitioners use a framework to inform the development of their implementation strategies (Bergström et al., 2020; Khalil & Kynoch, 2021). There is limited research in the field of sustainability and even fewer conceptual frameworks to support sustainment researchers (Shelton et al., 2018). In a review that started with 3119 articles, Lennox et al. (2020) found only 68 used a sustainment framework. Additionally, In a study of change initiatives impacting patient care in hospital settings, Geerligs et al. (2018) found that 37% of project teams used a conceptual framework to guide the change process. In a literature review of articles published from 1979 to 2017, Birken et al.

(2020) found that less than half of the literature used a conceptual framework to plan their sustainment efforts. Birken et al. (2020) suggested that the lack of sustainment frameworks may hinder the progress of sustainment research. The absence of sustainment frameworks restricted this study's choice of conceptual frameworks.

Due to limited sustainment research and conceptual frameworks, I focused the literature review on conceptual frameworks used in implementation research and assumed sustainment is a process step in administering change. Lennox et al. (2018) said leaders who view sustainability as a process would plan for and monitor sustainment over time instead of identifying sustainment as a phase after implementation. I chose the PARIHS implementation framework from the available implementation frameworks to guide this study. In a literature review, Bergström et al. (2020) identified the PARIHS framework as a frequently cited framework in implementation science, with 23% of 1614 articles referencing the PARIHS framework in a meaningful manner. Similarly, Rogers et al. (2020) found in their literature review of implementation frameworks that the PARIHS framework was a frequently referenced conceptual framework. Djukic et al. (2021) chose to use the PARIHS framework to examine the gaps managers experience implementing evidence-based practice because multiple researchers have used it to study evidence-based practices within different clinical settings. Therefore, the identification of sustainment as part of the implementation and researchers' use of Kitson et al.'s PARIHS framework to study practice change supported the choice to use an implementation framework to guide a study of practice change sustainment.

Healthcare leaders can apply the PARIHS framework to implement practice change. Researchers use the framework to evaluate research knowledge translation into everyday clinical practice (Kitson & Harvey, 2016). Moving from research to practice is a complex process that is not linear (Niemi et al., 2021). McLean et al. (2019) successfully used Kitson et al.'s PARIHS framework to assess the pre and post-implementation of pathways to evaluate the patient's mood after a stroke. Similarly, Xiang et al. (2018) used Kitson et al.'s PARIHS framework to assess the implementation and sustainment of a coordinator role to support high-risk patients transitioning from the hospital to home. Researchers can use the framework to measure the sustainment of a practice change, validating the PARIHS framework in a research project focused on identifying successful strategies to sustain practice change.

The PARIHS framework is a multicomponent framework. Kitson et al. (1998) said the implementation process had three components: evidence, context, and facilitation. These factors influence implementation success (Hawk et al., 2022). Kitson et al. (1998) developed these factors to be used simultaneously instead of sequentially. Diffin et al. (2018) said all three elements are critical for successful implementation of change.

Kitson et al. (1998) said leaders need to find a balance of evidence, context, and facilitation to implement practice change successfully. Bahtsevani and Idvall (2016) said researchers need to see the relationship between the three categories for successful implementation, but researchers could break the categories down to examine each component independently. Researchers can evaluate PARIHS framework elements on a

high to low scale, with high measures indicating a more significant potential for implementation success (Barakat-Johnson et al., 2019; Bjurling-Sjöberg et al., 2021; Yue et al., 2022). Regardless of the balance, evidence, context, and facilitation must be present for successful implementation (Kitson et al., 1998).

Evidence

Defining categories will help readers assess the usefulness of the PARIHS framework. The evidence category refers to research, clinician and patient experiences, and local knowledge supporting the efficacy of the practice change (Landes et al., 2021; Wijk et al., 2019). Research outcomes underpinning the practice change are a form of evidence (Strong et al., 2020). In a study involving health care leaders, researchers, and educators in Canada, Newman et al. (2020) found researchers and leaders can adjust the PARIHS framework by reviewing multiple forms of evidence in the implementation process. Local knowledge includes policies, guidelines, and internal documentation (Roohi et al., 2020). Research findings, organizational documentation, and internal or external benchmarks form tangible evidence to measure implementation and sustainment of change. Leaders need to identify concrete research, documentation, and data that will demonstrate to clinicians and physicians that the practice change is evidence-based and will positively impact patient care and outcomes.

In addition to tangible evidence, leaders use intangible evidence to support the argument for change. Providers' current or previous experience with the practice is another type of evidence (Xiang et al., 2018). Gately et al. (2022) said clinician and patient experience involves not only lived experience but also evaluation of information,

preferences, and personal belief systems. Roohi et al. (2020) said managers in the Iranian health care system did not consider patient preferences when developing their implementation strategies. Conversely, Bjurling-Sjöberg et al. (2021) found clinicians in the ICU routinely reflected on the patient experience when considering the implementation context and whether they would support the change. Small-scale implementation and evaluation before scalable change can provide the required evidence for providers to manage pre-implementation concerns with evidence-based practice (Yue et al., 2022). In a small-scale implementation, clinicians contribute their experience as evidence to support the full implementation of the intervention (Yue et al., 2022). Combining tangible and intangible evidence leads to successful implementation.

Researchers can find limited research evidence during implementation. In an Occupational Therapy (OT) implementation of new homecare services, Ruest et al. (2022) found that only 44% of sites used scientific research, 90% valued past clinical experience, and 53% used local knowledge as forms of evidence to support staff buy-in. Djukic et al. (2021) found healthcare leaders assess personal experience over scientific research or clinical expert knowledge when implementing evidence-based practice. Conversely, Roohi et al. (2020) found that Iranian managers identified local knowledge in the form of documented regulation as a barrier to delivering quality care as it hindered the managers' ability to make necessary changes. It is not just the presence of evidence but facilitators' ability to understand and communicate content to staff that makes the evidence relevant to implementation (Diffin et al., 2018). When implementing a new practice, it is essential to provide end users with evidence demonstrating why the change

is of value to their practice and the delivery of patient care (Bahtsevani & Idvall, 2016). Therefore, not only producing evidence but relating evidence to improve practice and patient care leads to success.

Context

The second category in the PARIHS framework is context. Context involves internal and external influences surrounding implementation (Squire et al., 202; Xiang et al., 2018). Context factors influencing a practice change include leadership presence, unit or organizational culture, support and resources, and informal leadership (Djukic et al., 2021). These factors can impact staff buy-in, availability of resources, continued focus of staff to make the change, and ultimately the sustainment of a practice change. Successful implementation requires leaders to assess the context as high on the high-low scale (Crowe & Manley, 2019) and develop strategies to mitigate factors that impede the change.

Context can be defined as an enabler or barrier when assessment against practice change implementation success (Dryden-Palmer et al., 2020; Squire et al., 2019). Harvey (2022) said the healthcare context might be complex and outside the control of change of leaders to influence. However, it is still essential to identify context elements and determine which barriers significantly impact developing mitigation strategies (Harvey, 2022). In a study assessing context, (Squire et al., 2019) identified 62 unique elements during 145 interviews, and in 2021, the authors identified 30 additional context characteristics. The Squire et al. (2019) and Squire et al. (2021) studies show that

researchers lack agreement regarding which factors are most significant for consideration in implementing practice change.

Internal influences are any factors from within the organization that affect change implementation outcomes. Braithwaite et al. (2018) said a healthcare organization is a complex structure of embedded social and clinical configurations influencing and challenging the implementation of new practices. Context elements such as culture are enablers and barriers to executing changes (Dryden-Palmer et al., 2020). Team culture can influence change readiness and resistance (Dryden-Palmer et al., 2020). Staff culture is an indicator of success in that staff apply their positive or negative experience with past implementation, the values within the group, and the assessment of the need for new practices to the current change intervention to determine whether they will support the implementation (Dryden-Palmer et al., 2020). Similarly, Djukic et al. (2021) found context factors such as leadership culture and staff change readiness were not indicators of successful evidence-based practice implementation.

Hølge-Hazelton et al. (2019) said while organizational culture can influence change, change can also transform corporate culture. Introducing new practices can be challenging for leaders without an organizational or unit culture of learning and change. Braithwaite et al. (2018) said leaders must find ways to penetrate long-standing organizational structures when introducing new evidence-based practices. Leaders must work with staff to change the culture and mindset that existing practices are working and new practices will burden staff. Additionally, researchers should anticipate that sustainability may vary in different settings (Shelton et al., 2018). Staff work with

different clinical practices to meet the needs of the unit or program patient populations and the existing culture of the unit. Sustaining practice change can vary between organizations and various clinical settings within the same organization (Braithwaite et al., 2018). Different approaches to examining internal context demonstrate the breadth of contextual elements impacting implementation and sustainment.

Facilitation

Facilitation is the third category of the PARIHS framework and represents levels of support provided to clinicians during the implementation phase. The leader's role is to determine what internal or external facilitation clinicians require to support the change initiative. Leaders evaluate the level of assistance clinicians or providers need to adopt the practice change (Xiang et al., 2018). Internal facilitators are part of the organizational context (Baloh et al., 2021). External consultants, such as private consultants, can support facilitation (Diffin et al., 2018; Harvey et al., 2018). Facilitation is an integral part of maintaining the adoption of new practices.

The facilitator's role is to assist clinicians in changing their practice, improving knowledge and skills, and building confidence instead of ordering or coaxing individuals to change (Harvey et al., 2018). Facilitators who employed a more collaborative and communicative approach successfully engaged staff in proposed change efforts (Diffin et al., 2018). Diffin et al. (2018) said facilitators with authority to implement practice changes and adjust implementation strategies as required were more successful then informal leaders or facilitators without authority. Relationships facilitators develop with clinicians affect their ability to influence change collaboratively.

The degree of facilitation varies according to the needs of clinicians and the specific context of the clinical setting (Lachance et al., 2019); however, as a critical enabler of change, it is the facilitator's actions that are most important. Harvey et al. (2018) found passive forms of facilitation, such as toolkits and web-based resources, were less effective than direct person-to-person facilitation. Principal activities conducted by a facilitator include preparing for implementation, developing supporting documentation, and engaging stakeholders during the implementation process (Yue et al., 2022). Mentoring is also a form of facilitation (Lachance et al., 2019). While researchers identified many activities important to facilitation, they did not say one action was more critical to ensuring change adoption. There is a need for further research to identify significant facilitation activities required to support practice change.

One reason researchers may not have found a single activity required to support practice change is that facilitation varies by type of practice change, organizational site, and phase of the process. Lachance et al. (2019) and Seers et al. (2018) found that facilitators need to tailor the facilitation activities to the clinical setting context for practice change to occur. Conversely, Dahl et al. (2018) found tailoring facilitation to the organizational context in their nursing home study challenging when the organization's culture is unstable. These findings raise questions of whether the balance of context, evidence, and facilitation remains balanced throughout the implementation and sustainment process.

There is little mention in the literature about the required facilitators' skills to support the implementation process. Olmos-Ochoa et al. (2021) looked at the

requirements for facilitation resiliency. They found facilitator experience, training, and ability to adapt to the changing needs of the stakeholders as critical indicators of facilitation success and endurance (Olmos-Ochoa et al., 2021). The lack of other references in this literature review of supports required by facilitators indicates a gap in the research and opportunities for a future area of study.

Subcategories

Each category within the PARIHS framework includes subcategories, which researchers use to assess factors influencing implementation. Researchers score the subcategory on a high-low scale (Kitson et al., 1998). Rycroft-Malone (2004) suggested that when many subcategories result in high scores, there is a high degree of evidence for change, a receptive context providing the foundation for change, and strong facilitation support leading to successful implementation. However, Kitson et al. (1998) acknowledged that researchers could implement an initiative with a low score in one subcategory if the factors influencing the other categories are positive. The subcategories are as follows: evidence encompasses research, clinical experience, and patient preferences; context includes culture, leadership, and measurements; and facilitation divides into characteristics, roles, and styles (Kitson et al., 1998). Understanding the subcategories may contribute to understanding the balance between the main categories.

Table 2

PARIHS Framework

Category	Subcategory	Subcategory	Subcategory
Evidence	Research	Clinical Experience	Patient Preferences
Context	Culture	Leadership	Measurement
Facilitation	Characteristics	Role	Style

Unlike the primary categories, where balance is essential, researchers use the subcategories to customize strategies supporting the practice change. Ward et al. (2017) found variation in the weighting of the PARIHS framework subcategories across the different hospitals. Similarly, Yue et al. (2022) suggested that researchers adjust the ranking of the subcategories to reflect the culture and clinical setting where the practice change occurs. Regardless of the balance, the subcategories provide a deeper level of analysis for researchers.

Challenges with Promoting Action Research in Health Services Framework

Variability of Results

Roohi et al. (2020) reported challenges balancing the three main categories using Kitson et al.'s PARIHS framework. When studying the use of the PARIHS framework in a post-implementation review of two units, Roohi et al. (2020) found a high degree of context elements and decreased evidence and facilitation factors. The authors attributed the imbalance to managers focusing on the lack of research available to support the implementation and less on facilitation or evidence because of incorrectly identified barriers, lack of organizational support, decreased personal capacity, and limited access

to research (Roohi et al., 2020). Conversely, in a post-implementation assessment of maternity evidence-based guidelines, Crowe and Manley's (2019) conclusions confirm Kitson et al.'s assessment that a high degree of evidence can not lead to implementation success without the balance of high levels of context and facilitation. The lack of balance between the three categories raises questions about why implementations are successful with an imbalance present.

These variations in using the PARIHS framework support Bergström et al.'s (2020) findings in their literature review that few researchers utilize all framework elements. The authors also found that there has been a shift from using the framework with a focus on context to a facilitation focus with minimal use of evidence (Bergström et al., 2020). Lastly, Bergström et al. (2020) identified that some researchers used the framework for unintended purposes or did not identify why they used it. Some authors reported using the PARIHS framework in collaboration with other models. For example, Geerligs et al. (2018) and Ruest et al. (2022) used the framework with the Consolidated Framework for Implementation Research (CFIR) (Damschroder et al., 2009). Geerligs et al. (2018) noted that adding the CFIR provided a deeper exploration of the elements influencing implementation. These findings indicate a potential for future research to determine how and why researchers use a specific conceptual framework.

Difficulties Using the Tool

Researchers have also evaluated the ease of using the PARIHS framework, finding variations in how leaders apply the framework. In a research study evaluating a change implementation at the U.S. Department of Veterans Affairs, Ullrich et al. (2014)

found that four participants indicated they made limited use of Kitson et al.'s PARIHS framework, four extensively used the framework, and one did not use the framework. The authors concluded that the implementation leaders' knowledge, experience, preferences, or the type of change undertaken might explain the variation in how the leader used the PARIHS framework (Ullrich et al., 2014). The applicability of Ullrich et al.'s (2014) conclusions to my research study is that it is foreseeable that the findings will demonstrate variations in sustainment strategies across different clinical settings.

Researchers have also evaluated how difficult the PARIHS framework is to implement, finding leaders varied in how user-friendly they found the approach. Some users found the subcategories challenging to define and apply, limiting the use of the framework (Ward et al., 2017). Leaders experienced challenges successfully evaluating change outcomes subcategory definitions (Ward et al., 2017). For other users, the ease of applying the PARIHS measures and the appeal of the three main categories were participants' main reasons for using the model (Ullrich et al., 2014). Despite the conflicting findings, researchers and leaders use the PARIHS framework to support practice change.

Potential Solutions

Stetler et al. (2011) and Walsh et al. (2017) took different approaches to resolve the challenges encountered using the PARIHS framework. Stetler et al. (2011) developed and studied the effectiveness of a guide for the PARIHS framework to clarify the definitions and application of the model's components, structure the development of implementation strategies, and evaluate implementation outcomes. Stetler et al. (2011)

also recommended reordering and adding to the framework's subcategories. The authors suggested raising leadership to the highest element under context and adding aspects of evidence-based practice under the evidence category (Stetler et al. (2011). Conversely, Walsh et al. (2017) used the PARIHS framework in combination with a solution-focused approach. The authors determined that the PARIHS framework lacked engagement, implementation strategies, and evaluation, which required the addition of a solution-focused approach (Walsh et al., 2017). The researchers combined the evidence, context, and facilitation elements with engagement, implementation, and evaluation in a study of patient medication administration protocol changes to decrease medication error rates (Walsh et al., 2017). While Stetler et al. (2011) looked within the PARIHS framework and Walsh et al. (2017) looked outside the framework for a solution, both sets of authors aimed to make the PARIHS framework more usable for researchers and leaders.

In response to researchers identifying usability gaps in the framework, Harvey and Kitson (2016) proposed changes to their PARIHS framework and renamed the framework I-PARIHS. Their updated framework redefined some categories and added others, such as facilitation, innovation, recipients, and context (Harvey & Kitson, 2016; Kitson & Harvey, 2016). Harvey and Kitson (2016) changed the three categories from the original framework. Kitson and Harvey's (2016) approach was similar to Stetler et al.'s (2011) in adding the groupings of recipient and engagement to address change users. The introduction of the recipient element acknowledged users and stakeholders are the ultimate users of new practices (Hammond et al., 2020; Kitson, 2022) and play a significant role in the success or failure of change implementation (Harvey & Kitson,

2016; Kitson & Harvey, 2016). However, Kitson and Harvey (2016) varied by changing the evidence category to innovation, representing the historical evidence and new knowledge gained during the change. The authors also expanded the subcategories under context to reflect the inclusion of internal and external factors influencing the changing environment (Kitson & Harvey, 2016). This expansion of the context category recognized the need to innovate and generate fresh thinking to implement evidence-based practice in a changing healthcare environment (Kitson, 2022). Kitson and Harvey demonstrated that conceptual frameworks evolve as researchers test and validate the models.

Harvey and Kitson (2016) also changed the principle of balance between the core categories in the iPARIHS framework. The authors emphasized facilitation as the critical factor in aligning the other three elements (Harvey & Kitson, 2016; Kitson & Harvey, 2016) and achieving a successful implementation (Hammond et al., 2020). Facilitation is now the key component to generating action within the other categories (Tucker et al., 2021). The role of the facilitator remains focused on helping recipients adopt the new knowledge by changing how they work (Kitson & Harvey, 2016; Kitson, 2022). Additionally, the facilitator is more active in evaluating how recipients respond to the evidence grounding the change and the environmental elements influencing the initiative to develop mitigation strategies to counter negative influences (Kitson & Harvey, 2016). Kitson and Harvey's (2016) revisions support Bahtsevani and Idvall's (2016) suggestion that researchers or leaders determine the implementation approach in response to the needs of the specific clinical setting.

Harvey and Kitson (2016) responded to researchers' concerns by changing the framework. These revisions are new and untested. The authors moved from the principle of balance to responsiveness (Harvey & Kitson, 2016). Multiple researchers have tested and validated the PARIHS framework (Harvey & Kitson, 2016). Therefore, the original PARIHS framework was more appropriate for this doctoral research study.

Alternative Conceptual Frameworks

I reviewed several implementation frameworks as part of the literature review. The frameworks I reviewed include an unnamed conceptual framework by Fleiszer et al. (2015a), the consolidated framework for implementation research (CFIR) by Damschroder et al. (2009), the theoretical domain framework by Michie et al. (2005), the dynamic sustainability framework by Chambers et al. (2013), and the exploration, preparation, implementation, and sustainment (EPIS) framework by Aarons et al. (2011). The following section includes the rejected frameworks.

Fleiszer et al.'s Conceptual Framework

Fleiszer et al. (2015b) developed an unnamed conceptual framework to identify the characteristics and factors contributing to the sustainment of practice changes. The authors identified three key characteristics: (a) the number of benefits achieved from the initiative; (b) the degree to which the improvement became part of the staff's daily work; and (c) the amount of continuous development that occurred after implementation (Fleiszer et al., 2015a). The four categories supporting the sustainment of change are (a) the type of innovation implemented, (b) the context or environment surrounding the improvement, (c) the level of leadership support provided, and (d) the strategic processes

used to support the implement the change (Fleiszer et al., 2015a). Although Fleiszer et al.'s framework focused on the sustainment of practice change, the source article represented the model's introduction, and I found no other source articles regarding their framework. As demonstrated by additional researchers, the framework lacked validity and transferability, making Fleiszer et al.'s unnamed framework inappropriate for a doctoral study.

Consolidated Framework for Implementation Research

Damschroder et al.'s consolidated framework for implementation research (CFIR) is a primary framework used to implement change. Researchers use Damschroder et al.'s (2009) CFIR framework to identify components that enable the change and elements that impose obstacles to implementation efforts (Melder et al., 2022). The CFIR framework is a compilation of frequently used constructs from published theories researchers used to guide implementation to categorize and define the elements influencing implementation success or failure (Damschroder et al., 2009). Damschroder et al. included eight factors related to change implemented, four to the outer context, twelve to the inner context, five to stakeholders, and eight to the implementation process (Kononowech et al., 2021; Squire et al., 2021). Researchers use the CFIR framework to analyze the factors influencing the implementation success (Melder et al., 2022).

Although researchers use Damschroder et al.'s CFIR framework to evaluate change implementations, some researchers have found that the framework does support the analysis of change sustainment. The practice change can sustain without including some CFIR framework elements (Damschroder et al., 2009). Melder et al. (2022)

demonstrated that researchers could use the CFIR framework to identify possible barriers to sustainment and scalability, thereby providing an opportunity to mitigate these deficits. Damschroder et al. intended for researchers to only use the framework constructs that apply to a specific implementation and not to develop sustainable strategies. The authors argued that using all the elements of the CFIR framework would confuse any analysis as each concept differed in the clarity of definition and use (Damschroder et al., 2009). Damschroder et al. developed the CFIR framework using 19 conceptual frameworks (Kononowech et al., 2021), including Kitson et al.'s PARIHS framework. The inclusion of Kitson et al.'s PARIHS, the lack of original theory, and the lack of validated use of the CFIR framework in sustainment research made this conceptual framework inappropriate for a doctoral study.

Theoretical Domain Framework

I considered Michie et al.'s theoretical domain framework as a framework targeted for healthcare study. Michie et al. aimed to understand how healthcare professionals must change their behavior to adopt new clinical practices. Researchers used 33 theories from the field of psychology to develop the 14 domains framework (Doherty et al., 2022; Squire et al., 2019) and 138 constructs to assess how individuals perceive the factors influencing their behavior (Michie et al., 2005). Doherty et al. (2022) found the theory beneficial in identifying barriers to implementing antenatal care for mothers who consumed alcohol while pregnant. However, the lack of original theory and the need for further inquiry made this framework inappropriate for a doctoral study.

Dynamic Sustainability Framework

Chambers et al.'s dynamic sustainability framework was proposed as a framework to sustain change after researchers completed the implementation. Change implementation and sustainment phases are different, and sustainment requires ongoing effort over time (Chambers et al., 2013). Chambers et al. also proposed that continuous improvement of practice during the sustainment phase, as opposed to quality assurance, leads to optimizing practices in the clinical environment. While Chambers et al.'s framework focused on the sustainment of practice change, Fox et al. (2015) said researchers had not operationalized the framework. The lack of actual application made the dynamic sustainability framework inappropriate for a doctoral study.

Exploration, Preparation, Implementation, and Sustainment Framework

I chose Aarons et al.'s exploration, preparation, implementation, and sustainment (EPIS) framework as the final conceptual framework to review because the authors included sustainment as a formal step within the framework. In the EPIS framework, Aarons et al. outlined four implementation categories: exploration, preparation, implementation, and sustainment (Moullin et al., 2018). In Aarons et al.'s EPIS framework, researchers start using the framework before implementation when identifying the need for change (Moullin et al., 2018), which is a unique variable to consider when studying the sustainability of practice change.

The EPIS framework involves the process and context of implementation, emphasizing the inner and external context (Rodriguez et al., 2018). Researchers consider the inner and outer contextual factors relevant during each stage of the implementation

process (Aarons et al., 2011). Additionally, researchers use the framework to examine how organizational factors may adapt to change (Lengnick-Hall et al., 2020). The internal and external contexts were relevant to this research study as I looked at leaders' strategies to implement the practice changes within different clinical settings.

The EPIS framework is one of the only implementation frameworks where the authors address sustainment explicitly. The EPIS framework focuses on the implementation and sustainment factors influencing the delivery of social services (Moullin et al., 2018). Rodriguez et al. (2018) demonstrated the framework's applicability to examine sustainability factors by examining leaders' perceptions and the organizational context. However, I did not choose to use the EPIS framework for this doctoral study. The EPIS framework is complex, with multiple elements and sub-elements appearing at different implementation stages under the primary inner and outer context categories. In addition to considering the framework complexity, the external context category seems to carry more weight with a more significant number of elements and sub-element in the outer context than in the inner context at each phase, such as sociopolitical factors and funding sources. I focused on operations managers' strategies to sustain practice change, an internally focused action. Although the external context influenced the managers' strategies, using a conceptual framework with less emphasis on internal factors did not support the research question. PARIHS framework categories presented a more balance within the categories of internal and external factors, which was more appropriate for this doctoral study.

Healthcare Context

Technological advancements and increasing demands for quality care are driving healthcare leaders to look for opportunities to transform the care system (Melder et al., 2022). Advances in technology and rapid changes in best practice (VanHeuvelen & Grace, 2020) enable patients to live longer with more frailty and multiple comorbidities than in previous generations (Nuño-Solinís, 2018; Williams et al., 2020). In a study of services required by the baby-boomer generation as they continue to age, D'Ambrosio et al. (2019) found a high area of concern for this population is access to healthcare and the experience of dying. Healthcare services include the need for personal choice, providers' support, and care affordability (D'Ambrosio et al., 2019). Newton (2022) found a correlation between health and well-being. These factors increase the demand for healthcare in an existing complex system.

Healthcare system complexity adds additional dimensions that test leaders' ability to implement and sustain and scale change initiatives (Melder et al., 2022). Dryden-Palmer et al. (2020) used Kitson et al.'s PARIHS framework to examine the complexity of knowledge translation from research to clinical practice and found complexity is a constant state in the healthcare system. Kitson et al. (2018) said introducing an intervention into a complex system corresponds with the potential for variable results. While complexity may persist, the demand for quality care within the complex system continues to grow.

Healthcare leaders are experiencing cost pressures from the demands patients put on the healthcare system. Healthcare leaders can expect increased financial burden to

continue from aging patients' demands on the healthcare system (Colombier, 2018). The BC healthcare system is a publicly funded service by the provincial government (Verma et al., 2018). Therefore, healthcare leaders are accountable to all citizens in managing healthcare dollars. BC Ministry of Health (2020) mandates that health authority leaders maintain balanced budgets while providing high-quality care to patients.

Leaders seek ways to improve internal processes to address the healthcare system's demands. Healthcare change includes continuous improvement activities, new government policy directions, organizational reprioritizations, introductions of advanced technology, and new evidence-based practices to improve patient outcomes. Implementing evidence-based practice benefits patients through improved care delivery with better outcomes and decreased costs (Melnyk et al., 2018). However, sustainment failure means the new practice does not become embedded in daily work and wastes the investment in time and resources (Berta et al., 2019). However, in a study assessing the factors influencing sustainment, Cowie et al. (2020) found that researchers identify staffing resources as a barrier to sustainment. Amongst leaders who need to lead change, there are inconsistencies in knowing how to lead change effectively and having the resources available to support the change effort. Nevertheless, if a change is part of everyday experience, healthcare leaders must become more effective in leading change to meet the growing healthcare service demands.

Evidence-Based Practice

One way clinicians experience a healthcare change is by implementing research through evidence-based practice. Leaders implementing evidence-based practice aim to

marry current knowledge regarding optimized clinical care with clinician experience to deliver care that meets the patients' needs and preferences (López-Medina et al., 2021)., In a study examining the influences on the successful implementation of age-friendly hospitals for seniors from the perspective of people involved in caring for the elderly, Mudge et al. (2021) reported interviewees expressed frustration that many evidence-based practices failed to sustain as part of daily practice. However, evidence-based research correlates to delivering quality patient care (Seers et al., 2018). The implementation of evidence-based practice is the application of current research outcomes, known as best practice, to the delivery of patient care (Harvey et al., 2019). Implementing evidence research translates research knowledge to the clinical setting (Titler, 2018). Best evidence stems from controlled trials, qualitative and qualitative research, or case studies (Titler, 2018). The implementation of research outcomes enables healthcare professionals to enhance medical treatments to meet the growing needs of patients.

Healthcare leaders consider the clinical setting and patient population when considering the appropriateness of implementing a specific evidence-based practice to improve care. A vital question as healthcare providers evaluate research evidence to improve the delivery of patient care is whether the evidence-based practice fits with the clinical setting (Titler, 2018). Braithwaite et al. (2018) stressed the need for leaders to adapt practices to the clinical and organizational environment. A match between research outcomes and clinical settings is an indicator for healthcare leaders that the evidence-based practice is appropriate to implement.

The type of evidence-based practice and the clinical context can correlate with the potential for unsuccessful implementation processes and adverse patient outcomes. Lack of evidence-based practice availability and adoption of evidence-based practice can lead to reduced patient outcomes (Titler, 2018). The misalignment of evidence-based research in a sterile environment versus the ever-changing clinical setting negatively affects successful implementation (Jordon, 2018). Jordon (2018) proposed that the collaboration of front-line clinicians and academics can promote the development of practical, evidence-based practice. Research-based on evidence and clinical experience informs quality patient care (Titler, 2018).

Practice Change Sustainment

Researchers use sustainment as a change component in the literature without a clear definition of the term (Cowie et al., 2020; Lennox et al., 2018). Researchers use the terms sustainment or unsustained change to represent different definitions (Shelton et al., 2018). In a literature search regarding sustainment, Hailemariam et al. (2019) found only 62% of the 26 studies defined sustainment, and the remaining 16 articles lacked a definition or the ones provided were inadequate. The lack of standardized definition in the sustainment field makes progress in the study of sustainment challenging (Birken et al., 2020) and assessing the current research difficult.

As a researcher, I determined which definition I would use in the study. One definition of sustainment is the retainment of desired change components outcomes, along with any associate adaptions made in response to the needs of the clinical setting (Lennox et al., 2018). Similarly, Cowie et al. (2020) defined sustainment as an

intervention continuing in practice after the initial introduction to clinicians is complete. For this study, I used Lennox et al.'s definition, and I added a time reference to the definition that spoke to the sustainment of implementation for the following definition: sustainment of practice change represents a change in clinical practice used and adapted by clinicians for one year or longer after implementation. Conversely, unsustained practice change is a change that clinicians do not use as part of their everyday work one year after the initiative moves from implementation to sustainment. Providing a clear definition of sustainment in this research study will enable other researchers to judge the validity and applicability of the research.

In addition to a lack of definition, I identified a lack of clarity regarding the implementation and sustainment phases. Distinguishing between the stages of implementation and sustainment varies among researchers (Fleiszer et al., 2015b). Some authors articulated sustainment as a final step of implementing change (Rapport et al., 2018), while others separated sustainment as a specific activity from implementation (Fleiszer et al., 2015b). Similarly, Ehrhart et al. (2018) suggested that implementation and sustainment share similar elements; however, implementation is the introduction of change and sustainment as the ongoing use of the new practice over time. Ehrhart et al. (2018) said sustainment could not occur without implementation, establishing an inherent dependency between the two concepts. A lack of consensus on phases of implementation and sustainment makes the comparison of research outcomes challenging.

For this study, the transition from implementation to sustainment occurred when leaders removed the internal or external enablers helping clinicians adopt the change. For

example, the project has transitioned into the sustainment phase when a project manager or educator no longer conducts in-services or one-to-one training to support staff learning the new practice. Clearly defining when a change has transitioned from implementation to sustainment will provide the reader clarity on what each stage contains.

Researchers need to consider whether changes to the evidence-based practice after implementation reflect sustainment or a lack of sustainment. Conversions to new practice resulting from continuous improvement or adaptions do not constitute unsustained change, as clinicians have altered the practice to meet the needs of the clinical environment (Dearing & Cox, 2018). Healthcare leaders evolve clinical practice or adapt a new care delivery as part of sustainment (Shelton et al., 2018; Song et al., 2022). It is critical for leaders to continuously improve the change to achieve and maintain sustainment (Braithwaite et al., 2018). In this research, I assessed whether the healthcare leaders or clinicians adapted the practice to meet the clinical needs of the area or through continuous improvement activities. I considered both types of change to practice as sustainment of the assessment.

The adaption of practice can go so far that the practice is no longer evidence-based. Researchers need an awareness of when they alter an implemented practice beyond recognition so that the delivery of care method is unsustained (Shelton et al., 2018). Change of practice during sustainment can occur when the delivery of care is not effective at implementation, is no longer sufficient for the treatment required for a patient population, or stops or changes an element of the care delivery (Shelton et al., 2018). Niemi et al. (2021) said adjusting the practice to fit the clinical setting and patient needs

signifies clinicians have diminished the validity of research evidence. Leaders must balance implementing a new practice adopted in a complex system and rigorously adhering to evidence-based standards (Niemi et al., 2021). The role of the healthcare leader is to distinguish the difference between implementing the care delivery processes from when the healthcare providers have fundamentally changed how they work.

Staff Support Requirements for Practice Change Adoption

Healthcare is a complex and ever-changing system that impacts the staff's ability to adapt to change (Bonnice, 2019). Several different elements are required to support teams in adopting a new practice. Adoption is staff embedding knowledge, change in behavior, various methods for delivering care, and new structures or processes into their work (Rapport et al., 2018). Adopting change is influenced by the potential for benefit to the patient and improved safety, but how clinicians respond to the impending change will be different for everyone (VanHeuvelen & Grace, 2020). It is not just individuals who need to change but also the unit and the organization (López-Medina et al., 2021). Harvey et al. (2019) also found a correlation between the internal environment and the strategies leaders used to implement evidence-based practice changed. While researchers identified different factors, internally driven characteristics are consistently more prevalent than external elements. There are opportunities for further research to synthesize a comprehensive list of contributing features supporting practice change adoption.

How leaders present the need for change can influence the staff's adoption of the new practice. As the recipients of practice innovations, staff can support or derail the

implementation based on their motivation (Dearing & Cox, 2018). Understanding why the healthcare leaders propose the change and the future vision enables clinicians to identify the value the intervention will bring to care delivery (Woods et al., 2020). Healthcare providers are more likely to adopt evidence-based practices as part of their daily practice when leaders focus on improving service delivery and patient outcomes (Fleiszer et al., 2016b). Therefore, leaders hold a position of influence when introducing change.

Leaders' actions demonstrate practice change's importance and set clinicians' expectations. Leaders model the behavior they expect staff to exhibit during the change process (Moullin et al., 2018), leading to increased staff engagement (Hebert et al., 2018). A leader reflects their belief that the new practice will positively impact patient care in the effort and support they give to the implementation and sustainment processes (Rodriguez et al., 2018; Woods et al., 2020). Motivating staff to change can also be demonstrated by leaders providing feedback to staff on how they are doing and showing appreciation for their efforts towards implementing and adopting the change (Woods et al., 2020). Managers who can keep the patient and patient outcomes at the focus of the change help facilitate successful implementations (Landes et al., 2019). Additionally, active participation in problem-solving can derail barriers to sustainment (Ehrhart et al., 2018). It is the actions of leaders that contribute to the success and failure of implementation and sustainment.

There is a correlation between staff perceptions of the change and improved implementation outcomes. Staff perceiving a fit between the proposed change with the

client population, clinical setting, and organizational culture leads to an increased potential for sustainability (Rodriguez et al., 2018). When the innovation is adapted to fit the clinical setting (Damschroder et al., 2009), it is more manageable for healthcare providers to embrace. Staff perceiving that the change benefits their patients and themselves can result in clinicians changing the way they work.

Leaders can influence the staff's readiness for change by creating a positive culture within the clinical setting. When staff work in an environment accepting of change, there is a higher opportunity for the team to adopt new change initiatives (Flaherty et al., 2021). In a study of mental health evidence-based practice implementations, Flaherty et al. (2021) found a correlation between organizational culture and the adoption of change. The level of work-related stress can also affect clinicians' willingness to change their clinical practice (Qiao et al., 2018). Qiao et al. (2018) suggested that reducing work-related stress levels increases the likelihood of successfully implementing a practice change. Staff members are willing to adopt new methods of delivering care when environmental factors in the clinical setting are positive and support the clinicians' ability to demonstrate their skills. In a study of practice change in care homes, Song et al. (2022) found that staff who had the support of their leader were critical for the care aids to demonstrate their skills and ability to adapt the intervention to their clinical needed. The staff's ability to maximize their scope of practice increases the likelihood that staff will sustain the change (Jean et al., 2019). Since healthcare leaders set the tone for the clinical culture (Moullin et al., 2018), leaders

can positively influence staff engagement and adoption of practice change by creating a positive work environment.

The clinicians' experience assessing the research evidence supporting best practices can influence their willingness to adopt new practices. Although evidence-based care is a standard set by all clinical colleges, clinicians can perceive and maintain old ways of working as more efficient than adopting evidence-based practice (Bonnice, 2019). After receiving education on evidence-based practice, van der Goot et al. (2018) found that 58 nurses raised concerns they did not have time to do the research (36%). The authors also found the nurses didn't have the time to implement new ways of working (23%) or the authority to change how they and their colleagues deliver care (23%) (van der Goot et al., 2018). Additionally, some clinicians do not have the competencies to assess current research against the practice (Bonnice, 2019). When education on identifying a clinical question, researching the best evidence, and evaluating the research outcomes was available for nurses, their skills improved by 40% (van der Goot et al., 2018). Conversely, Melnyk et al. (2018) argued that education is not only needed on how to research evidence-based practice but also on how to implement the change. Yue et al. (2022) found a learning culture to be a positive predictor of successful implementation. Increasing clinical competencies for assessing research against the practice (Bonnice, 2019) and for how to implement the change into practice (Melnyk et al., 2018) are methods of decreasing the adoption barriers.

Importance of Leadership in Sustaining Practice Change

A consistent theme across the research articles is the need for leaders to support the implementation of change. The leadership levels provided to staff during change can predict engagement and willingness to alter behavior (Ehrhart et al., 2018). The amount of leadership support provided to staff during a change initiative can predict the success or failure of the intervention (Li et al., 2018). Rodriguez et al. (2018) noted an enabler to ongoing sustainment is leaders taking an active role in sustaining the change as influenced by their previous experience with implementing new practices. Conversely, when the leaders' presence during sustainment decreases, staff struggle to maintain the new initiative without the leaders' support (Song et al., 2022). However, López-Medina et al. (2021) found that many managers found it challenging to effectively lead practice change in a transformational manner due to the number of operational requirements of their role. The strategies for optimizing leadership skills and duties are opportunities for future research.

Leaders define the clinical culture within the organization. Culture reflects the staff's comfort in their work setting, including what they believe should or could happen within that environment (Melnyk et al., 2018). Healthcare leaders who encourage care providers' creativity and ability to adapt to new situations; create a culture where staff is more likely to participate in practice change initiatives (Xiang et al., 2018). Leaders who establish a positive working environment with high morale amongst clinicians generate more clinicians willing to participate in implementation activities (Li et al., 2018). The

adoption of research-informed practice change strengthens when leaders and clinicians develop an evidenced-informed culture in the unit (Harding et al., 2016)

Leadership is critical to enabling change implementation; however, the length of time leaders must be present to support the change varies. Moullin et al. (2018) suggested that the role of the leader is essential through all phases of implementation, from the decisions to adopt a new practice to the sustainment of the change. Diffin et al. (2018) concurred with Moullin et al.'s (2018) findings stating that leadership support was critical during preplanning and implementation. In a study of evidence-based practice sustainment within the United States National Institute of Mental Health (NIMH), Ehrhart et al. (2018) identified leadership support as a critical element during implementation and sustainment; however, there is a requirement for different types of leadership during sustainment such as sourcing ongoing funds to support the practice. While the authors disagreed on the form of supervision required, they agreed that leadership support is essential.

The converse to visible leadership support is a lack of leadership presence, resulting in decreased success in implementing and sustaining evidence-based practice (Song et al., 2022). During the sustainment phase, executive leaders often lack continued presence due to competing priorities (Ehrhart et al., 2018). Landes et al. (2021) found that leaders experiencing resource limitations decreased their support for the change initiative. Applying strategies for ongoing leadership focus during sustainment builds on the benefits of leadership presence during implementation (Ehrhart et al., 2018). Providing education to leaders or just questioning leaders' assumptions during sustainment can

increase engagement (Landes et al., 2021). Leaders must continue to check in to get staff feedback to support successful implementation and sustainment (Wijk et al., 2019).

There are different types of leaders, and each plays a unique role during the implementation and sustainment of practice change. While many facilitators are managers, other positions are required to support staff adoption of change (Landes et al., 2019). Moullin et al. (2018) suggested that leaders at all levels of the organization have a role to play in implementing practice change and can influence the success or failure of change. However, frontline and executive leaders demonstrated different leadership skills to support change sustainment (Ehrhart et al., 2018). While Harvey et al. (2019) concurred with Ehrhart, they suggested both formal and informal leaders have a role in supporting practice change implementation and that the who provides leadership supports should be tailored to the intervention and internal context. Change leaders, champions, frontline leaders, opinion leaders, and management play a role in leading change initiatives (Alagoz et al., 2018). Geerligs et al. (2018) proposed that leaders' ability to sustain change depends on their understanding of the factors influencing success and what derails change implementation.

Champions play a valuable internal role during times of change. Internal champions also play a significant role in implementing and sustaining practice change (Xiang et al., 2018). In a literature review on the factors that influence sustainment, Cowie et al. (2020) found that 69% of respondents were among the top three factors that positively influenced sustainment. Facilitators can influence organizational dynamics to support change adoption if supported by operational leaders (Baloh et al., 2021).

Management support and a clear role with identified duties enabled champions to have a critical impact on sustainment (Cowie et al., 2020). Champions are essential facilitators of implementing practice change if their leaders support them.

Factors Influencing Practice Sustainment

In addition to demonstrating visible leadership, there are strategies leaders can utilize to increase the chances of success of the practice change. Leaders establish the cultural and environmental setting for staff to engage with implementing new methods of working (Moullin et al., 2018). A change management plan is one strategy leaders use to manage staff resistance and support clinicians when adopting new practices. The existing change management capabilities within an organization can impact the success of change (Palmer et al., 2018). However, some organizations do not have an established change management infrastructure to support complex change initiatives and require the support of external change facilitators (Harvey et al., 2018). When internal change management resources are unavailable external facilitators can support the change management efforts (Palmer et al., 2018). However, complex change initiatives require additional change support and internal capacity to successfully manage the change (Palmer et al., 2018).

The development of the auditing process should occur during the planning phase of the change initiative (Xiang et al., 2018). Åkesson et al. (2021) found leaders play a crucial role in auditing and monitoring compliance to the change, which leads to sustainment. In a literature review, Li et al. (2018) found that 39% of the researchers reported that establishing an evaluation process supported implementation success. At a minimum, leaders should conduct quarterly audits to sustain the focus on maintaining

evidence-based practices (Fleiszer et al., 2016b). Establishing auditing processes is one-way healthcare leaders can impact the internal environment to support change.

Engaging staff in the auditing process increases the accountability and responsibility of clinicians to participate in the sustainment processes. Healthcare leaders can further use the organizational setting to influence implementation by including staff in the auditing process (Fleiszer et al., 2016b). A pre-existing organizational culture structured around data analysis and quality improvement can inform new intervention initiatives (Kalsy et al., 2020). Making audit results visible increases accountability and ownership among the clinicians, thereby adding to the leader's sustainment efforts (Fleiszer et al., 2016b). As a precursor to auditing, managers must set consistent expectations and acknowledge healthcare providers' efforts when used with new practices (Fleiszer et al., 2016a). Leaders must demonstrate the resiliency required to maintain the review process and prioritize change sustainability (Woods et al., 2020). Leaders can use the auditing process to gauge the implementation status and recognize the staff's efforts when sustainment is successful.

Another internal factor impacting the sustainment of practice changes is the financial resources to fund the ongoing delivery of care. The rising cost of healthcare delivery is adding pressure on leaders (Lee et al., 2019). Researchers identified the lack of enduring funding support as a barrier to sustaining practice change (Xiang et al., 2018). Pilot projects account for many change initiative implementations, and when grant funding ends, healthcare leaders must absorb the ongoing costs into operational budgets or find new funding sources (Xiang et al., 2018). Palmer et al. (2018) identified that

leaders turn to quick solutions when faced with financial constraints instead of implementing longer-term practice changes. However, the ability to report improved patient outcomes over time enables healthcare leaders to demonstrate the importance of the intervention to senior leadership and gain ongoing management support and financial resourcing for the new practice (Xiang et al., 2018). Healthcare leaders require constant funding dollars to sustain evidence-based practice changes after initial implementation activities (Pegg et al., 2021). Healthcare leaders can take a critical step to amplify the potential for sustained change is securing funding sources during the planning phase.

Summary

To understand factors contributing to the sustainment of practice change, I conducted a qualitative interpretative descriptive study to answer the question: What strategies do healthcare leaders use to sustain practice changes to meet increasing demands for quality care while maintaining a balanced budget? During the literature search, I found limited conceptual frameworks to support a doctoral study involving the sustainment of practice change. I reviewed six conceptual frameworks used by researchers during the investigation of healthcare change implementation, including an unnamed framework by Fleiszer et al., the CFIR, theoretical domain framework, dynamic sustainability framework, EPIS framework, and PARIHS framework. After considering the literature, I used the PARIHS framework to guide this research study.

In addition to assessing the literature review, I searched for literature related to healthcare context, evidence-based practices, and the sustainment of change. I addressed staff adoption, leaders' role during implementation and sustainment, and healthcare

leaders' consideration of specific internal and external contexts during sustainment. Finally, I outlined the critical role healthcare leaders play throughout the change process, including setting the environment for healthcare providers' adoption, managing system impact, and enabling or hindering change sustainment (Moullin et al., 2018).

Transition

In Section 1, I addressed the study's foundational elements, including why I conducted the study, background of the problem, problem statement, purpose statement, research question, and interview questions. I then addressed the conceptual framework, definitions, assumptions, limitations, delimitations, and significance of the study. A comprehensive literature review follows this.

Section 2 includes the purpose statement, the role of the researcher, and the criteria for participant inclusion. I outline the study methodology, research design, population, sampling sections, and ethical issues considered. Finally, I detail the approach for collecting and analyzing data, data collection instruments and techniques, data organization techniques, data analysis, reliability, and validity.

Section 2: The Project

In Section 2, I provide a detailed research plan, including the purpose statement, the role of the researcher, and proposed participants. This section includes steps required to conduct research involving the method, design, population, sampling, and ethical research. Finally, I explain how data were collected and analyzed, data collection instruments and techniques, data organization techniques, data analysis, reliability, and validity.

Purpose Statement

The purpose of this qualitative interpretative description study was to explore strategies healthcare leaders use to sustain practice changes to meet increasing demands for quality care. The targeted population includes operations managers responsible for using successful strategies to implement and sustain a practice change in a healthcare setting. Implications for positive social change comprise the potential for healthcare leaders to understand what strategies they can use to sustain the implementation of current and advanced best practices. Healthcare professionals who successfully implement and deliver advanced best practices may improve patient care delivery, resulting in lower costs to the healthcare system and society because of fewer acute care admissions and reduced lengths of hospital stays.

Role of the Researcher

Researchers identify the study design and methodology after defining the research question (Hong & Frances, 2020). Researchers use the process of reviewing the literature to guide and narrow their ontology and frame their subsequent research study (Hong &

Francis, 2020). They must identify the appropriate research design, methodology, and conceptual framework to structure research (Mthuli et al., 2021). I chose a qualitative interpretative description approach to answer the research question for this doctoral study.

When conducting interviews, the researcher becomes part of the research context (Clark & Vealé, 2018) and can influence the outcomes of results (Babchuk, 2019). The researcher is a vehicle for delivering interview questions, recording participant responses, and interpreting meaning from answers. Recording and documenting interviews increases transparency and trustworthiness (Kekeya, 2021). My responsibility was to capture, transcribe, and theme the participants' experiences accurately and truthfully.

Researchers must assess how their social or organizational standing can influence their study (Busetto et al., 2020; Thuralrajah, 2019). I work in healthcare, which may lead to bias. As Director of Special Projects for a BC healthcare organization, I have participated in implementing and sustaining practice changes. To reduce the potential for bias, I studied practice changes I was not involved in implementing. If a potential participant worked for my healthcare organization, I excluded them from the study if I had any reporting or daily operations relationship with them. I also used a reflective journal to capture thoughts and determine potential assumptions. Researchers use reflective diaries to internally review their biases and identify how these assumptions may influence research outcomes, validity, and credibility (Karagiozis, 2018). Identifying potential bias and developing mitigation strategies are part of researchers' roles.

The Belmont Report outlines ethical principles and guidelines researchers use to ensure participants' safety while conducting research. The three research principles are respect for persons, beneficence, and justice (U.S. Department of Health and Human Services, 1979). As a researcher, I was responsible for following the principles and guidelines outlined in the Belmont Report.

The principle of respect for persons involves researchers' responsibility to ensure participation in research is voluntary, and participants have the capacity to decide whether they would like to participate (U.S. Department of Health and Human Services, 1979). Researchers must ensure participants understand the purpose of the study, obtain signed consent forms, and confirm they have the capacity to make informed decisions (Biros, 2018). A critical criterion for informed consent is providing participants time to ask questions (Pocock et al., 2021). Potential participants received and signed a consent form before the study began. The consent form included the purpose of the study, my role as a student researcher, participants' right to withdraw at any time, and how I planned to share results with organizational leaders to ensure participants received information for informed consent. As working healthcare managers, participants understood the consent form. I answered participants' questions and provided a detailed consent form to demonstrate principles of respect for persons.

The second principle of beneficence involves researchers' responsibility to ensure minimal harm comes to participants and they receive optimal benefits from research (U.S. Department of Health and Human Services, 1979). Researchers are responsible for identifying and mitigating potential, real, or perceived risks or harms to participants

(Biros, 2018). It is the role of the researcher to foresee how research impacts participants and establish mitigation strategies to counter the effects of any potential harm.

Maintaining the confidentiality of participants is a critical consideration for researchers (Ross et al., 2018). Before reporting findings, researchers must remove any identifier that could potentially lead to disclosing a participant's identity (Ross et al., 2018). To increase confidentiality, I removed personal identifiers from summarized data. Anonymizing data included removing language style, names, and corporate identity. I used pseudonyms such as P1 and P2 to identify participants. Additionally, I presented aggregated data when sharing study results and avoided using direct quotes that identified individual interviewees. Including these steps in the study helped mitigate the risk of negating participant confidentiality and harming participants if their responses to interview questions were unfavorable to their organization.

The last principle of justice involves fairness and equality to participate in or benefit from research (U.S. Department of Health and Human Services, 1979). It is the researchers' responsibility to understand their cultural beliefs to prevent the inclusion of their values in the study (Karagiozis, 2018). Researchers use self-reflection to expose their assumptions and judgments throughout the research process (Slettebø, 2021). Throughout the research study, I used a reflective diary to increase awareness of my biases. Reflective practice helps researchers look internally to identify different preconceived ideas or beliefs about the research subject and determine how their biases can influence research decisions (Johnson et al., 2020). The researcher is aware of their bias and acts transparently by writing reflections down as part of their documentation

(Tuval-Mashiach, 2021). The reflective diary becomes part of the research record and is a tool to mitigate against breaching the third principle of justice.

Researcher bias can influence fairness and equity; however, bias can also impact other aspects of research. As a participant in the study, researchers need to consider how they affect data collection and analysis with their beliefs and biases (Karagiozis, 2018). The less structured nature of qualitative inquiry means the researcher is vulnerable to bias if they are unaware of their perspectives and assumptions (Clark & Vealé, 2018). Without awareness of my expectations, how I delivered interview questions could inadvertently influence participants' responses. Researchers must avoid manipulating interviewees' responses (Moser & Korstjens, 2018). During the study, I used a reflective diary to consider how my biases may influence research and develop mitigation strategies to bring awareness to my biases and alleviate their potential impacts.

A mitigation strategy to decrease the researcher's influence on the participants during the interview process is to employ an interview protocol (see Appendix A). Following an interview, researchers use protocols to develop their skills and avoid errors (Roberts, 2020). Researchers use protocols, such as interview protocols, to avoid straying away from the focus of the research (Yeong et al., 2018). My role was to ensure research integrity by following the rigor of a structured research protocol, including an interview protocol, to ensure a transparent and valid research study.

Participants

Researchers are responsible for finding and engaging individuals who meet the criteria to participate in the study. Researchers select participants with the most

significant knowledge about the research question (Johnson et al., 2020). Researchers aim to solicit participants' perceptions of a phenomenon or event versus obtaining a high level of knowledge about the situation (McGrath et al., 2019). The participants for this doctoral research study are operations managers who led the strategies to sustain a practice change for one year or more. I excluded (a) operations managers where clinicians have not sustained the change for one year or more and (b) operations managers from business or support service departments. I aimed to identify operations managers who successfully sustained a practice change with the selection criteria to answer the research question.

Participants were recruited through social media using Linked-in® and the university Participant Portal. Researchers have experienced challenges executing their studies during the Covid-19 pandemic (Pocock et al., 2021). In response to the recruitment challenges, many researchers have turned to virtual technology to recruit participants (Cashwell, 2021; Keen et al., 2022; Wentzell et al., 2021). Researchers use social media as a successful recruitment strategy (Cashwell, 2021; Geddes et al., 2018). Researchers are using social media as a successful recruitment strategy. Parker et al. (2022) conducted a study regarding women's opinions of education resources received during cancer treatment. The researchers identified posting on social media provided an effective conduit to recruit participants (Parker et al., 2022). I maximized the reach to potential participants by using two social media platforms, LinkedIn® and the university Participant Portal (see Appendix B for social media invitation).

Before starting the data collection, the researcher must also develop a working relationship with the participants. Interviewing is an interpersonal process (Moser & Korstjens, 2018); therefore, it is essential to establish a working relationship with the participants. Moser and Korstjens (2018) suggested that while a set of interview questions and an interview guide supports the researchers, the interview should become a dialogue between two people and requires the participants to be at ease. I used an interview protocol and predetermined interview questions during the interview. The additional probing questions supported dialogue with the participants as I listened to their responses and asked further clarifying questions. Thuralrajah (2019) suggested that researchers truly understand the phenomenon when the interviewer and participant achieve a state of trust. I emailed participants a copy of the consent form before the interview day and reviewed the document in detail before starting the interview. Putting the participants at ease by ensuring participants understood the consent form to provide informed consent and creating an interactive interview process helped establish a working relationship with the participants.

Research Method and Design

Research Method

I used a qualitative approach for the doctoral study. Researchers choose a research methodology to facilitate their exploration of a phenomenon or event and answer the research question (Doyle et al., 2020; Mele et al., 2020). I used a qualitative approach to understand operations managers' strategies to sustain practice change successfully. Researchers use qualitative methodology to delve deeply into the phenomenon (Quintão

et al., 2020). Using interviews in a qualitative approach allows researchers to learn from the participants' experiences (Roberts, 2020), such as what they did and why they made decisions within their specific context. Interviewing the operations managers enabled an opportunity to learn about their experiences implementing strategies to sustain change, including why the manager chose to use one approach over another.

A qualitative study can be either inductive or deductive. Inductive research does not start with a theory or framework. Instead, the researchers aim to create a theory (Johnson et al., 2020). In contrast, deductive research begins with a theory or framework to guide the study (Johnson et al., 2020) and assumes an existing logic (Blaikie, 2018). I used Kitson et al.'s (1998) PARIHS framework to conduct the research. Therefore, I used a deductive approach.

Quantitative researchers collect numerical data and statistical analysis to answer research questions (Edwards, 2020). Researchers start their study to validate a hypothesis or assume a relationship exists between two variables (Bloomfield & Fisher, 2019). The researcher's goals are to identify how the independent and dependent variables interact, influence, or diverge from one another (Dewasiri et al., 2018). To test the hypothesis, the researcher isolates and analyzes the variables (Edwards, 2020) through controlled data collection processes (Bloomfield & Fisher, 2019). I did not start with a hypothesis and did not represent the operations managers' choices of sustainment strategies as numeric values; therefore, a quantitative approach was inappropriate for this study.

Researchers use a mixed-method study when they have identified that a quantitative and qualitative approach will most effectively answer the research question

(Dewasiri et al., 2018). Mixed-method researchers combine qualitative and quantitative methods to conduct a more complete, transferrable (Dewasiri et al., 2018) and trustworthy study (Kekeya, 2021). I did not use a mixed-methods approach because I could gain a deep understanding of participants' experiences in applying sustainment strategies using a single methodology.

Research Design

I used an interpretative description for this research. Researchers use interpretative description methodology to provide a detailed description of a phenomenon and interpret the meaning interviewees assign to the event (Timulak & Elliott, 2018). The researcher will influence the results through the interpretation and meaning-making process as they become active partners with the participants (Timulak & Elliott, 2018). The researchers bring their own experiences and knowledge to the research design and data interpretation (Shaw et al., 2018). Timulak and Elliot (2018) suggest the researcher must balance reporting the description of the phenomena and the interpretation of meaning associated with the event. The interpretative description method is used in healthcare settings to explore meaning within a specific phenomenon that clinicians implement into clinical practice (Shaw et al., 2018). An interpretative description approach was appropriate for this study because I aimed to understand the strategy decisions operations managers made while considering the context of their clinical setting.

A case study approach is appropriate when the researcher explores a phenomenon within a complex setting to identify a deep understanding of human behaviors, systems,

processes, and practices by connecting with individuals who experienced the event (Quintão et al., 2020). Researchers use a case study design to identify relationships and patterns within a specific event or series of events in which they have no control over the phenomena (Quintão et al., 2020). A case study approach was inappropriate for this research because participant recruitment was limited to the individuals within the setting where the phenomena occurred. Researchers experienced unprecedented challenging in conducting research during Covid-19 (Pocock et al., 2021). My original study methodology was a case study. However, I altered the methodology because I could not obtain an adequate sample size during Covid-19. Therefore, a case study methodology was not relevant for this research.

Researchers use a phenomenological design to understand what meaning participants attach to their experiences (Valentine et al., 2018). van Manen (2019) stressed that phenomenological researchers study lived experiences and the meaning or description the person assigns to the event. Researchers use a phenomenology approach to explore the relationship between how people relate to others and the context of the world around them (Aspers & Corte, 2019; Valentine et al., 2108). Konecki (2019) described phenomenological research as a creative activity that requires the researcher to use reflective techniques without applying social or cultural filters. A phenomenological was not appropriate for this study as I was not looking to understand the meaning the participants attach to their own experience of sustaining change.

Researchers use an ethnographic design to observe, in real-time, to articulate an individual or group's social interactions or how they live, not to understand cause and

effect (Harwati, 2019). Ethnography is an immersive research method as the researcher observes participants (Rashid et al., 2019). The researcher participates in daily interactions to understand the relationships within a phenomenon (Harwati, 2019). An ethnographic study was not appropriate for this study as the sustainment of the practice change had already happened; therefore, observations could not occur.

Researchers must document when they have achieved saturation. Qualitative researchers aim to collect the most important information relevant to answering the research question, not all the available information (Weller et al., 2018). Researchers reach data saturation when they stop finding new themes in the data analysis (Busetto et al., 2020). Reaching a point where no new themes emerge from the data indicates an appropriate sample size has been achieved (Hennink & Kaiser, 2022). I conducted a dual approach to interviewing and analyzing the data simultaneously by starting the data analysis as soon as I interviewed the first participant. I identified data saturation after the sixth interview, confirmed saturation after the seventh interview, and validated saturation after the eighth interview. Once I achieved data saturation, I stopped interviewing additional participants.

Population and Sampling

I used purposive sampling to identify appropriate participants for this study. Researchers can use multiple sampling approaches to understand a phenomenon and obtain the required sample size (Doyle et al., 2020). Researchers use purposive sampling to make up a specific population or stakeholder grouping (Busetto et al., 2020) and select participants who can share knowledge or insight to address the research question (Ames

et al., 2019; Blaikie, 2018; Johnson et al., 2020). Through the participants' extensive knowledge of the phenomenon, learning is achieved (Hong & Frances, 2020). Healthcare managers who led sustainment strategies had the knowledge to answer the research question.

I also used snowball sampling for this study. Researchers use their personal or professional networks to contact a small group of potential participants who can answer the research question (Geddes et al., Kirchherr & Charles, 2018). The sampling process continues through a repetitive cycle of interviewees referring potential participants to the researcher (Geddes et al., 2018; Kirchherr & Charles, 2018). Researchers combine snowball sampling with purposive sampling, where the initial contacts have the knowledge to answer the research question (Geddes et al., 2018). Researchers use snowball sampling, do not required when they use a broad or random sample group (Geddes et al., 2018). Combining snowball sampling and purposive via social media leveraged my existing network to identify an appropriate sample group to achieve saturation and answer the research question.

Participants were recruited through social media using LinkedIn® and the University's Participant Portal. Researchers use social media as an efficient, low-cost method of recruitment (Arigo et al., 2018; Welch, 2019). Accessing a comprehensive group of potential participants is effectively achieved through social media (Welch, 2019). Researchers use social media to communicate with participants (Arigo et al., 2018; Sedrak et al., 2019; Welch, 2019). In a clinical trial study, Sedrak et al. (2019) found that using social media to recruit participants effectively profiled their research.

Arigo et al. (2018) recommended researchers leverage the social media platform most widely used by the target participant population. Professional social media platforms such as LinkedIn® and the University's Participant Portal are appropriate choices for recruiting healthcare managers.

Researchers do not have set parameters to guide them in determining the sample size within a qualitative study (Moser & Korstjens, 2018). The research context determines the appropriate sample size for a given study (Moser & Korstjens, 2018). The minimum sample size for this study was ten. Hennink and Kaiser (2022) found that a researcher can demonstrate saturation with small sample sizes ranging from 9-17. The importance is interviewing the participants who add their knowledge to understanding the research phenomena (Moser & Korstjens, 2018). Mthuli et al. (2021) suggested identifying a preset sample size is not supported in qualitative research as the very nature of the design requires flexibility. Operations managers who participated in sustaining a change of practice had the knowledge to answer questions regarding the sustainment of practice change. A sample of ten operations managers for this study was appropriate.

Researchers can use a small sample size in qualitative research but must demonstrate data saturation (Moser & Korstjens, 2018). Researchers assess when they have reached data saturation in an iterative process of data collection, coding, and theming (Johnson et al., 2020). Researchers reach data saturation when they cannot identify new themes or ideas from the data points (Moser & Korstjens, 2018). Additional data collection would not enhance the study outcomes further (Guest et al., 2020). Data

saturation completion occurred when I could no longer identify new strategies for sustaining practice change in the interview summaries.

A component of the research design is the criteria for selecting participants. I narrowed the study population to operations managers for two reasons. First, the operations managers had direct operational responsibility for the units and were accountable for implementing and sustaining change in the unit. Second, studying the strategies of the primary leader within the clinical department aligned with my doctoral focus on leadership. I included operations managers from each type of clinical setting and anticipated the sample would provide a comprehensive data set for analysis.

Researchers must also determine where and how interviews will occur in person or via remote technology. The use of virtual communication technology to conduct qualitative interviews enables researchers and participants to connect easily, reducing the time and costs of conducting the interviews (Sah et al., 2020). Online interviewing also allows researchers to include participants from various countries or geographical locations (Doyle et al., 2020), thereby expanding the opportunities for international researchers (Keen et al., 2022). Following Sah et al.'s (2020) example and to address social distancing concerns during Covid-19, I conducted the interviews via Zoom®. A Zoom® meeting allowed the manager to select a confidential location for the interview, so they felt comfortable and free to speak openly.

Ethical Research

One ethical consideration for this research study was obtaining informed consent from participants. Following the principle of respect for persons, participation in the

study was voluntary. Participants did not receive a thank you or reimbursement for their participation in the study. Participants must sign a written agreement to participate in the research through an informed consent process (Biros, 2018; Ross et al., 2018). The following outlines the process for obtaining consent; I emailed study participants a copy of the consent form upon confirmation the individual was interested in participating and before the interview to provide them with time to read the document. I received confirmation of consent through an email from the participant stating, "I consent." I then reviewed the consent form with the participant before starting the interview to enable discussion and answering questions. Following the consent process during the research enhanced the consistency of the information provided to participants.

It is the researcher's responsibility to ensure the participants are capable of making decisions and receives all relevant information, including (a) the purpose of the study, participants' role, (b) an individual's right to withdraw from the study at any point during the data collection process, (c) steps required to withdraw participation, and (d) outline how the researcher plans to use the study results (Biros, 2018; Ross et al., 2018). To confirm participants provided informed consent for their participation in the study, I did not proceed with the interview if the participants did not understand the research purpose or their role in the study. The interview protocol included a short statement at the beginning of each interview comprising (a) the study purpose, (b) the participants' role, (c) the reason for the signed consent, and (d) directions for withdrawing consent. Inherent in the concept of self-determination and informed consent is that the participant can understand what it means to consent to the research (Biros, 2018), including that the

participants have the right to withdraw. In a study examining consent, Xu et al. (2020) found researchers articulated the participants' right to withdraw from the study is part of the information conveyed to interviewees. Participants could withdraw at any point during the study by email requesting their removal from the project. These steps supported my ability to ensure participants understood the information before starting the interview.

Another researcher's responsibility is to assess participants' vulnerabilities during the study and report anticipated vulnerabilities and steps taken to address this concern to the IRB review and the participants (Biros, 2018). Vulnerability includes any real or perceived physical, emotional, social, or economic harm to the participant (Biros, 2018). There is limited vulnerability for participants in this study. As an employee of a healthcare organization, there could have been a perceived vulnerability for participants and fear of potential bias. I did not have a reporting or daily working relationship with any operations managers. I asked if the participant was from BC and if they answered yes, let them know I work for my health organization. Additionally, I only asked about the type of clinical setting they work in and not the organization's name to avoid the participants experiencing negative organizational ramifications resulting from their participation in the study.

Researchers must articulate how they will preserve confidentiality, including storing the study data. Ethical standards require an investigator to maintain confidentiality and explain to participants how and when the researcher will share results outside the research team (Ross et al., 2018). I coded all data with a unique identifier in

the form of a letter and number. The purpose of the identifier is to remove the participants' identifying information and avoid the potential of sharing the information with others (Ross et al., 2018). Additionally, I will save all research information for five years after completing the study. The consent form and interview protocol included information regarding confidentiality and disclosure of study outcome distribution to meet ethical standards.

Confidentiality requirements address the sharing of participant information, as well. I advised participants that while the purpose of the study is to complete a doctoral degree, I intend to share the final study results with the healthcare leadership teams and may publish the results in a journal article. I also sent a copy of the results to the participants. I maintained participant confidentiality by reporting the aggregated and themes results and did not share the source data. Participants received information regarding the use and storage of the data in the consent form. To meet ethical standards, I completed the TCPS2: Core certification on May 23rd, 2019, and the CITI Program certification on May 23rd, 2022.

Data Collection Instruments

Observations, focus groups, and interviews are the most common data collection methods in qualitative studies (Moser & Korstjens, 2018). The data collection method for this study was semi-structured interviews. Researchers use semi-structured interviews with predefined questions to address the research question and ensure the interviewers consistently ask the same questions to all participants (McGrath et al., 2020). Probing questions elicit further details regarding the phenomenon or participant's experience

(Moser & Korstjens, 2018). Researchers need to establish a rapport with participants to ensure they are comfortable with the interview process and will provide rich responses to the interview questions (McGrath et al., 2019). The interaction between the interviewer and participant through structured and probing questions and answers make the interview process (Moser & Korstjens, 2018) and co-creates the study results (McGrath et al., 2020). I expected the operations managers would provide meaningful information about their experience utilizing strategies to sustain practice change.

I documented the process for collecting data in an interview protocol (see Appendix A). Researchers use interview protocols to predefine a set of questions to add structure and predictability that guides the researcher (Roberts, 2020). The open-ended nature of the interview questions should guide but not influence the participant while focusing on the research question (Moser & Korstjens, 2018). The interview questions should encourage the participant to share the depth of their knowledge and experience related to the research question (Moser & Korstjens, 2018). When used in collaboration with member checking, an interview protocol contributes to the validity of a research study (Yeong et al., 2018). The interview protocol included (a) information regarding instructions to introduce the research study, (b) obtaining the participant's consent, (c) a set of open-ended interview questions, and (d) the use of a consistent closing summary for all participants (see Appendix A).

Ensuring the validity of the data collected is essential to demonstrate the reliability and validity of the study. Researchers can validate the data when participants confirm the accuracy of the data through member checking (Moser & Korstjens, 2018;

Stenfors et al., 2020). The data needs to reflect the participants' experiences and perceptions (Slettebø, 2021). I reviewed the interview transcripts multiple times to address the validity and sent the interview summaries to the participants to confirm accuracy.

Data Collection Technique

The data collection followed the interview protocol. I introduced the purpose of the study, reviewed the consent form, and confirmed receipt of consent to start the interview. Participants must provide voluntary consent for all research (Biros, 2018) free of coercion (Xu et al., 2020). Participants answered questions during the qualitative interviews about their strategies to sustain change. I investigated the operations managers' experiences in actioning sustainment strategies by asking probing questions. Researchers use an interview technique when collecting individual versus group experiences of an event (McGrath et al., 2019). Answering the participants' questions and thanking them for their participation concluded the data collection process.

Interviews are one method of obtaining rich data to answer the research question (McGrath et al., 2019; Roberts, 2020). This study included participant interviews. McGrath et al. (2019) stressed that building a rapport with interviewees is essential for researchers. Yet, the interviewer must also remember that they can influence the dialogue (McGrath et al., 2019). The interviewer can unintentionally impact the participant or their responses, altering the data collected (Roberts, 2020). My experience as a group facilitator and conducting qualitative research using interviews gave me the required

skills to collect data for this study. Clearly written interview questions solicited meaningful information from participants.

I audio-recorded the interview using a tape recorder to enable verbatim transcription. Researchers record and transcribe interviews to convert the dialogue into data to be analyzed (Coleman, 2021; McGrath et al., 2019). Transcription enables the researcher to assign codes to the data that can be themed (Busetto et al., 2020). In addition to recording the interview, I took written notes throughout the dialogue. Audio recording only captures the participants' words, not the individuals' gestures or unspoken nuances, and the written notes provide data documentation for analysis of results (Korstjens & Moser, 2018). The interview transcripts were the primary data source for this doctoral study to inform the research question.

I conducted member checking to validate the researcher's interpretation of the participants' responses to the research question accurately. Member checking is a process of validating with participants that the researcher correctly interpreted the gathered data (Johnson et al., 2020; Stenfors et al., 2020) and corrects or challenges any misinterpretations (Korstjens & Moser, 2018). Interpretations reflect the data collected from participants, not the researcher's personal views or experiences (Korstjens & Moser, 2018). Researchers conduct member checking by sending copies of the interview summary to participants for validation and to correct the interviewer's interpretation of the participant's responses (Coleman, 2021). Member checking increases a study's credibility (Stenfors et al., 2020). I summarized the transcribed interviews and sent the

summary to the participants for confirmation. I increased my study's validity by using member checking to verify my data's accuracy.

I maintained a reflective diary to catalog my thinking during the interview and analysis processes. Reflective writing enables the researcher to think through each step of the research process to identify assumptions or actions that can influence the study (Karagiozis, 2018). Researchers use a diary to make notes of their decisions regarding the research methodology (Salmona & Kaczynski, 2016). Additionally, researchers use reflection to identify how their own experiences can influence the interpretation of participants' responses, helping the researcher separate their subjective perceptions from the data analysis (Clark & Vealé, 2018; Moser & Korstjens, 2018). A reflective diary increased the transparency of my research.

Data Organization Technique

Researchers must organize data throughout the collection, analysis, and writing process so the reader can trace the research logic, replicate the inquiry process, and produce comparable results (Salmona & Kaczynski, 2016). Providing a transparent process also enables the reader to judge the transferability of results to their setting (Korstjens & Moser, 2018). The researcher's detailed description of the research demonstrates credibility when the reader can replicate the steps of the study (Stenfors et al., 2020). I maintained a detailed record of all documents in a Microsoft Excel® spreadsheet and included the document name, identifier, source, and use to enable me to write a detailed description of the study.

Researchers must maintain organized records secured with computer passwords or locked storage (Babchuk, 2019). I stored all documents either electronically or in hardcopy. I kept all hardcopy documents in a locked filing cabinet in my home office and all electronic records on my password-protected personal computer. All electronic and hardcopy data contained a unique identifier represented by a letter for the document type and a number; for example, P1 described the first interview. A master list translating the codes to the identifiable data exists electronically on my computer in a separate password-protected folder, accessible only to the researcher. The researcher's responsibility is to ensure the participants' personal information remains confidential, accessible only to the investigator using unique identifiers (Ross et al., 2018). To meet ethical requirements, I will keep copies of all data files for five years after completing the study. After five years, I will delete the electronic copies of the data from the computer and shred all hardcopy documents.

Data Analysis

Researchers conduct a deductive data analysis using an existing conceptual framework to guide the research (Ayre & McCaffrey, 2022). I utilized Kitson et al.'s (1998) PARIHS framework as the lens to conduct the data analysis. I assessed the themes derived from the interviews against the categories and subcategories of the PARIHS framework. Using a conceptual framework supports the study's rigor (Johnson et al., 2020). Researchers use an iterative data analysis technique of data collection and analysis to determine when they have achieved saturation (Moser & Korstjens, 2018). I used an iterative process to analyze the data from the first interview until I attained saturation.

I recorded the interviews and transcribed the recordings verbatim. Moser and Korstjens (2018) recommend that researchers include notes in the transcription to capture participants pausing before answering, appropriate punctuation, and other nonverbal information as part of the data for analysis. I reviewed the interview transcripts to identify patterns and themes for comparison across interviews. The emerging themes addressed the research question. However, the researcher may find unanticipated insights into the research topic and go beyond the research question (Yates & Leggett, 2016). I expected the data to include unexpected themes.

I used Braun and Clarke's (2006) thematic analysis method. Researchers use thematic analysis to "identify, analyze, and report patterns" from their data set (Braun & Clarke, 2006, p. 79). The researcher must first code the data to create a list of themes from raw interview data. Two types of codes are (a) descriptive codes, the use of descriptive words to identify the group, and (b) NVivo codes, the use of the participants' actual words to identify the group (Babchuk, 2019; Castleberry & Nolen, 2018). NVivo codes were appropriate for this study. Coding is the process of dissembling or breaking the data into smaller parts to create groups (Castleberry & Nolen, 2018) to demonstrate meaning from the data (Babchuk, 2019; Roberts et al., 2019). The goal of coding is to summarize the data without losing the participants' original meaning (Clark & Vealé, 2018). In addition to highlighting sections of the transcript, I wrote a word or phrase in the page margin to summarize a key idea or concept.

I read the transcripts multiple times to enable coding, noted critical concepts from the participant's responses in the margins, and grouped the concepts into codes.

Researchers analyze verbal and nonverbal responses to derive meaning from the participants' answers (Renz et al., 2018). Researchers look for patterns (Clark & Vealé, 2018) and meaning (Belotto, 2018) amongst different codes, then summarize them as themes. During the theming process, researchers look for the obvious themes in the data and the expected ideas that are not present (Moser & Korstjens, 2018). I reviewed the codes and sorted them into themes represented by Kitson et al.'s (1998) PARIHS elements, including themes identified and representative of the PARIHS framework.

Reliability and Validity

Investigators and academics judge research on the criteria of reliability and validity. Researchers also assess the study's credibility, confirmability, and transferability when reviewing the reliability and validity. I met the requirements for reliability and validity by maintaining an interview protocol and documenting my decisions and thought processes in a reflective diary. Additionally, I kept a rigorous data management system, recorded and transcribed the interviews verbatim, and used member-checking to confirm the accuracy of the data.

Reliability

When a researcher can replicate a study and successfully produce similar results, the study's reliability increases (Tuval-Mashias, 2021). Unlike quantitative research, qualitative research does not have numerical variables for evaluators to recalculate to determine reliability. Readers can assess the study's reliability through a detailed description of the research process, including data analysis and theming, provided by the researcher (Raskind et al., 2019; Roberts et al., 2019). Member checking confirms

reliability when participants review and validate the data and interviewer's interpretation (Motulsky, 2021). I demonstrated study reliability by supplying a detailed description of the case, analysis, and conclusions, maintaining a reflective diary to document my thoughts and decisions during the research, conducting a member check by emailing the interview transcript to participants, and utilizing rigorous documentation.

To demonstrate dependability, researchers must show that their findings reflect the data collection and analysis, not their perceived outcomes (Korstjens & Moser, 2018). Researchers use an iterative data collection and analysis process in qualitative research (Babchuk, 2019; Belotto, 2018). Recording and verbatim transcription of interviews add to the data collection's trustworthiness and increase the reliability of the results (Coleman, 2021). Additionally, the researcher's documentation enables readers to follow how the researcher conducted the study to validate dependability (Amin et al., 2020). Researchers also use member checking to validate the data reflects the participants' experience (Amin, 2020). For this study, I transcribed the interview verbatim, reviewed the transcript multiple times to confirm the accuracy of the transcription and coding, sent the participants a copy of the transcript to validate the accuracy of the information during member checking, and maintained detailed research documentation.

Validity

Researchers accomplish validity within qualitative research by providing a detailed description of the study (Amin et al., 2020). Tuval-Mashiach (2021) stated that the achievement of similar results to original research determines whether a study can be replicated and validates the study's trustworthiness. Quintão et al. (2020) suggested

researchers conduct iterative data collection and analysis to ensure they capture all aspects of the phenomenon. By reaching a saturation point, the researcher has demonstrated that they have attained enough data points to do an in-depth analysis of the phenomenon and that continuing to collect additional data will not increase the quality of the results (Hayashi et al., 2021). I demonstrated validity by (a) following the interview protocol to conduct the interview, (b) verifying data accuracy through member checking, (c) using a reflective diary to control bias, (d) applying a consistent theming approach during data analysis, (e) starting the theming process as I conducted the interviews, and (f) clearly articulating when I reached data saturation.

Ensuring the credibility of the research is an element all researchers need to consider when designing and reporting study findings. Researchers demonstrate credibility when they correctly capture and then verify the accuracy of their representation of the participant's experiences in the study (Stahl & King, 2020). Methods for correctly capturing participants' experiences include (a) spending a prolonged time with the participants, (b) conducting long-term observations, (c) asking participants to validate the data through member checking, (d) talking through the data collection with peers in a debriefing process, and (e) maintaining a reflective diary throughout the research process (Korstjens & Moser, 2018). Providing a detailed outline of biases, the potential impact on the study, and any mitigation actions to avoid bias increase the credibility of the research (Johnson et al., 2020). Researchers use a reflective diary to demonstrate credibility by writing about their biases and thoughts; and how these influence the research design and outcomes of the study (Admin, 2020). I demonstrated

credibility by transcribing the interviews verbatim as part of the research documentation, maintaining a reflective diary, and utilizing a documentation database to track research articles.

Transferability is a term that reflects a researcher's ability to apply the study findings to another environment, context, or place (Stahl & King, 2020). Transferability is when the reader can conduct the study in a new context or setting (Tuval-Mashiach, 2021). Clearly articulating the research subject, context, and process enables readers to evaluate how transferable the research findings are (Korstjens & Moser, 2018). The reader of the research study will determine if the results are transferrable to another environment (Korstjens & Moser, 2018; Makel et al., 2022). Therefore, the researcher's responsibility is to contextualize the study by providing a detailed description of the research process, analysis, and results (Stahl & King, 2020; Tuval-Mashiach, 2021). Replicating a study in a different setting or context can add to the researcher's knowledge about the phenomenon (Makel et al., 2022). I demonstrated transferability by maintaining the reflective log to provide a detailed description of the phenomenon, the data collection, and the analysis processes.

Confirmability is the researcher's ability to remain neutral while collecting and analyzing the data so that the results reflect the data's findings, not the researcher's will (Tuval-Mashiach, 2021). Confirmability also requires the researcher to show that their inquiry results from analyzing the participants' experiences, not the researcher's experiences (Korstjens & Moser, 2018). Researchers' methods to show confirmability include audit trails and reflective diaries (Korstjens & Moser, 2018). I demonstrated

confirmability by maintaining a detailed documentation management system and reflective journal throughout the research process.

Achieving data saturation is another method of demonstrating validity. Researchers reach saturation when they fail to identify new codes or themes in the data (Guest et al., 2020). The researcher has derived significant responses from the participants to inform the research question. Weller et al. (2018) argued that data saturation correlates with obtaining the participants' most salient pieces of information. I achieved data saturation when I could not find new codes in the interview transcripts and supporting documentation.

Transition and Summary

I conducted a qualitative interpretative description research study. I completed interviews with operations managers from the US and Canada, who have sustained implementation of a practice change, and used the PARIHS framework to theme the data. To meet the criteria for reliability and validity, I used an interview protocol, documented my thought processes in a reflective diary, maintained a rigorous data management system, and recorded and transcribed interviews verbatim.

Section 3 includes three areas of focus. First, I summarize the research findings in terms of the PARIHS framework. Second, I outline an analysis of how results relate to the business environment, potential business actions, and an assessment of the impacts of social change. Last, I assess the research study, including recommendations for future research and reflections on the study.

Section 3: Application to Professional Practice and Implications for Change

Introduction

The purpose of this qualitative interpretative description study was to explore strategies healthcare leaders use to sustain practice changes to meet the increasing demands for quality care. Eight healthcare leaders in Canada and the United States participated in this study. The leaders came from various clinical settings and were managers who led the sustainment of a practice change sustained for one year or more. The study consisted of interviews with each participant. Seven of the eight participants member-checked the interview summaries for accuracy. Data analysis consisted of thematic analysis and mapping themes in the PARIHS framework.

The mapping of the themes presented a challenge because Kitson et al. developed the PARIHS framework to guide the implementation of practice change and not to examine the sustainment of change. I identified four key themes: staff buy-in, staff feedback, roles to support sustainment, and flexibility to change. I provide details regarding themes, the conceptual framework, and the importance these strategies have to the profession. Additionally, this section includes an outline of impacts on social change, recommendations for action and future research, and my reflections on conducting this investigation.

Presentation of the Findings

The research question is: What strategies do healthcare leaders use to sustain practice changes to meet increasing demands for quality care? Healthcare managers from Canada and the United States participated in the study. Participants worked in various

acute care and community clinical settings. Managers shared their experiences involving strategies in which they sustained a practice change for one year or more. In this section, I share the results of the data analysis and outline four themes: staff buy-in, staff feedback, roles to support sustainment, and flexibility to change.

Theme 1: Staff Buy-In

Six of eight interviewees spoke of the importance of obtaining staff buy-in to sustain a practice change. These findings aligned with Djukic et al. (2021), who said that culture, including frontline staff's attitudes regarding innovation, could be used to gauge the manager's ability to implement the practice change. Five participants stressed the importance of securing staff buy-in and suggested that improvements are not sustainable without them. P1 said, "The strongest correlation is staff seeing value in the initiative." P3 said, "You have to have buy-in from them as well because it's got to make clinical sense." P6 said, "If the staff are not all in, they're not going to implement, and they are not going to sustain anything." Staff culture that supports change is an indicator for successfully implementing and sustaining practice change.

Clinicians' previous experience can influence staff buy-in. The study findings further the research of Roohi et al. (2020), who said when assessing the value of a new practice, the middle and top-level managers in the Iranian Medical Sciences Universities used their previous experience and that of their colleagues to ground their assessment versus external evidence. P2 said, "you can provide all that evidence, but at the end of the day, a lot of people say who cares. I have been a nurse for 30 years, and I have never made a medication error." This statement supports Bjurling-Sjöberg et al. (2021), who

said staff with more extensive clinical experience were less likely to see value in using evidence to inform a practice change.

Additionally, three participants suggested strategies to engage the staff and obtain buy-in. P2 said, “Use the 80/20 percent rule to get buy-in.” P6 said, “Regular engagement with the staff because it is so important to have the buy-in” is an essential activity for managers. P7 said, “I solicit from my employees their ideas because we all come from different backgrounds, and we all have different ideas that can help. It also helps with the buy-in.” These findings align with Geerligs et al. (2018), who said staff mindset regarding implementation influences their overall participation efforts, and a lack of buy-in affects the success of a change intervention. Managers must understand clinicians’ previous experience to gain buy-in for new practice changes.

Theme 2: Staff Feedback

Six participants spoke about the importance of obtaining staff feedback to assess and maintain the sustainment of a practice change. Speaking to staff was identified as a mechanism to understand what is and is not working in the new practice change. P1 said, “talk to the staff to find out why.”. P3 said, “You want to see how it is working on the ground, so you want to keep the dialogue going on the group.” P8 said, “My role is to listen to them and let them really direct the change. Let them tell what’s working and what’s not working.” Song et al. (2022) said when leaders in a long-term care home worked with their care aids to adapt a safer care program for the elderly to meet the needs of their clinical setting, the intervention was more likely to be sustained. These findings build on Dahl et al. (2018) study, which said staff’s ability to remain engaged in using a

new restraint practice shifted daily depending on whether their interaction with the elderly in the long-term care home was positive or negative. Positive patient experiences increased engagement in implementing the change (Dahl et al., 2018).

Conversely, lack of staff feedback was recognized as an indicator that the leader had achieved sustainment of the practice change. P2 said, "when we go around, people are adopting it, and we are not hearing there is any more you need to look at" then leaders know the practice has been imbedded into the clinicians' practice. Continued engagement and feedback to identify and remove barriers are essential to sustainment.

Theme 3: Roles to Support Sustainment

Seven participants identified internal and external roles as facilitators to sustainment. Four interviewees considered champions to be critical facilitators of sustainment. P1 stated that their strategy for engaging facilitators included asking volunteers to be champions and responsible for "audits and data reported back monthly." P4 said, "Champions are going to be the ones that know better, bring information back and forth. They are super important to sustainment." P5 said, "You'll need clinical experts, typically the champions, to speak the language of the people implementing the change." Two participants also identified clinical nurse leaders as critical change agents. Clinical nurse leaders represent the role of unit champions. P5 said the clinical nurse leaders, "serves as the project management for all quality improvement. The clinical nurse leader is on the unit; she is still a staff nurse." P8 said, "Each one of our inpatient units have a clinical nurse leader that's attached to their unit. They are really able to be at the micro level to help drive the change."

Diffin et al. (2018) said practice change implementations were unsuccessful if an internal facilitator did not support the staff. Lachance et al. (2019) said facilitators need to contextualize their approaches to the local program or facility context. P5 said clinical nurse leaders' knowledge of the unit benefits the sustainment of practice change as they can apply their knowledge of the unit to the strategies they use to engage the staff. Cowie et al. (2020) said unit champions are critical in engaging staff to sustain change. Participants also identified numerous other facilitation roles, including project managers, organizational consultants, and quality and safety staff.

However, some managers did not use or have access to external or internal facilitators to sustain practice changes. P2 said, "I am now basically a process, quality, and change management lead for all the projects." Wijk et al. (2019) said that patient-focused managers engage staff in the implementation process and work through challenging situations as strong facilitators for practice change initiatives. However, the scope of the initiative makes a difference if the manager can lead the change. P3 said,

> It makes a bit of difference if the practice change is within our scope of knowledge. Where we can do it responsibly, then we try. If we come to a point where it's beyond our scope, then we look for the appropriate external consultant.

Conversely, P5 said that many facilitators and project support that participate during implementation diminish during the sustainment phase. P5 said, "As the group gets going, things will recede, and those resources will be allocated to whatever is next." Song et al. (2022) stated that a lack of leadership during sustainment could lead to staff struggling to maintain the adoption of change. Concerns about the lack of leaders

continued when the same participant emphasized the manager's role. P5 said, “It is the managers who will keep people focused on what they need to do and hold people accountable. They are the ones that the workers trust.” The importance of the manager role aligned with Moullin et al.’s (2018) findings that there is a requirement for leadership presence in all implementation phases for sustainment success.

Theme 4: Flexibility to Change

All eight participants spoke about the importance of being flexible and willing to make adjustments during sustainment. P3 said, **“**It's also the attitudes that you bring to practice that it's ever-evolving. And you are not setting anything in stone, necessarily.” P7 said, “You can't be fixed. You have to be flexible. You are bringing an ethic of continuous quality improvement.” Flexibility to change strategies aligns with Diffin et al.’s (2018) findings that an essential factor in successful implementations is using improvement methods such as Plan, Do, Study, Act (PDSA) to trial, obtain feedback from staff, and course correct as needed. Additional alignment occurs with Lennox et al.’s (2018) findings that iterative adjustments are required to meet the needs of the users and the implementation environment. Lastly, the study findings further Berta et al.’s (2019) result that leaders must find a balance between conforming to the best practice and adapting the practice to meet the needs of the patients and care setting to obtain sustainment. The findings indicate that a leader's flexibility and willingness to adapt are key attributes.

The continuous improvement theme continued when asked what the participants would do if sustainment weren’t working. P4 said, “Sometimes you have to regroup,

rethink, reinvent, be an innovator, be a ring leader." P5 said, "If what we implemented is not working, we need to go back and look at it." P7 said, "You are going to have some failures, and that's fine. A mistake is how you make things better." When your sustainment strategies don't work, P8 said, "You have to start from ground zero and start all over." These findings further Melder et al.'s (2022) assertion that healthcare is a complex system that will test a leader's perseverance to sustain change.

Relevance to the Conceptual Framework

There are three main categories within Kitson et al.'s PARIHS framework: evidence, context, and facilitation. The findings of this study align with the PARIHS framework categories except for the evidence category. Kitson et al. defined evidence as the "research, clinical experience, and patient preferences" used to inform leadership and staff of the need for change (p. 150). Researchers use evidence to present to stakeholders to ground the practice change (Strong et al., 2020). However, the category of evidence did not rank as a primary theme within the study. Five out of eight participants did identify learning from other hospitals and clinician or colleague experience strategies for sustainment. These findings aligned with Ruest et al. (2022) and Djukic et al. (2021). Ruest et al. (2022) found variable use of the evidence category with emphasis on clinical experience and local knowledge but limited use of scientific research. Djukic et al. (2021) found a heavier reliance on clinical experience. Providing evidence to staff to support why the practice needs to change is essential but was not the primary factor for study participants.

The lower ranking in this category conflicts with Kitson et al.'s premise that leaders achieve implementation success by maintaining a balance between evidence, context, and facilitation. Researchers rank the PARIHS framework subcategories from low to high depending on the intervention implemented (Barakat-Johnson et al., 2019). The finding of this study indicates a need for future research to understand what evidence is most beneficial to staff and how leaders can achieve a higher ranking when evaluating their strategies against the subcategories of Kitson et al.'s PARIHS framework.

The context category is the internal or external factors that influence the success of sustaining the implementation of change (Ruest et al., 2022). The context category includes culture, leadership, and measurement (Kitson et al., 1998). The highest number of themes identified in the data fell under the subcategory of leadership. P1 stated it is "very important to sustain change to see how what you are trying to do aligns with the organizational mission and vision." The results further the work of Song et al.'s (2022) study results that consistent leader support is critical to sustaining change. Diversion of a leader's attention away from the practice change limits the staff's ability to maintain momentum (Song et al., 2022). Alignment also occurs with Yue et al. (2022) stating that implementing a maternity intervention in China would not be possible without leadership support. The leadership findings in this study align with these authors' research and support the assumption that researchers can use Kitson et al.'s PARIHS framework to understand sustainment.

I sorted the elements of staff buy-in, and staff feedback under culture, aligning with the PARIHS framework's contextual factors. The staff buy-in theme aligns with

clinical experience in the PARIHS framework. The need for staff to understand the value of implementing a change aligns with Kitson et al.'s, who said externally validated best practices will not implement successfully if the clinicians do not buy into the need for change.

While staff feedback fell within the context category and leadership subcategory, there is a relationship between staff engagement and the facilitation category. The role of the facilitator in an intervention is to engage with staff and take action as required throughout the process (Tucker et al., 2021), including obtaining staff feedback. This finding supports Kitson et al., who said implementation success is a product of the three categories of evidence, context, and facilitation working together.

The facilitation category represents the individual facilitators and the processes or approaches they use to support staff (Harvey et al., 2018). Facilitators can be internal or external to the organization and are responsible for guiding and supporting the team through implementation (Hammond et al., 2020). I categorized the theme of roles to support sustainment and flexibility under role, a subcategory under facilitation in the PARIHS framework.

Applications to Professional Practice

This study has contributed to the field of sustainment research in two ways. I have confirmed that researchers can use the PARIHS framework to examine sustainment strategies. The study findings also contributed to learning the strategies managers used to sustain practice change successfully.

The study adds to the limited literature regarding strategies to sustain evidence-based practice change. Shelton et al. (2018) noted that sustainment research is increasing, which has been the experience of this researcher since starting the doctoral study in 2016. The findings of this study demonstrate that researchers can utilize an implementation framework to map the constructs of practice change sustainment.

This study also contributes to understanding what strategies managers can use to sustain practice change successfully. Healthcare leaders struggle to embed practice changes into everyday work once implementation is complete (Cowie et al., 2020; Lennox et al., 2018). There is no standard method for implementing and sustaining change in the complex and multi-dimensional environment of healthcare (Geerligs et al., 2018). Yet the sustainment of evidence-based practice is critical to improving health outcomes for patients. The implications of not sustaining practice change are the patients do not benefit from the best practice, and the organizations waste time, money, and efforts invested in implementing the change (Berta et al., 2019). Effective change leaders will demonstrate strong leadership, including engaging staff to obtain buy-in to the improvement process, feedback on what is working and what is not, and being flexible to make adjustments as required. Additionally, healthcare managers will develop a coalition of facilitators, including champions and unit leaders, to support the sustainment process. These strategies may provide healthcare leaders with techniques to sustain practice change.

Implications for Social Change

The implications for social change are that the changing population demographics are increasing demands on the healthcare system that require change (Jean et al., 2019). The need for healthcare reform is mainly from the baby-boomer generation, who are aging and living longer (Mudge et al., 2021). Healthcare leaders anticipate the aging population will continue to increase healthcare demands (Colombier, 2018). Verma et al. (2018) identified that practice improvements within the COPD population would not only benefit from the interventions but also freeing access to bed capacity, surgical time, and medical services to aid thousands of other chronically ill patients. Sustaining practice change is critical to enable healthcare leaders to meet the demands for care, maximize human resources, provide optimal care, and maintain balanced budgets (Jean et al., 2019; Lee et al., 2019; Melnyk et al., 2018).

Recommendations for Action

Healthcare managers have an opportunity to utilize organizational structures such as governance committees and corporate visions or values to structure the sustainment strategies to support staff. Within those structures, continuous engagement with staff through formal and informal meetings or huddles provides opportunities to look to their team P6 said, “get feedback from the folks that are boots on the ground that are doing the direct care.” The leader can then take the feedback to P3 said, “be flexible in light of new information. So you are always looking for this best decision with the best information we have at this time”. Finally, P8 said, “keep in mind that making change within a system can take some time.”; P4 said, “everything that we do in reality is an experiment”; and

sometimes your sustainment strategies don't work P8 said, "you have to start from ground zero and start all over."

Upon completing this doctoral study, I will email the participants a PowerPoint presentation outlining the research findings. I may also share the PowerPoint with some health organizations, including my health organization. A research article may be written and submitted to a peer-reviewed journal for publication in the near future.

Recommendations for Further Research

Due to the limitations of this study, a deep dive into a specific practice change or organization was not possible. This research was a qualitative interpretative descriptive study, which means that participants came from different clinical settings across North America. Additionally, the interviewees shared their experiences sustaining various practice changes; therefore, the factors from the practice change that may have influenced the sustainment strategies were not within the scope of this study. An opportunity for future research would be to conduct a similar study using a case study methodology in one organization. Researchers use a case study method to explore a specific event or phenomenon (Alpi & Evans, 2019). Identifying the strategies managers use to sustain practice change within one organization would provide an opportunity to explore the influence of internal and external context more deeply. Additionally, studying one practice change intervention across one or more organizations would enable researchers to examine how managers contextualize the sustainment strategies for the same intervention. These two potential research studies would add to the growing knowledge about practice sustainment.

Reflections

Asking participants to answer questions related to the sustainment of practice change initially proved challenging as participants had difficulty distinguishing between implementation and sustain. Participants initially responded by referencing implementation strategies in their responses, and most needed probing questions to reframe their answers to focus on the sustainment phase. Likewise, using an implementation framework proved challenging to apply Kitson et al.'s examples and definitions to a sustainment phase. However, these concerns provided an excellent opportunity for me to challenge my thinking and biases.

I have extensive experience implementing practice change with mixed results sustaining the change. I came into this study with ideas about what would work to sustain change and a general sense that sustainment in healthcare doesn't often work. Some of the participants' responses mirrored my experience regarding the challenges they encountered with sustainment. However, when probed to ask what they did to mitigate the barrier or, for example, what they had successfully done in the past, all interviewees were able to provide practical strategies. In some cases, I found myself judging some approaches based on my own experience. For example, how often a manager checked in with their staff didn't feel frequent enough to me or not using change management or process improvement method appeared to be a gap. Using my reflective journal helped me identify what I found unexpected and what I thought about it. It enabled me to remove my judgment to acknowledge that this was the participant's experience. I found this to be a challenging but excellent learning experience.

Conclusion

In this qualitative interpretative descriptive study, eight healthcare managers shared their experiences sustaining practice change, including providing strong leadership, obtaining staff buy-in, engaging staff for their feedback during sustainment, being flexible enough to make continuous adjustments, and maximizing the use of champions and unit leadership roles. While healthcare is becoming increasingly complex with more demands for cost-effective, quality care, healthcare leaders have access to a growing amount of evidence-based practice (Bucknall & Hitch, 2018). Identifying effective strategies to sustain practice change initiatives will aid healthcare managers in meeting demands for quality care.

References

Aarons, G. A., Hurlburt, M., & Horwitz, S. M. (2011). Advancing a conceptual model of evidence-based practice implementation in public service sectors. *Administration and Policy in Mental Health and Mental Health Services Research, 38*(1), 4-23. https://doi.org/10.1007/s10488-010-0327-7

Åkesson, K. S., Sundén, A., Hansson, E. E., & Stigmar, K. (2021). Physiotherapists' experiences of osteoarthritis guidelines in primary healthcare – An interview study. *BMC Family Practice, 22*(259), 1-9. https://doi.org/10.1186/s12875-021-01611-9

Alagoz, E., Chih, M.-Y., Hitchcock, M., Brown, R., & Quanbeck, A. (2018). The use of external change agents to promote quality improvement and organizational change in healthcare organizations: A systematic review. *BMC Health Service Research, 18*(42), 1-13. https://doi.org/10.1186/s12913-018-2856-9

Almasri, B. M., & McDonald, D. D. (2021). Philosophical assumptions used in research on barriers for effective cancer pain management: A scoping review. *Pain Management Nursing, 22*(5), 634-644. https://doi.org/10.1016/j.pmn.2021.04.006

Alpi, K. M., & Evans, J. J. (2019). Distinguishing case study as a research method from case report as a publication type. *Journal of Medical Library Association, 107*(1), 1-5. https://doi.org/10.5195/jmla.2019.615

Ames, H., Glenton, C., & Lewin, S. (2019). Purposive sampling in a qualitative evidence synthesis: A worked example from a synthesis on parental perceptions of

vaccination communication. *BMC Medical Research Methodology, 19*(26), 1-9. https://doi.org/10.1186/s12874-019-0665-4

Amin, M. E. K., Nørgaard, L. S., Cavaco, A. M., Witry, M. J., Hillman, L., Cernasev, A., & Desselle, S. P. (2020). Establishing trustworthiness and authenticity in qualitative pharmacy research. *Research in Social and Administrative Pharmacy, 16*(10), 1472-1482. https://doi.org/10.1016/j.sapharm.2020.02.005

Arigo, D., Pagoto, S., Carter-Harris, L., Lillie, S. E., & Nebeker, C. (2018). Using social media for health research: Methodological and ethical considerations for recruitment and intervention delivery. *Digital Health, 4*, 1-5. https://doi.org/10.1177/2055207618771757

Aspers, P., & Corte, U. (2019). What is qualitative research. *Qualitative Sociology, 42*(2), 139-160. https://doi.org/10.1007/s11133-019-9413-7

Ayre, J., & McCaffrey, K. J. (2022). Research note: Thematic analysis in qualitative research. *Journal of Physiotherapy, 68*(1), 76-79. https://doi.org/10.1016/j.jphys.2021.11.002

Babchuk, W. A. (2019). Fundamentals of qualitative analysis in family medicine. *Family Medicine and Community Health, 7*(2), 1-10. https://doi.org/10.1136/fmch-2018-000040

Bahtsevani, C., & Idvall, E. (2016). To assess prerequisites before an implementation strategy in an orthopaedic department in Sweden. *Orthopaedic Nursing, 35*(2), 100-107. https://doi.org/10.1097/NOR.0000000000000225

Baloh, J., Zhu, X., & Ward, M. M. (2021). What influences sustainment and nonsustainment of facilitation activities in implementation? Analysis of organizational factors in hospitals implementing TeamSTEPPS. *Medical Care Research and Review, 78*(2), 146-156. https://doi.org/10.1177/1077558719848267

Barakat-Johnson, M., Lai, M., Wand, T., Coyer, F., & White, K. (2019). Systemwide practice change program to combat hospital-acquired pressure injuries. *Journal of Nursing Care Quality, 35*(1), 51-57. https://doi.org/10.1097/NCQ.0000000000000395

Becker, J. D., & Schad, M. (2022). Understanding the lived experience of online learners: Towards a framework for phenomenological research on distance education. *Online Learning Journal, 26*(2), 296-322. https://olj.onlinelearningconsortium.org/index.php/olj/article/view/2642

Bergström, A., Ehrenberg, A., Eldh, A. C., Graham, I. D., Gustafsson, K., Harvey, G., Hunter, S., Kitson, A., Rycroft-Malone, J., & Wallin, L. (2020). The use of the PARIHS framework in implementation research and practice – A citation analysis of the literature. *Implementation Science, 15*(68), 1-51. https://doi.org/10.1186/s13012-020-01003-0

Berta, W. B., Wagg, A., Cranley, L., Doupe, M. B., Ginsburg, L., Hoben, M., MaEachern, L., Chamberlain, S., Clement, F., Easterbrook, A., Keefe, J. M., Knopp-Sihota, J., Rappon, T., Reid, C., Song, Y., & Estabrooks, C. (2019). Sustainment, sustainability, and spread study (SSaSSy): Protocol for a study of

factors that contribute to the sustainment, sustainability, and spread of practice changes introduced through an evidence-based quality-improvement intervention in Canadian nursing homes. *Implementation Science, 14*(109), 1-10. https://doi.org/10.1186/s13012-019-0959-2

Belotto, M. J. (2018). Data analysis methods for qualitative research: Managing the challenges of coding, interrater reliability, and thematic analysis. *The Qualitative Report, 23*(11), 2622-2633. http://doi.org/10.46743/2160-3715/2018.3492

Birken, S. A., Haines, E. R., Hwang, S., Chambers, D. A., Bunger, A. C., & Nilsen, P. (2020). Advancing understanding and identifying strategies for sustaining evidence-based practices: A review of reviews. *Implementation Science, 15*(88), 1-13. https://doi.org/10.1186/s13012-020-01040-9

Biros, M. (2018). Capacity, vulnerability, and informed consent for research. *Journal of Law, Medicine, & Ethics, 46*(1), 72-78. https://doi.org/10.1177/1073110518766021

Bjurling-Sjöberg, P., Pöder, U., Jansson, I., Wadensten, B., & Nordgren, L. (2021). Action research improved general prerequisites for evidence-based practice. *Heliyon, 7*(4), 1-8. Article e06814. https://doi.org/10.1016/j.heliyon.2021.e06814

Blaikie, N. (2018). Confounding issues related to determining sample size in qualitative research. *International Journal of Social Research Methodology, 21*(5), 635-641. https://doi.org/10.1080/13645579.2018.1454644

Bloomfield, J., & Fisher, M. J. (2019). Quantitative research design. *Journal of the Australasian Rehabilitation Nurses' Association, 22*(2), 27-30. https://doi.org/10.33235/jarna.22.2.27-30

Bonnice, B. (2019). A nursing leadership challenge: Making the integration of professional practice standards into nursing operations a reality. *Nurse Leader, 17*(3), 207-214. https://doi.org/10.1016/j.mnl.2019.03.003

Braithwaite, J., Churruca, K., Long, J. C., Ellis, L. A., & Herkes, J. (2018). When complexity science meets implementation science: A theoretical and empirical analysis of systems change. *BMC Medicine, 16*(63), 1-14. https://doi.org/10.1186/s12916-018-1057-z

Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101. https://doi.org/10.1191/1478088706qp063oa

British Columbia Ministry of Health (2020). 2022/23-2024/25 Service Plan. Retrieved from https://www.bcbudget.gov.bc.ca/2022/sp/pdf/ministry/hlth.pdf

Bucknall, T., & Hitch, D. (2018). Connections, communication and collaboration in healthcare's complex adaptive systems. Comments on "Using complexity and network concepts to inform healthcare knowledge translation." *International Journal of Health Policy and Management, 7*(6), 556-559. https://doi.org/10.15171/ijhpm.2017.138

Busetto, L., Wick, W., & Gumbinger, C. (2020). How to use and assess qualitative research method. *Neurological Research and Practice, 2*(14), 1-10. https://doi.org/10.1186/s42466-020-00059-z

Cashwell, E. J. (2021). Recruitment and data collection in the 21st century: Implications for grounded theory. *The Grounded Theory Review, 20*(2), 80-89. http://groundedtheoryreview.com/2022/02/14/recruitment-and-data-collection-in-the-21st-century-implications-for-grounded-theory/

Castleberry, A., & Nolen, A. (2018). Thematic analysis of qualitative research data: Is it as easy as it sounds? *Currents in Pharmacy Teaching and Learning, 10*(6), 807-815. https://doi.org/10.1016/j.cptl.2018.03.019

Chambers, D. A., Glasgow, R. E., & Stange, K. C. (2013). The dynamic sustainability framework: addressing the paradox of sustainment amid ongoing change. *Implementation Science, 8*(117), 1-11. https://doi.org/10.1186/1748-5908-8-117

Clark, K. R., & Vealé, B. L. (2018). Strategies to enhance data collection and analysis in qualitative research. *Radiologic Technology, 89*(5), 482CT-485CT. Retrieved from https://www.asrt.org/main/news-publications/publications

Coleman, P. (2021). Validity and reliability within qualitative research in the caring sciences. *International Journal of Caring Sciences, 4*(3), 2041-2045. http://www.internationaljournalofcaringsciences.org/docs/54_goleman_special_14_3.pdf

Colombier, C. (2018). Population aging in healthcare – a minor issue? Evidence from Switzerland. *Applied Economics, 50*(15), 1746-1760. https://doi.org/10.1080/00036846.2017.1374538

Coughlin, D., Nordman-Oliveira, S. E., Schlaak, M., & Ford, J. H., II. (2019). Falls prevention process in assisted living communities. *Journal of Applied Gerontology, 38*(6), 805-824. https://doi.org/10.1177/0733464817748776

Cowie, J., Nicoll, A., Dimova, E. D., Campbell, P., & Duncan, E. A. (2020). The barriers and facilitators influencing the sustainability of hospital-based interventions: A systematic review. *BMC Health Services Research, 20*(588), 1-27. https://doi.org/10.1186/s12913-020-05434-9

Crowe, C., & Manley, K. (2019). Assessing contextual readiness: The first step towards maternity transformation. *International Practice Development Journal, 9*(2), 1-20. https://doi.org/10.19043/ipdj.92.006

Dahl, H., Dewing, J., Mekki, T. E., Håland, A., & Øye, C. (2018). Facilitation of a workplace learning intervention in a fluctuating context: An ethnographic participatory research project in a nursing home in Norway. *International Practice Development Journal, 8*(2), 1-17. https://doi.org/10.19043/ipdj.82.004

D'Ambrosio, J. G., Faul, A. C., Fields, M., & Cotton, S. G. (2019). Baby boomer long-term services and supports expectations. *The International Journal of Health, Wellness, and Society, 9(*3), 13-25. https://doi.org/10.18848/2156-8960/CGP/v09i03/13-25

Damschroder, L. J., Aron, D. C., Keith, R. E., Kirsh, S. R., Alexander, J. A., & Lowery, J. C. (2009). Fostering implementation of health services research findings into practice: A consolidated framework for advancing implementation science. *Implementation Science, 4*(50), 1-15. https://doi.org/10.1186/1748-5908-4-50

Dearing, J. W., & Cox, J. G. (2018). Diffusion of innovations theory, principles, and practice. *Health Affairs, 37*(2), 183-190. https://doi.org/10.1377/hlthaff.2017.1104

Dewasiri, N. J., Weerakoon, Y. K. B., & Azeez, A. A. (2018). Mixed methods in finance research: The rationale and research design. *International Journal of Qualitative Research, 17*(1), 1-13. https://doi.org/10.1177/1609406918801730

Djukic, M., Jun, J., & Fletcher, J. (2021). An examination of the factors associated with implementation of evidence-based management practice for improving nursing work environment. *Worldviews on Evidence-based nursing, 18*(2), 129-137. https://doi.org/10.1111/wvn.12497

Doherty, E., Kingsland, M., Elliott, E. J., Tully, B., Wolfenden, L., Dunlop, A., Symonds, I., Attia, J., Ward, S., Hunter, M., Azzopardi, C., Rissel, C., Gillham, K., Tsang, T. W., Reeves, P., & Wiggers, J. (2022). Practice change intervention to improve antenatal care addressing alcohol consumption during pregnancy: A randomized stepped-wedge controlled trial. *BMC Pregnancy and Childbirth, 22*(345), 1-17. https://bmcpregnancychildbirth.biomedcentral.com/track/pdf/10.1186/s12884-022-04646-7.pdf

Doyle, L., McCabe, C., Keogh, B., Brady, A., & McCann, M. (2020). An overview of the qualitative description design within nursing research. *Journal of Research in Nursing*, *25*(2), 443-455. http://doi.org/10.1177/1744987119880234

Dryden-Palmer, K. D., Parshuram, C. S., & Berta, W. B. (2020). Context, complexity and process in the implementation of evidence-based innovation: A realist informed review. *BMC Health Services Research, 20*(81), 1-15. https://doi.org/10.1186/s12913-020-4935-y

Diffin, J., Ewing, G., Harvey, G., & Grande, G. (2018). Facilitating successful implementation of a person-centred intervention to support family carers within palliative care: A qualitative study of the carer support needs assessment tool (CSNAT) intervention. *BMC Palliative Care, 17*(129), 1-11. https://doi.org/10.1186/s12904-018-0382-5

Edwards, J. (2020). The peaceful coexistence of ethics and quantitative research. *Journal of Business Ethics, 167*(1), 31-40 https://doi.org/10.1007/s10551-019-04197-6

Ehrhart, M. G., Torres, E. M., Green, A. E., Trott, E. M., Willging, C. E., Moullin, J. C., & Aarons, G. A. (2018). Leading for the long haul: a mixed-method evaluation of the sustainment leadership scale (SLS). *Implementation Science, 13*(17), 1-11. https://doi.org/10.1186/s13012-018-0710-4

Esmaeilzadeh, P. (2022). Benefits and concerns associated with blockchain-based health information exchange (HIE): A qualitative study from physicians' perspective. *BMC Medical Informatics and Decision Making, 22*(80), 1-18. https://doi.org/10.1186/s12911-022-01815-8

Flaherty, H. B., Bornheimer, L. A., Hamovitch, E., Garay, E., Mini de Zitella, M. L., Acri, M. C., & Mckay, M. (2021). Examining organizational factors supporting the adoption and use of evidence-based interventions. *Community Mental Health Journal, 57*(6), 1187-1194. https://doi.org/10.1007/s10597-020-00751-z

Fleiszer, A. R., Semenic, S. E., Ritchie, J. A., Richer, M.-C., & Denis, J.-L. (2015a). An organizational perspective on the long-term sustainability of a nursing best practice guidelines program: A case study. *BMC Health Services Research, 15*(535), 1-16. https://doi.org/10.1186/s12913-015-1192-6

Fleiszer, A. R., Semenic, S. E., Ritchie, J. A., Richer, M.-C., & Denis, J.-L. (2015b). The sustainability of healthcare innovations: A concept analysis. *The Journal of Advanced Nursing, 71*(7), 1484-1498. https://doi.org/10.1111/jan.12633

Fleiszer, A. R., Semenic, S. E., Ritchie, J. A., Richer, M.-C., & Denis, J.-L. (2016a). A unit-level perspective on the long-term sustainability of a nursing best practice guideline program: An embedded multiple case study. *International Journal of Nursing Studies, 53*, 204-218. https://doi.org/10.1016/j.ijnurstu.2015.09.004

Fleiszer, A. R., Semenic, S. E., Ritchie, J. A., Richer, M.-C., & Denis, J.-L. (2016b). Nursing unit leaders' influence on the long-term sustainability of evidence-based practice improvements. *Journal of Nursing Management, 24*(3), 309-318. https://doi.org/10.1111/jonm.12320

Fox, A., Gardner, G., & Osborne, S. (2015). A theoretical framework to support research of health service innovation. *Health Service Research, 39*(1), 70-75. https://doi.org/10.1071/AH14031

Gately, M. E., Quach, E. D., Shirk, S. D., & Trudeau, S. A. (2022). Understanding variation in adoption of video telehealth and implementation for healthcare systems. *Medical Research Archives, 10*(5), 1-14. https://doi.org/10.18103/mra.v10i5.2751

Geddes, A., Parker, C., & Scott, S. (2018). When the snowball fails to roll and the use of 'horizontal' networking in qualitative social research. *International Journal of Social Research Methodology*. *21*(3), 347-358. https://doi.org/10.1080/13645579.2017.1406219

Geerligs, L., Rankin, N. M., Shepherd, H. L., & Butow, P. (2018). Hospital-based interventions: A systematic review of staff-reported barriers and facilitators to implementation processes. *Implementation Science, 13*(36), 1-17. https://doi.org/10.1186/s13012-018-0726-9

Guest, G., Namey, E., & Chen, M. (2020). A simple method to assess and report thematic saturation in qualitative research. *Plos One*, *15*(5), 1-17. https://doi.org/10.1371/journal.pone.0232076

Hailemariam, M., Bustos, T., Montgomery, B., Barajas, R., Evans, L. B., & Drahota, A. (2019). Evidence-based intervention sustainability strategies: A systematic review. *Implementation Science, 14*(57), 1-12. https://doi.org/10.1186/s13012-019-0910-6

Hammond, E. N., Brys, N., Kates, A., Musuuza, J. S., Haleem, A., Bentz, M. L., & Safdar, N. (2020). Nasal povidone-iodine implementation for preventing surgical

site infections: Perspectives from surgical nurses. *PLOS One,* Article e0242217. https://doi.org/10.1371/journal.pone.0242217

Harding, K., Lynch, L., Porter, J., & Taylor, N. F. (2016). Organisational benefits of a strong research culture in a health service: A systematic review. *Australian Health Review, 41*(1), 45-53. https://doi.org/10.1071/AH15180

Harvey, G. (2022). Context matters, so how do we get better at working with context in implementation research and practice? Comment on "Stakeholder perspectives of attributes and features of context relevant to knowledge translation in health settings: A multi-country analysis". *International Journal of Health Policy and Management,* 1-3. https://doi.org/10.34172/ijhpm.2022.7088

Harvey, G., Gifford, W., Cummings, G., Kelly, J., Kislov, R., Kitson, A., Pettersson, L., Wallin, L., Wilson, P., & Ehrenberg, A. (2019). Mobilising evidence to improve nursing practice: A qualitative study of leadership roles and processes in four countries. *International Journal of Nursing Studies, 90*, 21-30. https://doi.org/10.1016/j.ijnurstu.2018.09.017

Harvey, G., & Kitson, A. (2016). PARIHS revisited: From heuristic to integrated framework for the successful implementation of knowledge into practice. *Implementation Science, 11*(33), 1-13. https://doi.org/10.1186/s13012-016-0398-2

Harvey, G., Llewellyn, S., Maniatopoulos, G., Boyd, A., & Proctor, R. (2018). Facilitating the implementation of clinical technology in healthcare: What role does a national agency play? *BMC Health Services Research, 18*(347), 1-10. https://doi.org/10.1186/s12913-018-3176-9

Harwati, L. N. (2019). Ethnographic and case study approaches: Philosophical and methodological analysis. *International Journal of Education and Literacy Studies, 7*(2), 150-155. https://doi.org/10.7575/aiac.ijels.v.7n.2p.150

Hawk, K., McCormack, R., Edelman, J., Coupet, E., Jr., Toledo, N., Gauthier, P., Rotrosen, J., Chawarski, M., Martel, S., Owens, P., Pantalon, M. V., O'Connor, P., Whiteside, L. K., Cowan, E., Richardson, L. D., Lyons, M. S., Rothman, R., Marsch, L., Fiellin, D. A., & D'Onofrio, G. (2022). Perspectives about emergency department care enounters among adults with opioid use disorder. *JAMA Network Open, 5*(1), 1-12. https://doi.org/10.1001/jamanetworkopen.2021.44955

Hayashi, P., Jr., Abib, G., Hoppen, N., & Wolff, L. D. G. (2021). Processual validity in qualitative research in healthcare. *Inquiry: The Journal of Healthcare Organization, Provision, and Financing, 58*(1), 1-8. https://doi.org/10.1177/00469580211060750

Hebert, C. A., Hancock, K., & McConnell, E. S. (2018). Implementation of individualized music in long-term care: Application of the PARIHS framework. *Journal of Gerontological Nursing, 44*(8), 29-38. https://doi.org/10.3928/00989134-20180626-01

Hennink, M., & Kaiser, B. N. (2022). Sample size for saturation in qualitative research: A systematic review of empirical tests. *Social Science & Medicine, 292*, Article e114523. https://doi.org/10.1016/j.socscimed.2021.114523

Hølge-Hazelton, B., Bruun, L. Z., Slater, P., McCormack, B., Thomsen, T. G., Klassen, S. H., & Bucknall, T. (2019). Danish translation and adaption of the context

assessment index with implications for evidence-based practice. *Worldviews on Evidence-Based Nursing, 16*(3), 221-229. https://doi.org/10.1111/wvn.12347

Hong, J., & Francis, D.C. (2020). Unpacking complex phenomena through qualitative inquiry: The case of teacher identity research. *Education Psychologist, 55*(4), 208-219. http://doi.org/10.1080/00461520.2020.1783265

Jean, E., Guerra, S. S., Contandriopouls, D., Perroux, M., Kilpatrick K., & Zabalegui, A. (2019). Context and implementation of advanced nursing practice in two countries: An exploratory qualitative comparative study. *Nursing Outlook, 67*(4), 365-380. https://doi.org/10.1016/j.outlook.2019.02.002

Johnson, J. L., Adkins, D., & Chauvin, S. (2020). A review of the quality indicators of rigor in qualitative research. *American Journal of Pharmaceutical Education, 84*(1), 138-146. https://doi.org/10.5688/ajpe7120

Jordon, Z. (2018). Leveraging expertise: Partnerships for evidence-based practice. *International Journal of Evidence-Based Healthcare, 16*(1), 1-2. https://doi.org/10.1097/XEB.0000000000000133

Kalsy, M., Kelly, N., Meystre, S. M., Kim, Y., Bray, B. E., Bolton, D., Goldstein, M. K., & Garvin, J. H. (2020). Stakeholder engagement for a planned automated quality measure system. *Sage Open,* 1-13. https://doi.org/10.1177/2158244020919459

Karagiozis, N. (2018). The complexities of the researcher's role in qualitative researcher: The power of reflexivity. *The International Journal of Interdisciplinary Educational Studies, 13*(1), 19-31. https://doi.org/10.18848/2327-011X/CGP/v13i01/19-31

Kekeya, J. (2021). Qualitative case study research design: the commonalities and differences between collective, intrinsic and instrumental case studies. *Contemporary PNG Studies, 36,* 28-37. https://www.dwu.ac.pg/en/images/All_Attachements/Research%20Journals/vol_36/4._J.Lingawa.pdf

Keen, S., Lomeli-Rodriguez, M., & Joffe, H. (2022). From challenge to opportunity: Virtual qualitative research during Covid-19 and beyond. *International Journal of Qualitative Methods, 21*, 1-11. https://doi.org/10.1177/16094069221105075

Khalil, H., & Kynoch, K. (2021). Implementation of sustainable complex interventions in healthcare services: The triple C model. *BMC Health Services Research, 21*(143), 1-10. https://doi.org/10.1186/s12913-021-06115-x

Kirchherr, J., & Charles, K. (2018). Enhancing the sample diversity of snowball samples: Recommendations from a research project on anti-dam movements in Southeast Asia. *PLOS One,* (8), Article e0201710. https://doi.org/10.1371/journal.pone.0201710

Kitson, A. (2022). How and why context matters: A personal reflection. Comment on "Stakeholder perspectives of attributes and features of context relevant to knowledge translation in health settings: A multi-country analysis". *International Journal of Health Policy and Management, 11*(6), 1-2. https://doi.org/10.34172/ijhpm.2022.6782

Kitson, A., Brook, A., Harvey, G., Jordan, Z., Marshall, R., O'Shea, R., & Wilson, D. (2018). Using complexity and network concepts to inform healthcare knowledge

translation. *International Journal of Health Policy and Management, 7*(3), 231-243. https://doi.org/10.15171/ijhpm.2017.79

Kitson, A. L., & Harvey, G. (2016). Methods to succeed in effective knowledge translation in clinical practice. *Journal of Nursing Scholarship, 48*(3), 294-302. https://doi.org/10.1111/jnu.12206

Kitson, A. L., Harvey, G., & McCormack, B. (1998). Enabling the implementation of evidence-based practice: A conceptual framework. *Quality in Healthcare, 7*(3), 149-158. https://doi.org/10.1136/qshc.7.3.149

Konecki, K. T. (2019). Creative thinking in qualitative research and analysis. *Qualitative Sociology Review, 15*(3), 6-25. https://doi.org/10.18778/1733-8077.15.3.01

Kononowech, J., Hagedorn, H., Hall, C., Helfrich, C. D., Lambert-Kerzner, A. C., Miller, S. C., Sales, A. E., & Damschroder, L. (2021). Mapping the organizational readiness to change assessment to the Consolidated Framework for Implementation Research. *Implementation Science Communication, 2*(19), 1-6. https://doi.org/10.1186/s43058-021-00121-0

Korstjens, I., & Moser, A. (2018). Series: Practical guidance to qualitative research. Part 4: Trustworthiness and publishing. *European Journal of General Practice, 24*(1), 120-124. https://doi.org/10.1080/13814788.2017.1375092

Lachance, L., Watson, C., Blais, D., Ungar, M., Healey, G., Salaffie, M., Sundar, P., Kelly, L., & Lagace, M. C. (2019). Strengthening child and youth programs: A look at inter-organizational mentoring strategies. *Evaluation and Program Planning, 10*(76), 1-9. https://doi.org/10.1016/j.evalprogplan.2019.101679

Landes, S. J., Matthieu, M. M., McBain, S. A., & Ray, E. S. (2021). Challenges and potential solutions to implementing phone coaching in dialectical behavior therapy. *Cognitive and Behavioral Practice*, *28*(1), 66-76. https://doi.org/10.1016/j.cbpra.2019.10.005

Lee, E., Daugherty, J., & Hamelin, T. (2019). Reimagine healthcare leadership, challenges, and opportunities in the 21st century. *Journal of Perianesthesia Nursing*, *34*(1), 27-38. https://doi.org/10.1016/j.jopan.2017.11.007

Lengnick-Hall, R., Willging, C. E., Hurlburt, M. S., & Aarons, G. A. (2020). Incorporators, early investors, and learners: A longitudinal study of organizational adaption during EBP implementation and sustainment. *Implementation Science*, *15*(74), 1-13. https://doi.org/10.1186/s13012-020-01031-w

Lennox, L., Linwood-Amor, A., Maher, L., & Reed, J. (2020). Making change last? Exploring the value of sustainability approaches in healthcare: A scoping review. *Health Research Policy and Systems*, *18*(120), 1-24. https://doi.org/10.1186/s12961-020-00601-0

Lennox, L., Maher, L., & Reed, J. (2018). Navigating the sustainability landscape: a systematic review of sustainability approaches in healthcare. *Implementation Science*, *13*(27), 1-17. https://doi.org/10.1186/s13012-017-0707-4

Li, S.-A., Jeffs, L., Barwick, M., & Stevens, B. (2018). Organizational contextual features that influence the implementation of evidence-based practices across healthcare settings: A systematic integrative review. *Systemic Reviews*, *7*(72), 1-19. https://doi.org/10.1186/s13643-018-0734-5

López-Medina, I. M., Sáchez-García, I., García-Fernández, F. P., & Pancorbo-Hidalgo, P. L. (2021). Nurses and ward managers' perceptions of leadership in the evidence-based practice: A qualitative study. *Journal of Nursing Management, 30*(1), 135-143. https://doi.org/10.1111/jonm.13469

Makel, M. C., Meyer, M. S., Simonsen, M. A., Roberts, A. M., & Plucker, J. A. (2022). Replication is relevant to qualitative research. *Educational Research and Evaluation, 27*(1-2), 215-219. https://doi.org/10.1080/13803611.2021.2022310

Mele, V., Esteve, M., Lee, S., Bel, G., Cappellaro, G., Petrovsky, M., & Ospina, S. M. (2020). Enhancing methodological reporting in public administration: The functional equivalents framework. *American Review of Public Administration, 50*(8), 811-824. https://doi.org/10.1177/0275074020933010

McGrath, C., Palmgren, P. J., & Liljedahl, M. (2019). Twelve tips for conducting qualitative research interviews. *Medical Teacher, 41*(9), 1002-1006. http://doi.org/10.1080/0142159X.2018.1497149

McLean, P., Torkington, R., & Ratsch, A. (2019). Development, implementation, and outcomes of post-stroke mood assessment pathways: Implications for social workers. *Australian Social Work, 72*(3), 336-356. https://doi.org/10.1080/0312407X.2019.1579350

Melder, A., Robinson, T., Mcloughlin, I., Ledema, R., & Teede, H. (2022). Integrating the complexity of healthcare improvement with implementation science: A longitudinal qualitative study. *BMC Health Services Research, 22*(234), 1-12. https://doi.org/10.1186/s12913-022-07505-5

Melnyk, B. M., Gallagher-Ford, L., Zellefrow, C., Tucker, S., Thomas, B., Sinnott, L. T., & Tan, A. (2018). The first U.S. study on nurses' evidence-based practice competencies indicates major deficits that threaten healthcare quality, safety, and patient outcomes. *Worldviews on Evidence-Based Nursing, 15*(1), 16-25. https://doi.org/10.1111/wvn.12269

Michie, S., Johnston, M., Abraham, C., Lawton, R., Parker, D., & Walker, A. (2005). Making psychological theory useful for implementing evidence based practice: a consensus approach. *Quality & Safety Healthcare, 14*(1), 26-33. https://doi.org/10.1136/qshc.2004.011155

Moser, A., & Korstjens, I. (2018). Series: Practical guidance to qualitative research. Part 3: Sampling, data collection, and analysis. *European Journal of General Practice, 24*(1), 9-18. https://doi.org/10.1080/13814788.2017.1375091

Motulsky, S. L. (2021). Is member checking the gold standard of quality in qualitative research? *Qualitative Psychology, 8*(3), 389-406. https://doi.org/10.1037/qup0000215

Moullin, J. C., Ehrhart, M. G., & Aarons, G. A. (2018). The role of leadership in organizational implementation and sustainment in service agencies. *Research on Social Work Practice, 28*(5), 558-567. https://doi.org/10.1177/1049731517718361

Moullin, J. C., Dickson, K. S., Stadnick, N. A., Albers, B., Nilsen, P., Broder-Fingert, S., Mukasa, B., & Aarons, G. A. (2020). Ten recommendations for using implementation frameworks in research and practice. *Implementation Science Communications, 1*(42), 1-12. https://doi.org/10.1186/s43058-020-00023-7

Mthuli, S. A., Ruffin, F., & Singh, N. (2021). 'Define, explain, justify, apply' (DEJA): An analytic tool for guiding qualitative research sample size. International Journal of Social Research Methodology, 1-13. https://doi.org/10.1080/13645579.2021.1941646

Mudge, A. M., Young, A., McRae, P., Graham, F., Whiting, E., & Hubbard, R. E. (2021). Qualitative analysis of challenges and enablers to providing age friendly hospital care in Australian health system. *BMC Geriatric, 21*(147), 1-3. https://doi.org/10.1186/s12877-021-02098-w

Newman, K., DeForge, R., Van Eerd, D., Mok, Y. W., & Cornelissen, E. (2020). A mixed methods examination of knowledge brokers and their use of theoretical frameworks and evaluative practice. *Health Research Policy and Systems, 18*(34), 1-11. https://doi.org/10.1186/s12961-020-0545-8

Newton, N. J. (2022). Older Canadians' identity and well-being in retirement. *The International Journal of Aging and Human Development, 95*(1), 91-109. https://doi.org/10.1177/00914150211001586

Niemi, M., Crane, R., Sinselmeijer, J., & Andermo, S. (2021). The implementation of mindfulness-based programs in the Swedish healthcare system – A survey study of service providers. *Global Advances in Health and Medicine, 10*, 1-8. https://doi.org/10.1177/21649561211049154

Nuño-Solinís, R. (2018). Are healthcare organizations ready for change? Comments on "Development and content validation of a transcultural instrument to assess organizational readiness for knowledge translation in healthcare organizations:

The OR4KT". *International Journal of Health Policy and Management, 7*(12), 1158-1160. https://doi.org/10.15171/ijhpm.2018.95

Olmos-Ochoa, T. T., Ganz, D. A., Barnard, J. M., Penney, L., Finley, E. P., Hamilton, A. B., & Chawlu, N. (2021). Sustaining implementation facilitation: A model for facilitator resilience. *Implementation Science Communications, 2*(65), 1-9. https://doi.org/10.1186/s43058-021-00171-4

Palmer, K. S., Brown, A. D., Evans, J. M., Marani, H., Russell, K. K., Martin, D., & Ivers, N. M. (2018). Standardising costs or standardizing care? Qualitative evaluation of the implementation and impact of a hospital funding reform in Ontario, Canada. *Health Research Policy and Systems, 16*(74), 1-15. https://doi.org/10.1186/s12961-018-0353-6

Pamplin, J. C., Scott, B. K., Quinn, M. T., Little, J. R., Goede, M. R., Pappas, P. A., Jolly, B. T., Hipp, S. J., Colombo, C. J., & Davis, K. L. (2021). Technology and disasters: The evolution of the national emergency tele-critical care network. *Critical Care Medicine, 49*(7), 1007-1014. https://doi.org/10.1097/CCM.0000000000005001

Parker, P. D., McSweeney, J. C., Hadden, K. B., & Hess, K. G. (2022). Revising recruitment for focus groups to meet shifting needs during Covid-19. *Nursing Research, 71*(2), 158-163. https://doi.org/10.1097/NNR.0000000000000563

Pegg, S., Walsh, L. M., Becker-Haimes, E. M., Ramirez, V., & Jensen-Doss, A. (2021). Money makes the world go round: A qualitative examination of the role funding plays in large-scale implementation and sustainment of youth evidence-based

practice. *Psychological Services, 18*(2), 265-274. https://doi.org/10.1037/ser0000399

Pocock, T., Smith, M., & Wiles, J. (2021). Recommendations for virtual qualitative health research during a pandemic. *Qualitative Health Research, 31*(13), 2403-2413. https://doi.org/10.1177/10497323211036891

Qiao, S., Li, X., Zhou, Y., Shen, Z., & Stanton, B. (2018). Attitudes towards evidence-based practices, occupational stress and work-related social support among healthcare providers in China: A SEM analysis. *PLoS One, 13*(8), 1-16. https://doi.org/10.1371/journal.pone.0202166

Quintão, C., Andrade, P., & Almeida, F. (2020). How to improve the validity and reliability of a case study approach. *Journal in Interdisciplinary Studies in Education*, *9*(2), 274-285. https://doi.org/10.32674/jise.v9i2.2026

Qutoshi, S. B. (2018). Phenomenology: A philosophy and method of inquiry. *Journal of Education and Educational Development, 5*(1), 215-222. https://eric.ed.gov/?id=EJ1180603

Rapport, F., Clay-Williams, R., Churruca, K., Shih, P., Hogden, A., & Braithwaite, J. (2018). The struggle of translating science in action: Foundational concepts of implementation science. *Journal of Evaluation in Clinical Practice*, *24*(1), 117-126. https://doi.org/10.1111/jep.12741

Rashid, M., Hodgson, C. S., & Luig, T. (2019). Ten tips for conducting focused ethnography in medical education research. *Medical Education Online*, *24*(1), 1-5. https://doi.org/10.1080/10872981.2019.1624133

Raskind, I. G., Shelton, R. C., Comeau, D. L., Cooper, H. L. F., Griffith, D. M., & Kegler, M. C. (2019). A review of qualitative data analysis practices in health education and health behavior research. *Health Education & Behavior, 46*(1), 32-29. https://doi.org/10.1177/1090198118795019

Renz, S. M., Carrington, J. M., & Badger, T. A. (2018). Two strategies for qualitative content analysis: An intramethod approach to triangulation. *Qualitative Health Research, 28*, 824-831. https://doi.org/10.1177/1049732317753586

Roberts, K., Dowell, A., & Nie, J.-B. (2019). Attempting rigour and replicability in thematic analysis of qualitative research data; A case study of codebook development. *BMC Medical Research Methodology, 19*(66), 1-8. https://doi.org/10.1186/s12874-019-0707-y

Roberts, R. E. (2020). Qualitative interview questions: Guidance for novice researchers. The Qualitative Report, 25(9), 3185-3203. https://doi.org/10.46743/2160-3715/2020.4640

Rodriguez, A., Lau, A. S., Wright, B., Regan, J., & Brookman-Frazee, L. (2018). Mixed-method analysis of program leader perspective on the sustainment of multiple child evidence-based practices in a system-driven implementation. *Implementation Science, 13*(44), 1-14. https://doi.org/10.1186/s13012-018-0737-6

Rogers, L., De Brún, A., & McAuliffe, E. (2020). Defining and assessing context in healthcare implementation studies: A systematic review. *BMC Health Services Research, 20*(591), 1-24. https://doi.org/10.1186/s12913-020-05212-7

Roohi, G., Mahmoodi, G., & Khoddam, H. (2020). Knowledge implementation in healthcare management: A qualitative study. *BMC Health Services Research, 20*(188), 1-9. https://doi.org/10.1186/s12913-020-5043-8

Ross, M. W., Iguchi, M. Y., & Panicker, S. (2018). Ethical aspects of data sharing and research participant protection. *American Psychologist, 73*(2), 138-145. https://doi.org/10.1037/amp0000240

Ruest, M., Léonard, G., Thomas, A., Desrosiers, J., & Guay, M. (2022). Algo's integrated knowledge translation process in homecare services: A cross-sectional correlational study for identifying its level of utilization and its associated characteristics. *Canadian Journal of Occupational Therapy*, *89*(1), 13-25. https://doi.org/10.1177/00084174211064495

Rycroft-Malone, J. (2004). The PARIHS framework – A framework for guiding the implementation of evidence-based practice. *Journal of Nursing Care Quality, 19*(4), 297-304. https://doi.org/10.1097/00001786-200410000-00002

Sah, L. K., Singh, D. R., & Sah, R. K. (2020). Conducting qualitative interviews using virtual communication tools amid Covid-19 pandemic: A learning opportunity for future research. *Journal of the Nepal Medical Association, 59*(22), 1101-1106. https://doi.org/10.31729/jnma.5738

Şahin, M. D., & Ǫztürk, G. (2019). Mixed method research: Theoretical founds, designs and its use in educational research. *International Journal of Contemporary Educational Research, 6*(2), 301-310. https://doi.org/10.33200/ijcer.574002

Salmona, M., & Kaczynski, D. (2016). Don't blame the software: Using qualitative data analysis software successfully in doctoral research. *Forum: Qualitative Social Research, 17*(3), 1-24. https://doi.org/10.17169/fqs-17.3.2505

Seers, K., Rycroft-Malone, J., Cox, K., Crichton, N., Edwards, R. T., Eldh, A. C., Estabrooks, C. A., Harvey, G., Hawkes, C., Jones, C., Kitson, A., McCormack, B., McMullan, C., Mockford, C., Niessen, T., Slater, P., Titchen, A., van der Zijpp, T., & Wallin, L. (2018). Facilitating implementation of research evidence (FIRE): An international cluster randomized controlled trial to evaluate two models of facilitation informed by the promoting action on research implementation in Health Services (PARIHS) framework. *Implementation Science, 13*(137), 1-11. https://doi.org/10.1186/s13012-018-0831-9

Sedrak, M. S., Sun, V., Liu, J., George, K., Wong, A. R., Dale, W., & Dizon, D. S. (2019). Physician perception of the use of social media for recruitment of patients in cancer clinical trials. *JAMA Network Open*, *2*(9), Article e1911528. https://doi.org/10.1001/jamanetworkopen.2019.11528

Shaw, M., Hewson, J., Hogan, D. B., Bouchal, S. R., & Simon, J. (2018). Characterizing readiness for advance care planning from the perspective of residents, families, and clinicians: An interpretive descriptive study in supportive living. *The Gerontologist*, 58(4), 739-748. https://doi.org/10.1093/geront/gnx006

Shelton, R. C., Cooper, B. R., & Wiltsey Stirman, S. (2018). The sustainability of evidence-based interventions and practices in public health and healthcare.

Annual Reviews of Public Health, 39, 55-76. https://doi.org/10.1146/annurev-publhealth-040617-014731

Sibbald, S. L., Paciocco, S., Fournie, M., Van Asseldonk, R., & Scurr, T. (2021). Continuing to enhance the quality of case study methodology in health services research. *Healthcare Management Forum, 34*(5), 291-296. https://doi.org/10.1177/08404704211028857

Slettebø, T. (2021). Participant validation: Exploring a contested tool in qualitative research. *Qualitative Social Work, 20*(5), 1223-1238. http://doi.org/10.1177/1473325020968189

Song, Y., MacEachern, L., Doupe, M. B., Ginsburg, L., Chamberlain, S. A., Cranley, L., Easterbrook, A., Hoben, M., Knopp-Sihota, J., Reid, R. C., Wagg, A., Estabrooks, C. A., Keefe, J. M., Rappon, T., & Berta, W. B. (2022). Influences of post-implementation factors on the sustainability, sustainment, and intra-organizational spread of complex interventions. *BMC Health Services Research, 22*(666), 1-14. https://doi.org/10.1186/s12913-022-08026-x

Squire, J. E., Aloisio, L. D., Grimshaw, J. M., Bashir, K., Dorrance, K., Coughlin, M., Hutchinson, A. M., Frances, J., Michie, S., Sales, A., Brehaut, J., Curran, J., Ivers, N., Lavis, J., Noseworthy, T., Vine, J., Hillmer, M., & Graham, I. D. (2019). Attributes of context relevant to healthcare professionals' use of research evidence in clinical practice: A multi-study analysis. *Implementation Science, 14*(52), 1-14. https://doi.org/10.1186/s13012-019-0900-8

Squires, J. E., Hutchinson, A. M., Couglin, M., Bashir, K., Curran, J., Grimshaw, J. M., Dorrance, K., Aloisio, L., Brehaut, J., Francis, J. J., Ivers, N., Lavis, J., Michie, S., Hillmer, M., Noseworthy, T., Vine, J., & Graham, I. D. (2021). Stakeholder perspectives of attributes and features of context relevant to knowledge translation in health settings: A multi-country analysis. *International Journal of Health Policy and Management,* 1-18. https://doi.org/10.34172/ijhpm.2021.32

Stahl, N. A., & King, J. R. (2020). Expanding approaches for research: Understanding and using trustworthiness in qualitative research. *Journal of Developmental Education*, *44*(1), 26-28. https://www.proquest.com/scholarly-journals/expanding-approaches-research-understanding-using/docview/2467348904/se-2

Statistics Canada (2021). *Census Profile, 2021 Census of Population: Profile table.* https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&DGUIDList=2021A000011124&GENDERList=1&STATISTICList=1&HEADERList=0&SearchText=Canada

Stenfors, T., Kajamaa, A., & Bennett, D. (2020). How to … assess the quality of qualitative research. *The Clinical Teacher*, *17*(6), 596-599. https://doi.org/10.1111/tct.13242

Stetler, C. B., Damschroder, L. J., Helfrich, C. D., & Hagedorn, H. J. (2011). A guide for applying a revised version of the PARIHS framework for implementation. *Implementation Science*, *6*(99), 1-10. https://doi.org/10.1186/1748-5908-6-99

Strong, J. V., Plys, E., Hartmann, C. W., Hinrichs, K. L. M., & McCullough, M. (2020). Strategies for implementing group mental health interventions in a VA community living centre. *Clinical Gerontologist,* 1-13. https://doi.org/10.1080/07317115.2020.1756550

Suárez-Gonzalo, L., & Catalá-López, F. (2018). Knowledge translation strategies to improve healthcare. *Medicina Clinica, 156*(6), 239-241. https://doi.org/10.1016/j.medcli.2018.02.022

Theofanidis, D., & Fountouki, A. (2018). Limitations and delimitations in the research process. *Perioperative Nursing, 7*(3), 155-162. https://doi.org/10.5281/zenodo.2552022

Thuralrajah, K. (2019). Uncloaking the researcher: Boundaries in qualitative research. *Qualitative Sociology Review, 15*(1), 132-147. https://doi.org/10.18778/1733-8077.15.1.06

Timulak, L., & Elliott, R. (2018). Taking stock of descriptive-interpretative qualitative psychotherapy research: Issues and observations from the front line. *Counselling & Psychotherapy Research: Linking research with practice, 19*(1), 8-15. https://doi.org/10.1002/capr.12197

Titler, M. G. (2018). Translation research in practice: An introduction. *Online Journal of Issues in Nursing, 23*(2), 1-20. https://doi.org/10.3912/OJIN.Vol23No02Man01

Tucker, S., McNett, M., Melnyk, B. M., Hanrahan, K., Hunter, S. C., Kim, B., Cullen, L., & Kitson, A. (2021). Implementation Science: Application of evidence-based

practice models to improve healthcare quality. *Worldview on Evidence-Based Nursing*, *18*(2), 76-84. https://doi.org/10.1111/wvn.12495

Tuval-Mashiach, R. (2021). Is replication relevant for qualitative research? *Qualitative Psychology*, *8*(3), 365-377. https://doi.org/10.1037/qup0000217

Ullrich, P. M., Sahay, A., & Stetler, C. B. (2014). Use of implementation theory: A focus on PARIHS. *Worldviews on Evidence-Based Nursing*, *11*(1), 26-36. https://doi.org/10.1111/wvn.12016

U.S. Department of Health and Human Services. (1979). The Belmont Report: Ethical principles and guidelines for the protection of human subjects of human research. https://www.hhs.gov/ohrp/regulations-and-policy/belmont-report/index.html

Valentine, K. D., Kopcha, T. J., & Vagle, M. D. (2018). Phenomenological methodologies in the field of educational communications and technology. *TechTrends*, *62*, 462-472. https://doi.org/10.1007/s11528-018-0317-2

van der Goot, W. E., Keers, J. C., Kuipers, R., Nieweg, R. M. B., & de Groot, M. (2018). The effect of a multifaceted evidence-based practice programme for nurses on knowledge, skills, attitudes, and perceived barriers: A cohort study. *Nurse Education Today*, *63*, 6-11. https://doi.org/10.1016/j.nedt.2018.01.008

VanHeuvelen, J. S., & Grace, M. K. (2020). Occupational heterogeneity in healthcare workers' misgivings about organizational change. *Work and Occupations*, *47*(3), 280-313. https://doi.org/10.1177/0730888420919144

van Manen, M. (2019). Rebuttal: Doing phenomenology on the things. *Qualitative Health Research*, *29*(6), 908-925. https://doi.org/10.1177/1049732319827293

Verma, J. Y., Amar, C., Sibbald, S., & Rocker, G. M. (2018). Improving care for advanced COPD through practice change: Experiences of participation in a Canadian spread collaborative. *Chronic Respiratory Disease*, *15*, 5-18. https://doi.org/10.1177/1479972317712720

Veziari, Y., Kumar, S., & Leach, M. J. (2022). An exploration of barriers and enablers to conduct and application of research among complementary and alternative medicine stakeholders in Australia and New Zealand: A qualitative descriptive study. *Plos One, 17*(2), 1-25. https://doi.org/10.1371/journal.pone.0264221

Walsh, K., Ford, K., Morley, C., McLeod, E., McKenzie, D., Chalmers, L., Gordon-Croal, S., & Peterson, G. (2017). The development and implementation of a participatory and solution-focused framework for clinical research: A case example. *Collegian, 24*(4), 331-338. https://doi.org/10.1016/j.colegn.2016.06.003

Ward, M. M., Baloh, J., Zhu, X., & Stewart, G. L. (2017). Promoting action on research implementation in health services framework applied to TeamSTEPPS implementation in small rural hospitals. *Healthcare Management Review, 42*(1), 2-13. https://doi.org/10.1097/HMR.0000000000000086

Welch, T. D. (2019). Is Facebook a viable recruitment tool? *Nurse Researcher, 28*(9), 9-13. https://doi.org/10.7748/nr.2019.e1682

Weller, S. C., Vickers, B., Bernard, H., Blackburn, A. M., Borgatti, S., Gravlee, C. C., & Johnson, J. C. (2018). Open-ended interview questions and saturation. *PLoS One, 13*(6), 1-18. https://doi.org/10.1371/journal.pone.0198606

Wentzell, K., Walker, H. R., Hughes, A. S., & Vessey, J. A. (2021). Engaging social media influencers to recruit hard-to-reach populations. *Nursing Research, 70*(6), 455-461. https://doi.org/10.1097/NNR.0000000000000544

Wijk, K. Jönsson, F. A., & Lingberg, M. (2020). Perceived enabling factors and barriers for the implementation of improvements in healthcare in order to achieve patient-centred care: A case report from Sweden. *Journal of Evaluation in Clinical Practice, 26*(3), 791-800. https://doi.org/10.1111/jep.13272

Williams, J. S., Myléus, A., Chatterji, S., & Valentine, N. (2020). Health systems responsiveness among older adults: Findings from the World Health Organization study on global AGEing and adult health. *Global Public Health, 15*(7), 999-1015. https://doi.org/10.1080/17441692.2020.1742365

Woods, A. L., Luciano, M. M., Aloia, T. A., Gottumukkala, V., & Salas, E. (2020). Functional framework for change leaders: Results of a qualitative study. *BMJ Leaders, 4*(4), 1-7. https://doi.org/10.1136/leader-2020-000237

Xiang, X., Robinson-Lane, S. G., Rosenberg, W., & Alvarez, R. (2018). Implementing and sustaining evidence-based practice in healthcare: The bridge model experience. *Journal of Gerontological Social Work, 61*(3), 280-294. https://doi.org/10.1080/01634372.2018.1445154

Xu, A., Baysari, M. T., Stocker, S. L., Leow, L. J., Day, R. O., & Carland, J. E. (2020). Researchers' views on, and experiences with, the requirement to obtain informed consent in research involving human participants: A qualitative study. *BMC Medical Ethics, 21*(93), 1-11. https://doi.org/10.1186/s12910-020-00538-7

Yates, J., & Leggett, T. (2016). Qualitative research: An introduction. *Radiologist Technology*, *88*(2), 225-231. http://www.radiologictechnology.org/content/88/2/225.extract

Yeong, M. L., Ismal, R., Ismail, N. H., & Hamzah, M. I. (2018). Interview protocol refinement: Fine-tuning qualitative research interview questions for multi-racial populations in Malaysia. *The Qualitative Report*, *23*(11), 2700-2713. https://doi.org/10.46743/2160-3715/2018.3412

Yue, J., Liu, J., Zhao, Y., Williams, S., Zhang, B., Zhang, L., Zhang, Q., Liu, X., Wall, S., & Zhao, G. (2022). Evaluating factors that influenced the successful implementation of an evidence-based neonatal care intervention in Chinese hospitals using the PARIHS framework. *BMC Health Services Research*, *22*(104), 1-13. https://doi.org/10.1186/s12913-022-07493-6

Appendix A: Interview Protocol

The purpose of this document is to outline the standard protocol I will use when interviewing operations managers for the purposes of my doctoral research project.

- I will introduce myself and will inform the participant I work in healthcare but am acting in the role of doctoral student for the purposes of this interview.
- I will introduce the purpose of the research project. The purpose is to answer the research question: What strategies do leaders use to sustain practice changes to meet demands for quality care?
- I will reconfirm the voluntary nature of the participant consenting to participate in the interview and will restate that the participant can withdraw their consent to participate in the research study at any time.
- I will let the participant know we can stop the interview for a break at any time if they feel uncomfortable.
- I will inform the participant that the interview will be recorded and transcribed for the purpose of analyzing the data.
- I will ask the participant if they have any questions before we start the interview.
- Once the participant has confirmed they are ready to proceed, I will start the interview.
- I will ask all participants the following semi-structured interview questions:
    - What internal factors do you take into consideration when developing your practice sustainment strategies to meet the increasing demands for quality care?
    - What external factors do you take into consideration when developing your practice sustainment strategies to meet the increasing demands for quality care?
    - What type of evidence do you provide to clinicians to inform their adoption of the practice change?
    - What type of internal or external facilitators do you use to support the clinicians to adopt the change into their practice?
    - What specific steps do you take to transition the project from practice implementation to sustainment?
    - What strategies do you implement that did not contribute to or derailed the sustainment of change, thereby impacting your ability to meet the increasing demands for quality patient care?

    - What changes have you made to your sustainment strategies since starting the sustainment phase to ensure you are providing quality care and are there any further changes you anticipate making in the future?
    - As a leader, what is your role in maintaining the clinicians' continued use of the practice change?
    - What additional information you would like to share, regarding strategies used to sustain practice change?
- The interview will last for a maximum of 60 minutes.
- Once the interview has concluded, I will remind the participant that if they have any concerns after the interview, they can contact me at the email address or can reach out to the university research participant advocate listed on the consent form.
- I will remind the participant that I will be sending them a summarized copy of the interview with a request that they confirm the information is correct.
- I will end the interview by thanking the interviewee for participating in the research study.

Appendix B: Social Media Post

ARE YOU PASSIONATE ABOUT IMPROVING PATIENT CARE?

There is a new study about sustaining practice change in healthcare.

For this study, you are invited to describe your experience leading the strategies used to sustain clinical practice changes.

About the study:

- One 60 minute phone interview via Zoom® that will be audio recorded
- Review the interview summary for accuracy and provide feedback to the researcher via email. Reviewing the summary should take approximately 20 minutes.
- To protect your privacy, the published study will not use participant names or direct quotes that could identify you.

Volunteers must meet these requirements:

- Be a manager of a clinical unit (all clinical settings welcome)
- Led the strategies used to sustain practice change(s)
- The clinicians are still using the practices after one year or more

This interview is part of the doctoral study for Erin Gable, a Doctor of Business Administration student at Walden University. Interviews will take place during June 2022.

Please email me at erin.gable@waldenu.edu if you are interested in this study.