Proposing Implementation Strategies to Enhance Compassionate Nursing Care of Complex Patients: An Exploratory Sequential Mixed Methods Research Design

by ©Ahtisham Younas

A dissertation submitted to the School of Graduate Studies in partial fulfillment of the requirements for the degree of

Doctor of Philosophy Faculty of Nursing

Memorial University of Newfoundland

May 2022

St. John's, Newfoundland and Labrador

Abstract

Background: Complex patients have multiple, ongoing health conditions, often with limited resources, and are frequent recipients of health and social care services. Complex patients experience discrimination and are often shown a lack of compassion from nurses and other health professionals which negatively impact their care experiences and health outcomes. Missing in the practice literature are the strategies to guide much needed improvements in the compassionate nursing care of complex patients.

Purpose: The purpose of this doctoral dissertation was to enhance understanding of the indicators of, and barriers to, compassionate nursing care delivery and to propose implementation strategies with potential to promote compassionate nursing care of complex patients.

Methods: An exploratory sequential mixed methods design was conducted comprised of a qualitative phase, an instrument development phase, and a quantitative phase. The qualitative phase enabled identification of indicators and barriers based on interviews with 23 individuals with experiences as complex patients. Barriers were then mapped to implementation science frameworks in the instrument (i.e., a Q-sort survey) development phase to identify relevant domains and integration functions, and to choose implementation strategies for the survey concourse. The Q-sort survey was then electronically distributed during the quantitative phase to over 140 nursing, health, and compassion care experts, out of which 32 responded and ranked the strategies. Principal component analysis determined highest ranked strategies. A five-factor solution was generated using Varimax rotation. Merging technique confirmed the rankings before strategies were subsequently

operationalized using an implementation science specification framework, followed by development of an implementation plan.

Results: Participants identified six indicators of compassionate nursing care—nurses who are: sensitive, aware, positive, nonjudgmental, empathic, and altruistic. Barriers were categorized under knowledge, intentions, skills, social influences, behavioural regulation, reinforcement, emotion, and environmental context and resources. The final operationalized implementation strategies included: organize clinician implementation team meetings, involve patients and families, modelling, *implementation* facilitation, and ongoing consultation with stress experts.

Conclusions: Implementation strategies made specific for practice contexts are urgently needed to effect change at provider, managerial and organizational levels to improve compassionate care experiences of complex patients. One promising approach are alliances between health professionals and patient and family groups to design, plan, and implement strategies to improve compassionate nursing care.

Keywords: compassion; complex patients; implementation science; mixed methods research; nursing practice

General Summary

This four-manuscript-style dissertation comprises six chapters. Chapter 1 is an introduction to the dissertation research topic (i.e., proposing implementation strategies to improve compassionate nursing care of complex patients) and includes a comprehensive literature review covering the global and Canadian prevalence of complex patients, the health and social care needs of complex patients, and the reports of stigma and other negative experiences in health care settings. The results highlight how these patients require compassionate care through a detailed account of compassion and its critical importance. The problem statement and justification for using a three-phase mixed methods research design are provided, followed by a detailed description of the methodology, the underpinning paradigmatic stance, the methods of each phase, and a brief overview of the results.

It should be noted that due to the coronavirus (COVID-19) global pandemic the study design and methods had to be amended. Initially, the target population of the qualitative phase was complex patients and their families, and, nurses and floor managers working in acute care settings at three hospitals in Atlantic Canada. However, due to the pandemic public health protections, on-site research was suspended. Therefore, the target population and setting were changed by recruiting *individuals with experiences as complex patients*. Also, the quantitative phase was originally designed to be a pretest-posttest control group pilot study to assess the feasibility and usefulness of proposed implementation strategies to enhance compassionate nursing care, but was changed to a Q-sort survey.

The Q-sort survey was distributed to frontline nurses, nurse managers, policymakers, health care administrators, and compassionate care experts inviting respondents to rank a list of implementation strategies. Ranking resulted in the prioritization of six implementation strategies. However, given close similarities between two of the six strategies, two strategies were combined leaving five implementation strategies for operationalization for specific use in Newfoundland and Labrador.

Chapters 2, 3, 4, and 5 are manuscripts that will be prepared for publication. Chapter 2 is a research manuscript, entitled "A Qualitative Descriptive Study to Explore Compassionate Nursing Care of Complex Patients." The manuscript is a report of the findings from the qualitative phase after the study aims, objectives and methods are presented. The findings describe the behavioural indicators of compassionate nursing care from the perspectives of participants with experiences as complex patients. Chapter 3 is a methodological manuscript, entitled "The Pathway Building Technique in Implementation Research Using Mixed Methods Designs." The focus is on illustrating how data from the qualitative phase can be integrated in the construction of an instrument for the quantitative phase of a mixed methods study by using a novel pathway bridging technique and implementation science frameworks. Chapter 4 is a research manuscript, entitled "An Exploratory Sequential Mixed Methods Study of Implementation Strategies to Promote Compassionate Nursing Care of Complex Patients," which captures the full dissertation study, complete with the indicators and barriers to compassionate nursing care, the Q-sort survey results, and the recommended implementation strategies to promote compassionate nursing care of complex patients. Chapter 5 is the fourth and final manuscript, entitled

"Operationalizing Implementation Strategies: A Worked Example" in which the highest ranked implementation strategies resulting from the Q-sort survey are confirmed using the merging technique, and then operationalized for specific use in nursing practice by applying an implementation science specification framework. Finally, Chapter 6 is a discussion of key dissertation results along with implications and recommendations for nursing practice, nursing research, nursing education, and for, health care policy, knowledge translation, and implementation science.

Acknowledgements

I would like to thank and acknowledge those individuals who supported me during the completion of this dissertation. I extend my special thanks to my supervisor, Dr. Caroline Porr, Associate Professor, Memorial University of Newfoundland Faculty of Nursing for her continuous support, guidance, and encouragement throughout this dissertation research experience. I thank her for her availability to talk about any critical issues throughout the dissertation journey. Special thanks to my supervisory committee members: Dr. Julia Moore, Dr. Dean Whitehead, Pablo Navarro, and Dr. Joy Maddigan for their support, encouragement, and guidance. They have provided excellent conceptual and methodological input to strengthen this dissertation research.

I would like to pay a tribute to my mother, Josephine Younas, and my eldest brother Robert, who worked hard and made countless sacrifices to help me achieve my career goals, and encouraged, supported, and believed in me. You taught me how to be patient and determined and how to achieve my goals with the limited resources available. To my brother, Albert, thank you for encouraging me to pursue higher education outside my home country. To my brothers, Patras, Baber, and Waqas, thank you for your support and encouragement and the many sacrifices you made for me. To my sister Sana, thank you for all your love and support during this academic journey. My sincere gratitude to my wife Kate Jardine for her love, support, sacrifices, continuous encouragement, and patience while listening to me rant about mixed methods and issues concerning data collection. I also would like to extend my gratitude to Maria Kelsey and Father Wayne Bolton S.J., for

being available to me whenever I needed support and assistance. I would like to thank Father Earl Smith S.J. for his support.

Special thank you to my friends and academic colleagues Amara Sundus, Angela Durante, Parveen Ali, Shahzad Inayat, Sharoon Shahzad, Hussan Zeb, Joel Fakhar, and Sergi Fàbregues for supporting me during my tough times.

Finally, I would like to extend my sincere gratitude to all the research participants; thank you for your participation. Thank you to my funding agency Memorial's Seed, Bridge and Multidisciplinary Fund and to Memorial's Faculty of Nursing. Without all of you, I would not have achieved this accomplishment.

Table of Contents

CHAPTER ONE: Introduction……..……...……..1

Literature Review……4

Search Strategy ……...5

Search Results……5

Data Extraction and Synthesis…….....7

Critical Appraisal……7

Narrative Summary……...……10

Conceptual Meaning of Compassion……10

Significance of Compassionate Care…….12

Prevalence of Complex Patients……15

Global context……...15

Canadian context……...16

Health and Social Care Needs of Complex Patients…….17

Negative Care Experiences of Complex Patients……..20

Barriers to the Provision of Compassionate Nursing Care.…….…..……22

Provider-level barriers……...22

Managerial barriers……...22

Organizational barriers……..23

Problem Statement……24

Research Purpose and Objectives…….25

Research Design……26

Ontological Stance……...…….29

Epistemological Stance……..……...29

Phase 1: Qualitative Component……...……30

Phase 2: Instrument Development……30

Phase 3: Quantitative Component…….31

Research Ethics…….32

Brief Overview of Dissertation Results……33

Perceived Compassionate Care Indicators and Barriers……..……33
Highest Ranked Implementation Strategies……..35
Summary…….…..37
References …….…...38

CHAPTER TWO: A Qualitative Descriptive Study to Explore Compassionate Nursing Care of Complex Patients……..……..57

Manuscript (1) Abstract…….……...58
Background……...60
Care Experiences……...60
Compassionate Nursing Care……....61
Research Rationale……62
Aims……..63
Methods……63
Setting and Sample……63
Data Collection……..64
Data Analysis……66
Rigour……67
Findings……68
Sample Characteristics……..68
Behavioural Indicators……..70
Sensitivity……..71
Awareness……73
A Nonjudgmental Approach……...……..75
A Positive Demeanour……...……...77
Empathic Understanding…….……..78
Altruism……79
Discussion……81
Limitations……84
Summary……...84

References…….……86

CHAPTER THREE: The Pathway Building Technique in Implementation Research Using Mixed Methods Designs……...93

Manuscript (2) Abstract……94
Background……...95
Integration in Mixed Methods Research……...96
Goal……...…99
Overview of the Compassionate Nursing Care Mixed Methods Research Study……99
The Pathway Building Technique……...100
Pathway One: Developing the Q-Sort Survey…….100
Step 1: Analysis of Qualitative Data……...100
Step 2: Mapping Barriers……102
Step 3: Mapping Relevant Theoretical Domains……104
Step 4: Choosing Implementation Strategies……..105
Step 5: Refining Survey Statements……...…….107
Pathway Two: Operationalizing the Implementation Strategies…….108
Discussion……...110
Contribution to Mixed Methods Research……..112
Summary…….113
References……...…114

CHAPTER FOUR: An Exploratory Sequential Mixed Methods Study of Implementation Strategies to Promote Compassionate Nursing Care of Complex Patients…..,……...…118

Manuscript (3) Abstract…….,…….119
Background…….121
Aims……..……..122
Study Design……...122
Phase 1: Qualitative Component…….,……122

Sample……....123
Data Collection…….……...123
Data Analysis……..124
Phase 2: Instrument Development……..……125
Theoretical Domains Framework……....125
Capabilities, Opportunity, Motivation-Behaviour Theoretical Model…....125
Expert Recommendations for Implementing Change Guidelines……...126
Phase 3: Quantitative Component……...……126
Sample…….127
Inclusion Criteria…….……128
The Data Collection Instrument…….…….128
Procedures..…….……128
Analysis……...129
Rigour……..131
Ethical Considerations…….132
Results……..…132
Phase 1: Qualitative Findings……...……...132
Demographic Information……...132
Barriers to Compassionate Nursing Care…….…...133
Knowledge..…….....….133
Intentions..……...134
Skills..……..134
Social influences..……...…135
Behavioural regulation..……..136
Reinforcement..……...137
Emotion..…….137
Environmental context and resources…….....138
Phase 2: Integration and the Q-Sort Survey……139
Phase 3: Quantitative Results……...……...143

Demographic Profile……...143
Description of Factors…….……143
Perspective One: Enablement NOT Incentives to Promote Compassion...145
Perspective Two: Managers Model Compassion ……...146
Perspective Three: Enablement Through Incentivizing and Funding…..…147
Perspective Four: Enablement, Modelling, and Training…….…..148
Perspective Five: Enablement Through Discussion about Patient Expectations……149
Integration of Qualitative Findings and Q-Sort Survey Results…….153
Discussion……...160
Contributions to Practice Change……160
Potential Implementation Strategies…….....161
Limitations……..164
Summary…….165
References……...167

CHAPTER FIVE: Operationalizing Implementation Strategies: A Worked Example……..……..……...175

Manuscript (4) Abstract……..176
Background……..……...177
Goal…….179
Data Sources……179
Operationalization Framework……180
Operationalization……...181
Strategy One: Clinician Implementation Team Meetings……...181
Strategy Two: Involve Patients and Family Members……183
Strategy Three: Modelling……..186
Strategy Four: *Implementation* Facilitation……189
Strategy Five: Ongoing Consultation with Stress Experts……..193
Implementation Plan……...195

Evaluation Outcomes……..202
Implementation Strategies and Contextual Issues……..…….201
Summary…….……203
References……...204

CHAPTER SIX: Conclusions……...……215

Participant-Perceived Indicators and Barriers…….215
Potential Implementation Strategies……....216
Implications for Nursing Practice……...218
Circle of Compassion……..219
Misuse of Education and Training……..220
Implications for Nursing Research……\……221
Designing Implementation Studies……...……..222
Evaluation of the Process of Implementation. ……...222
Designing Patient and Family Satisfaction Surveys ……..……223
Implications for Nursing Education……...….224
Health Care Policy……..225
Knowledge Translation and Implementation Science…….226
Unified Use of Qualitative Methods and Implementation Science Frameworks....226
Q Methodology in Implementation Research…….227
Concluding Remarks……..…….228
References……...…230

List of Tables

Table 1 Findings, Literature Sources, and Appraisal Ratings……...……...8-10

Table 2 Prevalence of Complex Patients in Canada…….17

Table 3 Semi-Structured Interview Guide…….....65

Table 4 Sample Characteristics……68-69

Table 5 Behavioural Indicators of Compassionate Nursing Care…….…...70-71

Table 6 Barriers to Compassionate Nursing Care……...102

Table 7 The Theoretical Domains Framework……...103

Table 8 Chosen ERIC Strategies in Pathway One, Step 4..….....……106-107

Table 9 Extracted Factors and Factor Loadings……..130

Table 10 Joint Display Illustrating Qualitative Analysis, Building, and Concourse Development……141-142

Table 11 Respondent Q-Sort Loadings on Factors……..……...……144-145

Table 12 Ranking of Implementation Strategies Across Factors…….…150-153

Table 13 Joint Display of Qualitative Findings and Ranked Implementation Strategies…….…….155-159

Table 14 Implementation Plan…….196-201

Table 15 Highest Ranked Implementation Strategies and Integration Functions……...217

List of Figures

Figure 1 Literature Search Strategy……6

Figure 2 Schematic Diagram of the MMR Design……...27

Figure 3 The Pathway Building Technique……...……..101

Figure 4 Operationalization of Facilitation as an Example…….109

Appendices

Appendix A Literature Summary Table…….…….234

Appendix B Q-Sort Survey……..…257

Appendix C Ethics Approval Letter…….……...269

Appendix D Recruitment Poster…….……273

Appendix E Recruitment Email…….…….274

Appendix F Consent Form for Phase 1 …….…….275

Appendix G Consent Form for Phase 3……..280

Appendix H (Full) Semi-Structured Interview Guide ……..……..284

Appendix I Legitimation Criteria for Rigour in Mixed Methods Research……285

List of Abbreviations

aOR	Adjusted Odds Ratio
COM-B	Capability, Opportunity, Motivation-Behaviour
ERIC	Expert Recommendations for Implementing Change
IS	Implementation Science
KT	Knowledge Translation
MMR	mixed methods research
TDF	Theoretical Domains Framework
RE-AIM	Reach, Effectiveness, Adoption, Implementation, and Maintenance

Chapter One

Introduction

Individuals who present with multimorbidity (defined as two or more chronic conditions), comorbidities and mental health issues or medication-related problems, and social vulnerability, are termed complex patients (Martello et al., 2014). Complex patients often present with more than one health problem and require comprehensive care. Increasingly, these individuals are frequent consumers of health care in Canada, and as their numbers increase they will place an added demand on the health care system (Wister, 2021). In 2015, 12.9% of all adult Canadians 20 years of age and older had two or more chronic conditions (Roberts et al., 2015). Arthritis, mood disorder and, or, anxiety, and asthma were the most common chronic conditions and appeared prominently in multimorbidity in combination with other health conditions. In the province of Newfoundland and Labrador (NL) the prevalence is estimated to be higher, at 26.5% of all adults, with 28.1% of complex patients having two or more chronic conditions and 10.2% having three chronic conditions (Feely et al., 2017). Currently, it is estimated that 75.3% of the 11,161 adults across Canada designated as complex patients have at least two chronic conditions. In NL, 47% of complex patients have three or more chronic conditions (Nicholson et al., 2021).

Complex patients live with a significant disease burden and must manage multiple health needs. They make more frequent visits to the hospital or to other health care settings compared to the general population, managing multiple health conditions and initiating new treatments. Intensive medical services are often required in addition to holistic patient-centered nursing care, mental health support, and family and community assistance

(Bayliss, 2012; Loeb et al., 2016; Manning & Gagnon, 2017; Poitras et al., 2020). Scholars from the practice literature advocate that compassion within a coordinated team approach (i.e., multidisciplinary collaboration to align the resources, personnel, and health care system and services [Lee et al., 2016]) is critical to meeting the health and social care needs of this patient population. Being able to adequately meet the care needs of complex patients within the acute, primary, and community care settings is of utmost importance and requires demonstration of compassion in practice.

Compassion is defined as recognizing, understanding, and alleviating physical and emotional suffering (Perez-Bret et al., 2016). Compassionate care within the realm of nursing practice is the nurse's altruistic and cognitive effort to recognize, to understand, and to alleviate patient suffering (Sinclair et al., 2016; Van der Cingel, 2014). Compassionate nursing care is manifest in practice through behavioural indicators. The behavioural indicators of compassionate nursing care include the recognition, acceptance, and alleviation of suffering through authentic presence, empathy, understanding, respect, and, an openness to the unique needs and suffering of individual patients (Younas & Maddigan, 2019). The provision of compassionate care would enable nurses to become aware, to acknowledge, and to understand the suffering of complex patients (O'Connor et al., 2018). Practicing compassion may assist nurses to improve care experiences and promote positive health outcomes among complex patients (Post, 2011).

There is ample theoretical literature in nursing about the importance of compassionate care (Bradshaw, 2011; Hartrick Doane & Varcoe, 2015; Roach, 1992; Schantz, 2007; Von-Dietze & Orb, 2000). Compassion is recognized as a critical

competency to provide quality nursing care. Nursing theorists have highlighted that compassion is an integral nursing component and necessary to demonstrate a caring approach (Roach, 1992; Hartrick Doane & Varcoe, 2015). The Canadian Nursing Association (2017) outlined in the *Code of Ethics* that compassion is instrumental for providing socially-just and equitable care. The International Council of Nurses (2021) list compassion as one of the key nursing values along with respect, justice, empathy, responsiveness, caring, trustworthiness, and integrity. Despite the critical significance of compassionate care, there is limited empirical guidance in the literature on the topic of compassionate nursing care delivery in the context of meeting the health and social care needs of complex patients. Closer examination of the physical and emotional issues and holistic health needs of complex patients, and the emerging approaches designed to improve quality of care, symptom management, and coordinated care are warranted. There is also limited research on how to facilitate a more humanistic, integrated care approach (i.e., collaborative care with greater involvement of multidisciplinary health professionals and patients and their families) so that nurses and other health professionals are not just treating the disease but caring for the whole person as unique human beings with unique lives and circumstances (Loet et al., 2016; Manning & Gagnon, 2017).

The behavioural indicators of compassionate care, as mentioned above, were mainly derived from the work of scholars and practitioners in palliative and acute care settings in global and Canadian contexts (Younas & Maddigan, 2019; Sinclair et al., 2016). Hence, compassionate care indicators may manifest differently depending on the local context, patient population, and type of health care facility (Sinclair et al., 2016; Singh et al., 2018).

Moreover, compassionate nursing care vis-a-vis the demonstration of behavioural indicators is affected by individual provider-, managerial-, and organizational-level barriers. Some of the barriers reported are understaffing, high patient acuity, intergenerational differences among nurses, and workplace factors and forces such as lack of support from management (Christiansen et al., 2015; Cole-King & Gilbert, 2011; Pehlivan & Güner, 2020; Tehranineshat et al., 2019; Valizadeh et al., 2018). Sinclair et al. (2016) noted that barriers to compassion in practice are contingent on the nature of settings, type of health care facility, patient condition, and complexity of the disease.

The above-mentioned barriers to compassionate care are commonly experienced by nurses in acute, palliative, and emergency care settings. It is not known if the same barriers are applicable within all settings, nor if some barriers to compassionate nursing care are more pronounced when caring for complex patients. There is a dearth in nursing and global knowledge concerning the nature and barriers of compassionate care within the context of complex patients. Moreover, given this dearth of research, it is not known which barriers exist in the NL health care system and to which extent. Research to address this gap and to advance contextually-relevant knowledge and understanding of compassionate nursing care of complex patients in NL is warranted to identify and overcome barriers and to improve practice.

Literature Review

Using comprehensive literature search methods, an integrative literature review was conducted to synthesize select empirical, theoretical, and conceptual sources on the topic of

compassionate care and compassionate nursing care of complex patients after critical appraisal (Whitmore & Knalf, 2005; Younas et al., 2021).

Search Strategy

Peer-reviewed publications published in nursing and health care journals were located through search engines: Cumulative Index to Nursing and Allied Health Literature (CINAHL), and by searching databases: PubMed, Scopus, OVID, Web of Science, and PsycINFO. Inclusion criteria were as follows: primary studies (qualitative, quantitative, and mixed methods); theoretical articles; published in English; published between January 2000 and November 2021; and, focused on compassionate nursing care, patients with multimorbidities, complex patients and their health care issues and experiences. The literature search timeline of January 2000 to November 2021 ensured capturing contemporary literature on compassionate nursing care and complex patients. Search terms, phrases, and MESH terms consisted of: “complex patients,” “complex” AND “patients,” “multimorbidity*,” “comorbidity*,” “patient complexity,” “prevalence of complex patients,” “chronic condition*,” “health care needs,” “nursing care,” “stigma,” “marginalization of complex patients,” “compassion,” “compassionate nursing care,” AND, “barriers,” AND “indicators of compassionate care,” AND “behavioural indicators of compassion.”

Search Results

In total, 776 records were located on the topic (see Figure 1). Of these, 373 duplicates were removed and then 373 records were entered into the screening stage when titles and abstracts were reviewed. Of the 373 records screened, 300 were excluded because

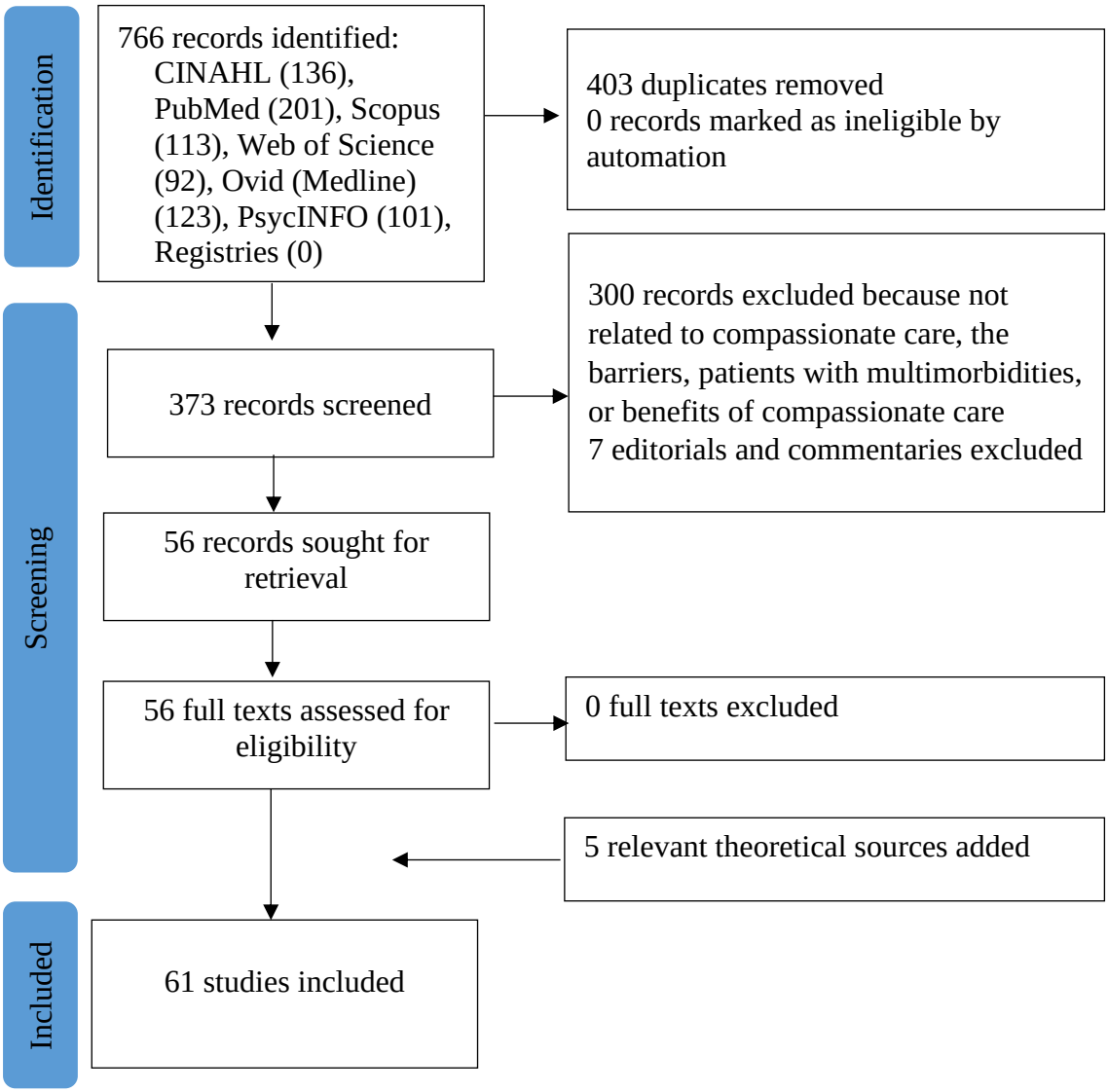


Figure 1

Literature Search Strategy

they were not relevant to the topic. The excluded records covered topics such as fundamentals of care, compassion therapies, compassionate curriculum, compassion for individuals who identify as lesbian, gay, bisexual, transgender, self-compassion, and,

complexity of health care and complex interventions. The remaining 56 full-text articles were assessed for eligibility and included. Additionally, five theoretical sources about compassionate care were included. Therefore, data were extracted from 61 articles.

Data Extraction and Synthesis

A synopsis of included articles is presented in a literature summary table in Appendix A. Presented is information pertaining to the authors, country, year of publication, study purpose, design and methods, and, critical appraisal. Narrative synthesis was the approach adopted because the purpose of this integrative review was to synthesize relevant information (Whitmore & Knalf, 2005; Younas et al., 2021) on the dissertation topic. Data were extracted from each article to provide literature support for the dissertation investigation of compassionate nursing care of complex patients.

Critical Appraisal

Critical appraisal of included primary studies was carried out using various checklists. Public Health Agency of Canada (PHAC) Critical Appraisal Toolkit (2014) was used to critically appraise descriptive and analytical quantitative research including surveys and interventional and noninterventional studies. The Mixed Methods Appraisal Tool (MMAT) (Hong et al., 2018) was used for appraisal of MMR studies, the VAKS (Danish acronym for Appraisal of Qualitative Studies) tool (Schou et al., 2012) for appraisal of qualitative studies, and the Critical Appraisal Skills Program (CASP) (CASP, 2018) checklist for appraisal of systematic and narrative reviews, and concept analyses. Only studies graded moderate to strong quality were included in the narrative synthesis. Of the 61 articles, 38 were original research studies, 18 were reviews, and five were theoretical

sources. Most of the studies originated from Canada (21), the US (10), and UK (7). The remaining sources were from Sweden, Italy, the Netherlands, Spain, Iran, Pakistan, Turkey, Australia, and New Zealand. A majority of the original research studies were quantitative studies (21) including cohort, cross-sectional survey, descriptive survey designs, and secondary data analysis. Only 16 of the original research studies were qualitative, including descriptive qualitative, exploratory qualitative, ethnographic, and grounded theory methodologies. Of the 18 reviews, seven were systematic reviews, four were narrative and integrative, two were scoping, three were concept analyses, and two were critical reviews. See Table 1 for findings, literature sources, and appraisal ratings after completing the critical appraisal of all 61 articles (41 were rated as strong quality and 20 were rated as moderate quality).

Table 1

Findings, Literature Sources, and Appraisal Ratings

Findings		Literature Sources	Quality Score
Compassionate Care	Conceptual Meaning of Compassion	Goetz et al. (2010) Sinclair et al. (2017) Straughair et al. (2019) Straughair et al. (2021) Van der Cingel (2009) Von-Dietze & Orb (2000) Schantz (2007) Hartrick Doane & Varcoe (2015) Perez-Bret et al. (2016) Van der Cingel (2011) Younas (2020) Younas & Maddigan (2019)	Moderate to Strong
	Significance of compassionate care	Sinclair et al. (2017) Straughair et al. (2019) Van der Cingel (2011)	Moderate to Strong

		Frampton et al. (2013) Del Canale et al. (2012) Hojat et al. (2011) Carson (2011) Lown et al. (2011) Younas & Maddigan (2019) Singh et al. (2018) Pehlivan & Güner (2020)	
	Barriers to Compassionate Nursing care	Sinclair et al. (2016) Christiansen et al. (2015) Jones et al. (2016) Babaei & Taleghani (2019) Papadopoulos et al. (2020)	Strong
	Provider-level barriers	Sinclair et al. (2016) Christiansen et al. (2015) Jones et al. (2016) Babaei & Taleghani (2019)	Strong
	Managerial Barriers	Jones et al. (2016) Christiansen et al. (2015) Papadopoulos et al. (2020)	Strong
	Organizational barriers	Sinclair et al. (2016) Valizadeh et al. (2018) Dev et al. (2019)	Strong
Complex patients	Prevalence of complex patients	Hajat & Stein (2018) Abebe et al. (2020) Nguyen (2019) Kingston et al. (2018) Bezerra de Souza et al. (2021) Roberts et al. (2015) Basham & Karim (2019) Sakib et al. (2019) Nicholson et al. (2019) Chireh & D'Arcy (2020)	Moderate to Strong
	Global context	Hajat & Stein (2018) Abebe et al. (2020) Nguyen (2019) Kingston et al. (2018) Bezerra de Souza et al. (2021)	Strong
	Canadian context	Roberts et al. (2015) Basham & Karim (2019) Sakib et al. (2019) Nicholson et al. (2019) Chireh & D'Arcy (2020) Feely et al. (2017)	Moderate to Strong

	Health and social care needs of complex patients	Bayliss (2012) Loeb et al. (2016) Manning & Gagnon (2017) Rudin et al. (2017) Burgos et al. (2020) Westley-Wise et al. (2020) Heins et al. (2020) Luijks et al. (2012) Chan et al. (2019) Karam et al. (2021) Heins et al. (2020) Tuzzio et al. (2021) Akugizibwe et al. (2021) Griffith et al. (2019)	Moderate to Strong
	Negative care experiences of complex patients	Loeb et al. (2016) Loeb et al. (2012) Webster et al. 2019 Van Boekel et al. (2013) Knaak et al. (2017) Javed et al. (2021) Kuluski et al. (2017) Rich et al. (2012)	Moderate to Strong

Narrative Summary

After presenting the conceptual meaning or core sense of compassion, remaining findings of this integrative literature review are discussed in order of significance, in terms of justifying investigation of compassionate nursing care of complex patients. Included in the narrative summary is the significance of compassionate care and the barriers, the prevalence of complex patients and their health and social care needs, and, finally, the negative care experiences of complex patients.

Conceptual Meaning of Compassion

Based on the review of the theoretical literature, compassion is conceptualized as a multi-textured response that entails kindness, sensitivity to suffering, caring, sympathy,

empathy, and generosity (Hoffman, Grossman, & Hinton, 2011; Kanov et al., 2004). Scholars from the health and nursing literature, describe compassion synonymously with empathy, caring, and sympathy. Following a concept analysis, Goetz et al. (2010) described empathy, caring, and sympathy as different states of compassion. Empathy is a trait entailing cognitive, behavioural, and emotional attributes such as seeing the world as others, understanding feelings, and communicating feelings in a nonjudgmental way (Sinclair et al., 2017). Caring consists of three dimensions: the intention to care (intentionality); the nurse-patient relationship (relationality), and the actions taken by the nurse (responsivity) that are appropriate given the patient's cues, situation, and context (Porr & Egan, 2013). Sympathy is possessing kindness that allows a person to realize something has happened to another person that is traumatizing (Gladkova, 2010).

The most compelling conceptualization of compassion based on the theoretical and empirical literature, is that compassion is a characteristic that nurses should possess in order to alleviate the suffering of patients (Bradshaw, 2011; Straughair et al., 2019; Straughair et al., 2021; Van der Cingel, 2009). Von-Dietze and Orb (2000) defined compassion as a characteristic trait, as "moral character" that requires emotional and thoughtful responses to be able to make decisions for oneself and others. It involves actions that are comforting for oneself and others. Schantz (2007) defined compassion as an attitude that urges one to focus on others' suffering and take action, accordingly. Davison and Williams (2009) defined compassion as caring for and caring about patients and their needs. Based on the above, it could be implied that compassion is a deliberative process, a moral character, and both an emotional and cognitive response—this conceptualization is captured well by

Canadian nursing scholars: "to share suffering, being in solidarity with persons, and doing with one another" (Hartrick Doane & Varcoe, 2015, pp. 103-104).

Compassionate nursing care can be defined as the altruistic and cognitive efforts to alleviate patient suffering (Van der Cingel, 2011; Younas, 2020). According to a critical review of 29 empirical and theoretical articles, compassionate nursing care is manifest in practice through certain behavioural indicators which include recognizing, accepting, and alleviating suffering through authentic presence, empathy and understanding, respect, and an openness to patients' unique needs and experiences of suffering (Younas & Maddigan, 2019). Based on systematic reviews and other strong quality empirical research, an all-encompassing definition of compassion is the recognition, understanding, and alleviation of physical and emotional suffering (Perez-Bret et al., 2016).

Significance of Compassionate Care

It is well known that compassion is a central tenet of nursing practice (Hem & Heggen, 2004) because it plays a significant role in the provision of quality care (Haslam, 2015) and high-quality value-based care (Frampton et al., 2013). High-quality value-based care is the care provided to patients that, among other elements, carefully considers their values and beliefs. Compassionate care may enable nurses to genuinely understand the suffering of complex patients which in turn, can improve complex patients' experiences of care and promote positive health outcomes (Post, 2011). In their well-designed grounded theory research project with 53 patients with cancer, Sinclair et al. (2017) uncovered that lack of compassion results in technically excellent but depersonalized care. However, compassionate care shown by health professionals, has the potential to improve health

outcomes for patients. A number of correlational studies found that there is an association between health professionals who report high levels of empathy and compassion and better health outcomes for their patients including reduced hospital admissions (Del Canale et al., 2012; Hojat et al., 2011). For example, Del Canale et al. (2012) assessed the relationship between physician empathy scores with clinical outcomes of patients with diabetes. They included 20,961 patients and 242 primary care physicians and reported that patients of physicians with high empathy scores had lower rates of complications compared to patients of physicians with moderate and low empathy scores ($p < .05$). The complication scores for patients with physicians with high, moderate, and low empathy scores were 4.0, 7.1, and 6.5 per 1,000 patients, respectively.

Based on patient interviews, qualitative researchers have identified that when health professionals practice with a compassionate approach, patients gain a sense of personal responsibility for managing symptoms and control over their disease trajectory (Lloyd & Carson, 2011; Straughair et al., 2019; van der Cingel, 2011). For example, Straughair et al. (2019) conducted a constructivist grounded theory with 11 patients who participated in individual interviews as well as in focus groups. Patients noted that receiving compassionate care improved their relationships with health professionals, increased their involvement in care decision-making, and contributed to their personal sense of well-being.

The benefits of compassionate care are further corroborated by a survey of 800 hospital patients and 510 attending physicians. Patients thought that compassionate care improved their health outcomes and their positive care experiences. The majority of respondents claimed that compassion was essential for increasing trust between patients

and physicians and for establishing a therapeutic relationship that contributed to advancing patient care and health outcomes (Lown et al., 2011).

Compassion is valuable for fostering therapeutic relationships with patients in diverse clinical settings (Van Lieshout et al., 2015). Compassionate actions of nurses and other health professionals are crucial for individuals with complex health care issues and social vulnerabilities (e.g., complex patients) (Henderson & Jones, 2017). Findings from reviews and qualitative studies have shown that receiving compassionate care is correlated with patients feeling valued and respected—feeling like they are being treated with dignity and respected as human beings with unique needs (Lloyd & Carson, 2011; Straughair et al., 2019; Younas & Maddigan, 2019).

Compassionate nurses can elicit sensitive and crucial information from patients who may find it difficult to discuss their feelings (Singh et al., 2018). Patients report that receiving compassionate care enriches the human connection with nurses and other health professionals which in turn enhances the quality of care provided (Lown et al., 2011; The Schwartz Center for Compassionate Healthcare, 2015).

Pehlivan and Güner's (2020) narrative review highlighted how compassion, similar to earlier systematic reviews (Singh et al., 2018), is associated with therapeutic physiological and mental effects on general wellbeing including improved mood and peace of mind. Compassion enables nurses to move beyond technological, disease-focused, and reductionist care to more altruistic care (Hartrick Doane & Varcoe, 2015; Youngson, 2008), thereby improving their relationship with the patient and promoting positive health outcomes (Pehlivan & Güner, 2020).

Prevalence of Complex Patients

Global context. The prevalence of complex patients has been increasing around the world. Hajat and Stein (2018) reported that the global prevalence of individuals designated as complex patients with two or more chronic physical and mental health problems ranged from 16% to 57%. A recent systematic review noted that the global prevalence of complex patients varies across different regions. For example, in the United Kingdom the prevalence ranges from 16% to 58% and in the United States the prevalence ranges from 25.5% to 81% with advancing age. The estimated prevalence of complex patients is 45% in China and as high as 71% in Russia. According to another scoping review of 76 studies, which included data pertaining to populations ranging from 103 to 242,952 patients, the prevalence of complex patients is also increasing in low- and middle-income countries (e.g., Brazil, China, South Africa, India, Mexico, and Iran). The prevalence across these countries ranges from 3.2% to 90.5% (Abebe et al., 2020).

Nguyen (2019) conducted a systematic review and meta-analysis and noted the pooled prevalence of complex patients across low-, middle-, and high-income countries to be 33.1%. According to World Bank classifications high-income countries are those with a Gross National Income (GNI) equal or greater than 12,695 USD, middle-income countries have a GNI of 1,046 to 12,695 USD, and the low-income countries have a GNI of less than 1,046 USD. Kingston et al. (2018) estimated that the projected prevalence of complex patients may double between 2015 and 2035. A recent strongly rated quantitative survey estimated the prevalence of multimorbidity and its associated factors in 17 European countries. The researchers reviewed the data of 63,844 participants aged 50 years and

above from the *Survey of Health, Ageing and Retirement in Europe*. The overall prevalence of multimorbidity was 28.2% among men and 34.8% among women (Bezerra de Souza et al. 2021).

Canadian context. There has been an increased prevalence of complex patients within the Canadian context. Roberts et al. (2015) analyzed the data of 105,416 Canadian adults from the *Canadian Community Health Survey* of 2011/12. They noted that 12.9% of Canadian adults aged 20 years and above had two or more chronic conditions, and 3.9% had three or more chronic physical and mental health problems. Basham and Karim (2019) analyzed the *Canadian Community Health Survey* data from 2013-2014. A prevalence of 14% was reported for residents with three or more chronic conditions. Sakib et al., (2019) extracted the data of 29,841 residents from the *Canadian Longitudinal Study on Aging*. The researchers estimated that the prevalence of complex patients is on the rise, suggesting that about 39.6% of older Canadian residents had three or more chronic conditions. Nicholson et al. (2019) conducted a retrospective cohort analysis of *Canadian Primary Care Sentinel Surveillance* data from 1990 to 2013. They reviewed the data of 367,743 adult primary care patients. They discovered 195,838 (53.3%) adult primary care patients were living with two or more chronic conditions and 121,864 (33.1%) adult patients were living with three or more chronic conditions. More recently, Chireh and D'Arcy (2020), after calculating the results of a survey of 7,764 older adults, estimated a 12.7% increase in the prevalence of complex patients in Canada. In 1978, similar surveys reported that about 19.4% of older adults experienced multiple health conditions; by 2014 the number of older adults with multimorbidity had risen to 32.1% (see Table 2).

Table 2

Prevalence of Complex Patients in Canada

Reporting Year	Prevalence		Source
	Two or more chronic conditions	*Three or more chronic conditions*	
2011/12	12.9%	3.9%	Roberts et al. (2015)
2013/14	NA	14%	Basham & Karim (2019)
1990-2013	53.3%	33.1%	Nicholson et al. (2019)
2015	NA	39.6%	Sakib et al. (2019)
1978-2015	32.1%	NA	Chireh & D'Arcy (2020)

In comparison, survey results at the provincial level indicated that NL had the highest prevalence of complex patients relative to other Canadian provinces. In 2020, Chireh and D'Arcy reported a greater prevalence of complex patients in the Atlantic provinces, with estimates as high as 20.3%. Based on available survey statistics, Feely et al. (2017) documented that in 2011-2012 the proportion of complex patients living in NL with two or more chronic conditions was 28.1% while 10.2% of patients surveyed had three or more chronic conditions.

Health and Social Care Needs of Complex Patients

According to qualitative and quantitative studies, complex patients require various acute and supportive health and social care services over time to address ongoing physical and mental health conditions (Bayliss, 2012; Loeb et al., 2016; Manning & Gagnon, 2017; Rudin et al., 2017). Acute services include physical care, treatment for complications associated with chronic conditions, and meeting nutritional needs. Burgos et al. (2020) conducted a cohort survey of 101 complex patients. They discovered that 83% of those surveyed were at risk for malnutrition and 86% were malnourished, indicating a lack of

access to food at home or within the local community. Additionally, the researchers reported that some of these complex patients were frequently admitted to acute care settings with disease-related malnutrition because they could not afford a healthy diet; and, upon admission to hospital, were at a greater risk of mortality.

From studies graded moderate to strong quality, evidence suggests that complex patients frequently visit health care settings due to unanticipated complications or are discharged from hospital and readmitted within a short timeframe. Westley-Wise et al. (2020) after a cohort study of 38,156 respondents, found that the hospital readmission rates for patients with multimorbidities were high at 38.9% in the first 30 days and at 21% within 6 months. The risk of unplanned readmission was greater for those of Indigenous background (aOR=1.45, 95% CI 1.25–1.69), for individuals with socioeconomic disadvantage (aOR=1.32, 95% CI 1.08–1.61), and for those without medical insurance (aOR=1.28 95% CI 1.21–1.36). These complex patients were mostly readmitted with exacerbation of physical health conditions. Admission rates ranged from 10.2% to 70.4%. Schoen et al. (2008), based on their survey of 9,944 complex patients in the United States, Australia, Canada, France, Germany, the Netherlands, New Zealand, and the United Kingdom, noted that 17–18% of hospitalized chronically ill patients with complex health care needs were readmitted to hospitals in the Unites States, Canada and the Netherlands.

Heins et al. (2020) reviewed electronic medical records of 245,065 patients with two or more chronic diseases. They reported that age, sex, morbidity, and health services and medication use in the previous year, were the strongest predictors of hospital readmission and emergency department visitation. Compared to the general patient

population, complex patients had repeated episodes of illness and required more frequent contact with health professionals. It is not surprising then, that quantitative researchers have recommended that complex patients should receive comprehensive, integrated care with adequate mental health support because of individualized needs and, often, deteriorating physical and mental health status (Loeb et al., 2016; Luijks et al., 2012).

A scoping review of 34 studies (Karam et al., 2021) representing both quantitative and qualitative research designs, underscored how important it is for nurses to provide coordinated, integrated care to meet the unique health and social care needs of complex patients. Given the adverse impacts of low literacy, poverty, lack of self-care motivation and resources, homelessness, substance abuse, mental illness, and inadequate social support for coping and recovery, a thorough understanding of the individual's lifeworld is essential. Skilled nursing assessments are critical to ensuring that complex patients receive needed emotional, social, and tangible interventions to achieve their holistic health goals. Nurses must have a deep understanding of the personal and sociocultural values of complex patients and how these and other social determinants of health can affect each person's ability to manage independently (Heins et al., 2020; Manning & Gagnon, 2017). Nurses must be prepared to coordinate the range of services needed at any point in time and facilitate care transitions as they occur (Akugizibwe et al., 2021; Karam et al., 2021; Tuzzio et al., 2021).

Undoubtedly, the disease burden of complex patients may affect and increasingly worsen their physical and mental health status and overall quality of life (Karam et al., 2021; Westley-Wise et al., 2020). As a result of the multimorbidities, complex health care

needs, socioeconomic factors, and unstable, everchanging health status, complex patients rely on a larger proportion of health care resources relative to other patients. Griffith et al. (2019) conducted three retrospective cohort studies to examine the relationship between multimorbidity (three or more conditions) and health services use in Canada. They identified 376,434 patients with diabetes, dementia, stroke, and, or, other physical and mental health issues. Health care utilization rates were assessed in terms of general practitioner and emergency medical attention, hospitalizations, and home care visitation. The researchers observed that higher levels of comorbidity were associated with greater acute health care utilization. Moreover, patients with two or more comorbidities utilized health care services as many as nine to 14 times over a period of a month.

Negative Care Experiences of Complex Patients

Based on the findings from moderate and strongly rated qualitative studies, researchers discovered that complex patients are more likely to experience care neglect, stigmatizing labels, and discrimination in primary care settings (Loeb et al., 2016; Webster et al., 2019). Systematic reviews have provided evidence that complex patients experience physical and psychological care neglect; are assigned derogatory labels; are often abandoned and ignored, and, may be subjected to discriminatory policies and practices within the health care system in acute (Van Boekel et al., 2013), mental health, and long-term care settings (Knaak et al., 2017; Van Boekel et al., 2013). Complex patients are often poorly assessed and even left feeling offended or insulted after being spoken to in derogatory language (Javed et al., 2021; Knaak et al., 2017). There are reports that health professionals have adopted more of a dehumanizing approach toward complex patients by

dismissing and devaluing their input in mental health settings (Knaak et al., 2017; Reader et al., 2013). In primary care settings it is not unusual for complex patients to be absent from their own health care planning and decisions, often left with insufficient information about their health, illness, and treatment regimen (Loeb et al., 2016; Webster et al., 2019). Schoen et al. (2008) surveyed 9,944 individuals with multiple chronic conditions and complex health are needs in eight countries. It was reported that one quarter of the survey participants from the United States and about half of the participants from European countries stated that health professionals did not involve them in decision-making and did not discuss health care goals and priorities. Close to more than one third of those completing the survey indicated that health professionals did not encourage them to pose questions and did not take note of their concerns.

Strong qualitative evidence further suggests that some health professionals including nurses may downplay clinically legitimate complaints and the suffering of complex patients, considering those complaints as attention-, drug-, or benefit-seeking, or a consequence of psychiatric disorders (Manning & Gagnon, 2017; Webster et al., 2019). If nurses ensure that they are person-oriented as opposed to disease-oriented when caring for complex patients, nurses can better explore and address presenting needs. In addition, adopting a relational care approach through establishing a therapeutic relationship also enhances nurses' awareness of the illness experiences of complex patients (Fulton, 2014; Kuluski et al., 2017; Rich et al., 2012).

Barriers to the Provision of Compassionate Nursing Care

Reported in primary studies are a range of barriers that negatively affect the provision of compassionate nursing care. These barriers can be categorized as provider-level, managerial, and organizational barriers (Sinclair et al., 2016).

Provider-level barriers. Frequently reported barriers at the provider level are lack of motivation, fatigue, burnout, stress, inability to develop a therapeutic relationship with patients, limited education and training, long working hours, and time constraints. For example, Christiansen et al. (2015) conducted an MMR study of strong quality to explore barriers to compassionate care from the perspective of a large sample of health professionals (n=146) and students (n=166). They reported limited motivation, stress, burnout, workload, long working hours, and limited resources. Jones et al. (2016) completed a strongly-rated qualitative analysis of reflective logs of 171 intensive care nurses and reported that the workload, long working hours, and burnout prevented nurses from practicing a compassionate approach with patients and their families. Babaei and Taleghani (2019) conducted an ethnographic inquiry of 40 nurses, 16 patients, and eight family members. They reported several barriers: workload, time constraints, lack of motivation, routine care, and lack of role models.

Managerial barriers. Based on moderately- to strongly-rated qualitative and quantitative studies, scholars have reported that inadequate support, lack of modelling by managers, and little opportunity for staff to process stress are the common barriers to the provision of compassionate nursing care at the managerial level. For example, Jones et al. (2016) reported that delivery of compassionate care in intensive care units was blocked by

the negative work environment that contributed to inadequate human and material resources and other supports necessary for compassionate nursing care. Christiansen et al. (2015), too, had identified that the work environment was not conducive to compassionate nursing care delivery primarily because managers showed little compassion toward staff resulting in the absence of models of compassion that nurses could emulate. Papadopoulos et al. (2020) conducted an international survey of 1,217 nurse managers across 17 countries. Managers responded that they found it challenging to make the concerted effort to show compassion toward frontline nurses as managers were either not motivated or they came up against bigger, system-level obstacles.

Organizational barriers. Commonly reported organizational barriers include staff shortage; the lack of appreciation, rewards, and incentives; the lack of policies and resources to support compassionate care delivery; and the greater emphasis on procedural tasks over quality of compassionate patient care. For example, Valizadeh et al. (2018) interviewed 15 nurses across four acute care hospitals in Iran and identified organizational barriers to compassionate care. Commonly reported barriers were patient case loads, insufficient staffing patterns, the business organizational culture of the hospital institution, and the lack of organizational mandates focused on compassionate care. Dev et al. (2019) conducted a cross-sectional survey of 801 nurses, 516 physicians, and 383 medical students. The researchers reported that nurses mainly experienced obstacles to compassionate nursing care delivery stemming from the work environment including lack of administrative support, appreciation, and resources.

Problem Statement

Complex patients have a host of chronic health issues and multifaceted health care needs (Tsasis & Bains, 2008) Therefore, they frequently visit health care settings to seek medical attention and to obtain emotional and physical supports. Also, complex patients regularly use community support programs and services to manage their multiple chronic conditions (Kuluski et al., 2017; Tsasis & Bains, 2008). Frequent visitation in acute and community care settings and continuous interaction with overworked and highly stressed health professionals affect the quality of care these patients receive (Chan et al., 2019; Foo et al., 2020). Health professionals who fail to practice compassion toward this marginalized patient population may do so because of limited understanding of patient-perceived expectations and the individual health and social care needs of complex patients (Gauvin et al., 2019; Rich et al., 2012). Lack of compassionate care is also associated with provider-, managerial-, and organizational-level barriers affecting, too, the ability of health professionals to effectively and adequately meet the health and social care needs of complex patients (Tehranineshat et al., 2019; Pehlivan & Güner, 2020). However, it is not known if the above barriers are applicable to local contexts, for example, during the nursing care of complex patients in NL. A clear gap exists in the nursing literature concerning the practice of, and the barriers to, providing compassionate nursing care for complex patients.

Drawing from the literature review, there are several research gaps. First, the behavioural indicators of compassionate care among patients with one disease or one chronic illness are well known, but there is a dearth in the research and practice literature concerning compassionate care of complex patients, in particular compassionate nursing

care. Second, there are well documented global barriers to the provision of compassionate care. However, it is not known if these barriers are relevant to nurses providing compassionate care to complex patients in the local context of NL.

Given there is ample evidence that compassionate nursing care has proven effective in advancing the quality of care for complex patients, it is paramount that strategies be designed for implementation in practice to improve compassionate nursing care toward this marginalized patient population. However, behavioural indicators and the barriers must first be understood before attempting to design implementation strategies to promote and improve compassionate nursing care of complex patients. This dissertation, therefore, was oriented to addressing the qualitative gap concerning the nature of compassionate nursing care of complex patients in NL, and, the quantitative gap pertaining to the optimal and contextually-relevant implementation strategies that would promote the uptake of compassionate behaviours and improve the delivery of compassionate nursing care.

Research Purpose and Objectives

The purpose of this doctoral dissertation was to promote compassionate nursing care of complex patients through advancing understanding of compassionate care delivery including existing barriers and by proposing implementation strategies to effect change in practice. An exploratory sequential three-phase MMR study design was employed to achieve four objectives:

1. To identify the behavioural indicators of compassionate nursing care according to individuals with complex health and social care needs (i.e., complex patients). (Phase 1 Qualitative Component)

2. To identify the barriers that inhibit compassionate nursing care delivery according to individuals with complex health and social care needs (i.e., complex patients). (Phase 1 Qualitative Component)
3. To generate a list of potential implementation strategies to improve compassionate nursing care based on participant perspectives of behavioural indicators and barriers, that would become the basis for a Q-sort survey for distribution in the quantitative phase. (Phase 2 Instrument Development)
4. To identify the highest ranked compassionate nursing care implementation strategies from a Q-sort survey of nurses, nurse managers, health care administrators, policymakers, and compassionate care experts. (Phase 3 Quantitative Component)

Research Design

MMR is a research methodology with four characteristic features: a) the integration of qualitative and quantitative methods, b) the integration of qualitative and quantitative paradigms, c) the collection of qualitative and quantitative data, and d) the analysis of both datasets using distinct methods before the integration of the qualitative and quantitative findings to develop a more comprehensive understanding of a phenomenon (Creswell & Plano Clark, 2018). An exploratory sequential MMR study is a three-phase design made up of a dominant qualitative phase followed by a development phase and a quantitative phase (Creswell & Plano Clark, 2018). The development phase may entail development of a data collection instrument, intervention, digital tool, and, or, new variables. The qualitative phase generally informs the development of the method in the quantitative phase be it an

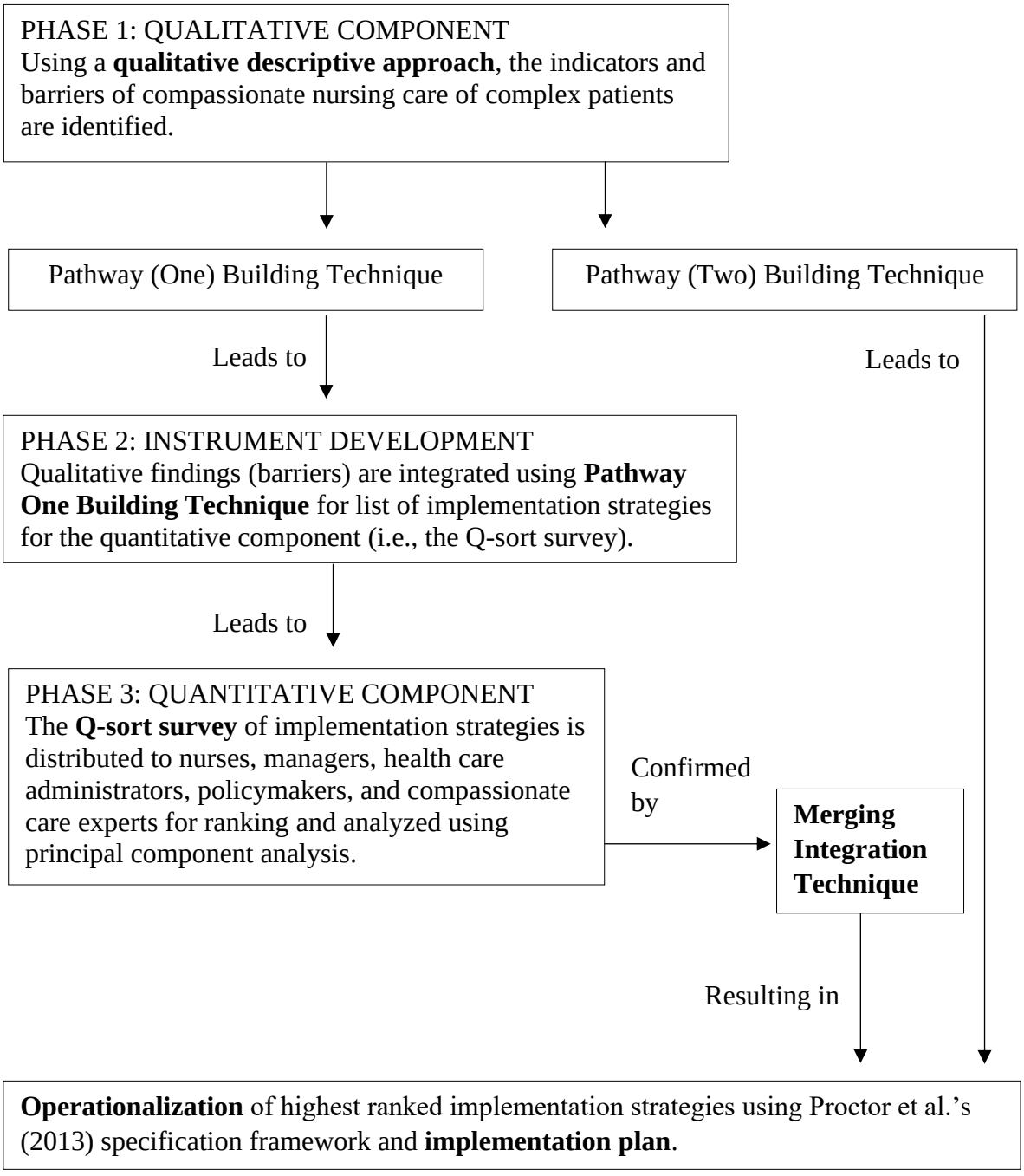


Figure 2

Schematic Diagram of the MMR Design

instrument or intervention, and so forth (Creswell & Plano Clark, 2018). The developed quantitative method is grounded in the qualitative findings and is considered more contextually-relevant and sensitive to the particular needs and circumstances of the culture or population under study.

This dissertation study was an exploratory sequential MMR design that consisted of three phases (see Figure 2 for a schematic diagram). Phase 1 was the dominant qualitative component during which a descriptive qualitative approach was used to gain comprehensive knowledge of the nature of compassionate nursing care of complex patients in NL including the behavioural indicators and barriers. Based on data from interviews with individuals who shared their hospital experiences as complex patients, a list of potential implementation strategies to promote compassionate nursing care was generated using a novel pathway building technique (see Chapter 3 “The Pathway Building Technique in Implementation Research Using Mixed Methods Designs” for full details). Then, during Phase 3, the quantitative component, the Q-sort survey consisting of the list of implementation strategies was electronically distributed to nurses, nurse managers, health care administrators, policymakers, and compassionate care experts who ranked the 21 implementation strategies according to what they deemed were most relevant to promoting compassionate care. Survey results were analyzed using principal component analysis and confirmed through the merging technique by comparing Phase 1 qualitative data with Phase 3 survey results. The six highest ranked implementation strategies were then operationalized for specific use in NL practice contexts and an implementation plan created by integrating Phase 1 data using the second pathway of the pathway building technique.

Dialectical pluralism served as the guiding paradigm for this MMR study. Dialectical pluralists posit that distinct qualitative and quantitative paradigms should be used and integrated to inform MMR. Johnson (2011) proposed that dialectical pluralism can serve as a metaparadigm for addressing the longstanding paradigm debate in MMR and for ensuring concurrent and equal emphasis on multiple paradigms and on developing synthesized knowledge (Johnson et al., 2014; Johnson, 2017).

Ontological Stance

Ontologically, dialectical pluralism reflects multiple realities in addition to aligning with multiple ways to construe and articulate reality. The ontological assumptions are: a) scholars operating out of dialectical pluralist stance must consider that there is no single truth to understanding any phenomena; instead, reality, how one sees the world, is constantly changing. Reality is construed at multiple levels: objective (causal, structural, and material), subjective (personal), inter-subjective (shared cultural, social, and political), disciplinary, and pragmatic, and, b) there are divergent paradigms or worldviews and sources of evidence which provide information about different aspects of an ever-changing and multifaceted reality (Johnson et al., 2014; Johnson, 2017).

Epistemological Stance

The epistemological stance of dialectical pluralists is dialectical, dialogical, and hermeneutical (Johnson, 2012). That is, they "acknowledge the fallibility of knowledge, have the goal of producing somewhat heterogeneous and somewhat homogeneous wholes that respect multiple standpoints, and place weight on solutions that work in theory and contextualized practice" (Johnson, 2017, p. 164). Understanding reality requires listening to

diverse and contradictory viewpoints and continuous dialogue to apply beneficial ideas to understand the phenomenon under consideration. The dialogue could be intrapersonal (paying close attention to one's own viewpoints) and interpersonal (paying attention to others' viewpoints). The hermeneutical stance posits that each viewpoint that contributes to unraveling a reality is an interpretive account (Johnson, 2017).

Phase 1: Qualitative Component

As mentioned above, the objective of the qualitative component was to identify indicators and barriers of compassionate nursing care from individuals with complex health and social care needs (i.e., complex patients). A qualitative descriptive approach using semi-structured interviews enabled exploration of individuals' perspectives of compassionate nursing care by drawing from their experiences as complex patients.

Individuals who had been complex patients in hospital settings in St. John's, NL were recruited to participate in face-to-face or virtual interviews. Multiple recruitment strategies were used, such as posters (see Appendix F), social media campaigns, and recruitment emails (see Appendix G) to community and patient support groups. In total, 23 interviews were conducted. The data were analyzed using reflexive thematic analysis (Braun, & Clarke, 2019) to identify compassionate nursing care indicators and the barriers.

Phase 2: Instrument Development

Integration of Phase 1 qualitative data was achieved using the pathway building technique. Integration can occur in five ways: connecting, building, merging, embedding, (Creswell & Plano Clark, 2018; Fetters, Curry, & Creswell, 2013; Creswell et al., 2011), and threading (Moran-Ellis et al., 2006). Building was the chosen technique in order to

build on Phase 1 qualitative findings to develop the quantitative data collection instrument (i.e., the Q-sort survey) for use in Phase 3. Merging was the other integration technique used after completion of Phase 3 for higher level interpretation (see Chapter 4 “An Exploratory Sequential Mixed Methods Study of Implementation Strategies to Promote Compassionate Nursing Care of Complex Patients” for a more fulsome explanation).

Phase 3: Quantitative Component

The objective of the quantitative component was to determine the highest ranked compassionate nursing care implementation strategies through a Q-sort survey of frontline nurses, nurse managers, health care administrators, compassionate care experts, and policymakers. The survey was founded on Q methodology by using a multiple-participant format to explore and understand complicated and contested concepts (i.e., respondents were asked to rank implementation strategies that would improve compassionate nursing care of complex patients) by drawing on the perspectives of a relevant group of individuals (Watts & Stenner, 2005, 2012).

A purposive and snowball sample of frontline nurses, nurse managers, health care administrators, policymakers, and compassionate care experts was recruited from St. John's, and various international settings. The inclusion criteria varied for target groups; for frontline nurses: a) nurses who worked in the three acute care hospitals in St John’s and had the experience of implementing organizational policies. The criteria for the floor managers and hospitals administrators were: a) those who had experience in frontline care and developing policies (this was identified from their designation and role), b) those who had been working in any of the hospitals in St. John's, and c) those who had been working as

policymakers for the health authority of the city (i.e., Eastern Health). The inclusion criteria for the compassionate care experts were: a) researchers working in health-related disciplines such as nursing, medicine, psychology, and mental health and b) those who had published at least one peer-reviewed paper about compassion in nursing or health care, compassionate care interventions, and, or, about educating nurses and, or, health professionals about compassionate nursing care.

The Q-sort survey consisted of three sections (see Appendix F). The first section included demographic information about respondents' age, gender, country of residence, previous or current experiences working in Canadian health care settings, and relevant academic and research publications. The second section included the list of 21 implementation strategies designed to address the barriers to compassionate nursing care. A sorting grid with detailed instructions about the sorting process (i.e., ranking the strategies) was included with the strategies. Two open-ended questions were included at the end inviting respondents to comment about the relevance of the implementation strategies and any challenges completing the survey. The survey results were analyzed using principal component analysis by Varimax rotation to generate the most meaningful factor solution after capturing responses (Watts & Stenner, 2005, 2012).

Research Ethics

Ethics approval (see Appendix C) for the dissertation study was obtained from the Health Research Ethics Board (HREB) (Approval Number# 2020.255). Written, informed consent (see Appendix D) was obtained from participants in Phase 1, the qualitative component, and electronic implied consent (see Appendix E) was obtained during Phase 3,

the quantitative component. Phase 1 participants and Phase 3 respondents were informed of their rights to withdraw from the study at any time. Strict protocols were in place to maintain confidentiality and anonymity of research data throughout all study phases. The data were encrypted and stored in a password-protected computer.

Brief Overview of Dissertation Results

Perceived Compassionate Care Indicators and Barriers

The 23 individuals who participated in Phase 1 semi-structured interviews had various physical and mental health problems such as diabetes, cardiovascular illnesses, chronic respiratory diseases, musculoskeletal problems, major depression, bipolar disorder, generalized anxiety, and schizophrenia. Based on the individuals' descriptions of their experiences as complex patients, six compassionate nursing care behavioural indicators were identified. When nurses provide compassionate care, participants shared that nurses are:

- sensitive
- aware
- nonjudgmental
- positive
- empathic, and
- altruistic.

Participants also responded to interview questions (see Appendix H for semi-structured interview guide) pertaining to what they thought inhibited nurses from providing

compassionate care to complex patients. The perceived barriers to compassionate nursing care delivery included:

- limited knowledge about patient needs
- limited experience
- lack of educational preparation
- underpaid
- lack of appreciation
- limited motivation
- greater focus on getting things done
- workload
- negative patient behaviours
- unrealistic patient demands and expectations
- lack of organizational supports
- lack of compassion modelling
- interprofessional conflicts
- nurse-patient conflicts
- nurses' fears related to personal safety
- stress and burnout
- self-care neglect
- negative personal and familial experiences, and
- routinization of care.

Data integration and mapping the above barriers against theoretical frameworks and models from implementation science during the instrument development phase, produced a list of 21 implementation strategies that was then converted into the concourse/statements of the Q-sort survey. The 21 strategies represented several integration functions including Education and Training, Environmental Restructuring, and, Enablement and Modelling (see Appendix B "Q-Sort Survey" for full list).

Highest Ranked Implementation Strategies

Out of the 140 nurses, nurse managers, health care administrators, policymakers, and compassionate care experts invited to complete the Q-sort survey, 32 responded and ranked the 21 implementation strategies (response rate 22.9%). Factor analysis of the 32 Q-sorts generated a five-factor solution explaining 64.15% of the variance. The highest ranked strategies across all five factors chosen were based on the following criteria: a) If the implementation strategy received a ranking of +3 on any of the five, b) If the strategy did not receive a ranking of +3, but received three positive rankings (+2, +1), and c) If the strategy received a ranking of -3 or at least two negative rankings on any of the factors, the strategy was considered lowest ranked across all five factors. Based on this analysis, it was determined that six of the 21 implementation strategies have the most potential. These highest ranked implementation strategies were then operationalized using an implementation science specification framework which involved several steps including combining "shadowing experts" and "modelling intended change" to form one implementation strategy (see #4 below). The highest ranked implementation strategies were:

1. Use facilitation to establish a process of interactive problem solving and support to discuss nurses' challenges and negative encounters with complex patients and their families;
2. Involve patients/consumers and family members in the efforts to promote compassionate care of complex patients;
3. Organize clinician implementation team meetings to support providers and provide them opportunities to reflect on compassionate care implementation strategies;
4. **Model** the intended change by **shadowing** other experts (i.e., nurses practicing compassion towards complex patients) and by reflecting and applying observed compassionate behaviours; and
5. Provide ongoing consultation with stress experts or counselors to address nurse burnout and to promote self care.

One of the other steps was naming each strategy: “Implement Team Meetings to Support Compassionate Practice,” “Patient and Informal Caregiver Involvement to Foster Compassion,” “Model Compassionate Behaviours Through Reflective Sessions and Shadowing the Experts,” “*Implementation* Facilitation to Support Nurses in Compassionate Practice,” and “Supporting Nurses in Stress Management through Consultations” and the why, how, where, and when for translation in real-life settings in NL and beyond. An action plan was then created that includes the Reach, Effectiveness, Adoption, Implementation, and Maintenance (RE-AIM) evaluation measures.

Summary

It is apparent from the theoretical and empirical literature that complex patients are prevalent and increasing in numbers in both global and Canadian contexts. Their multimorbidity, comorbidity, and, or, drug-related issues require intensive self-management, and, hospital and community physical and mental health care and supports. However, their frequent engagement within the health care system have resulted in many complex patients experiencing negative encounters with health professionals, including nurses. The reports of marginalization and discriminatory practices toward this population speak to the void of compassion and the critical need for compassionate nursing care delivery.

The literature review resulted in moderate to strongly rated qualitative and quantitative studies indicating substantial evidence that compassionate nursing care could improve the nurse-patient therapeutic relationship, general physical and mental wellbeing, and health outcomes. Patients expect nurses and other health professionals to show compassion during clinical encounters but there are widely known and well-documented barriers at provider, managerial and organizational levels. To promote compassionate nursing care for complex patients, a better and contextualized understanding of barriers could enable development of effective implementation strategies to foster nurse compassion in a local setting like NL. High-quality compassionate nursing care can improve clinical outcomes for complex patients and promote positive experiences and satisfaction with care.

References

Abebe, F., Schneider, M., Asrat, B., & Ambaw, F. (2020). Multimorbidity of chronic non-communicable diseases in low-and middle-income countries: A scoping review. *Journal of Comorbidity, 10*, 1-13. https://doi.org/10.11772F2235042X20961919

Akugizibwe, R., Calderón-Larrañaga, A., Roso-Llorach, A., Onder, G., Marengoni, A., Zucchelli, A., Rizzuto, D., & Vetrano, D. L. (2020). Multimorbidity Patterns and unplanned hospitalisation in a cohort of older adults. *Journal of Clinical Medicine, 9*(12), 4001. https://doi.org/10.3390/jcm9124001

Babaei, S., & Taleghani, F. (2019). Compassionate care challenges and barriers in clinical nurses: A qualitative study. *Iranian Journal of Nursing and Midwifery Research, 24*(3), 213–219. https://doi.org/10.4103/ijnmr.IJNMR_100_18

Basham, C. A., & Karim, M. E. (2019). Multimorbidity prevalence in Canada: A comparison of Northern Territories with Provinces, 2013/14. *International Journal of Circumpolar Health, 78*(1), 1607703. https://doi.org/10.1080/22423982.2019.1607703

Bauman, C. A., Fillingham, J., Candidate, E., Keely-Dyck, E., Elrafih, Y., Stevenson, J., Boehm, M., Haesler, L., Kaufman, S., Duck, T., Kenney, J., & Henry, S. (2019). An approach to interprofessional management of complex patients: A case report. *The Journal of the Canadian Chiropractic Association, 63*(2), 119–125.

Bayliss, E. A. (2012). Simplifying care for complex patients. *Annals of Family Medicine, 10*(1), 3-5. https://doi.org/10.1370/afm.1352.

Bazeley, P. (2018). *Integrating analyses in mixed methods research*. Sage.

Beran, D. (2015). Difficulties facing the provision of care for multimorbidity in low-income countries. *Comorbidity of Mental and Physical Disorders*, 179, 33-41. https://doi.org/10.1159/000365545

Bezerra de Souza, D. L., Oliveras-Fabregas, A., Espelt, A., Bosque-Prous, M., de Camargo Cancela, M., Teixidó-Compañó, E., & Jerez-Roig, J. (2021). Multimorbidity and its associated factors among adults aged 50 and over: A cross-sectional study in 17 European countries. *PloS One, 16*(2), e0246623. https://doi.org/10.1371/journal.pone.0246623

Bradshaw, A. (2011). Compassion: What history teaches us? *Nursing Times, 107*(19-20), 12-14.

Bradshaw, C., Atkinson, S., & Doody, O. (2017). Employing a qualitative description approach in health care research. *Global Qualitative Nursing Research*, 4, 2333393617742282.

Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health, 11*(4), 589-597. https://doi.org/10.1080/2159676X.2019.1628806

Braun, V., & Clarke, V. (2021). Conceptual and design thinking for thematic analysis. *Qualitative Psychology*. https://doi.org/10.1037/qup0000196

Burgos, R., Joaquín, C., Blay, C., & Vaqué, C. (2020). Disease-related malnutrition in hospitalized chronic patients with complex needs. *Clinical Nutrition, 39*(5), 1447–1453. https://doi.org/10.1016/j.clnu.2019.06.006

Canadian Nursing Association. (2017). *Code of ethics for registered nurses*. fhttps://www.cna-aiic.ca/en/nursing/regulated-nursing-in-canada/nursing-ethics

Cane, J., O'Connor, D., & Michie, S. (2012). Validation of the theoretical domains framework for use in behaviour change and implementation research. *Implementation Science, 7*(1), 1-17. https://doi.org/10.1186/1748-5908-7-37

Chan, B., Hulen, E., Edwards, S., Mitchell, M., Nicolaidis, C., & Saha, S. (2019). "It's Like Riding Out the Chaos": Caring for socially complex patients in an ambulatory intensive care unit (A-ICU). *Annals of Family Medicine, 17*(6), 495–501. https://doi.org/10.1370/afm.2464

Chireh, B., & D'Arcy, C. (2020). Contrasting trends in prevalence of chronic diseases and multimorbidity, Canada 1978–2014. *Comprehensive Clinical Medicine, 2*(9), 1563-1572. https://doi.org/10.1007/s42399-020-00432-8

Christiansen, A., O'Brien, M. R., Kirton, J. A., Zubairu, K., & Bray, L. (2015). Delivering compassionate care: The enablers and barriers. *British Journal of Nursing, 24*(16), 833–837. https://doi.org/10.12968/bjon.2015.24.16.833

Cole-King, A., & Gilbert, P. (2011). Compassionate care: The theory and the reality. *Journal of Holistic Healthcare, 8*(3), 29-33. http://hdl.handle.net/10545/621778

Cornwell, J., & Goodrich, J. (2009). Ensuing compassionate care in hospital. *Nursing Times, 105*(15), 14–16.

Critical Appraisal Skills Program. (2018). *CASP systematic review checklist*. https://casp-uk.net/casp-tools-checklists/.

Cross, J.S. (2017). *Families say patients face 'neglect,' 'substandard care' in nursing home*. https://globalnews.ca/news/3537347/neglect-at-sault-ste-marie-nursing-home/

Dev, V., Fernando, A. T. III, Kirby, J. N., & Consedine, N. S. (2019). Variation in the barriers to compassion across healthcare training and disciplines: A cross-sectional study of doctors, nurses, and medical students. *International Journal of Nursing Studies, 90*, 1–10. https://doi.org/10.1016/j.ijnurstu.2018.09.015

Epstein, J. A., & Wu, A. W. (2020). Delivering complex care: Designing for patients and physicians. *Journal of General Internal Medicine*, 1-3. https://doi.org/10.1007/s11606-020-06212-3

Fetters, M. D., & Molina-Azorin, J. F. (2017). The Journal of Mixed Methods Research starts a new decade: The mixed methods research integration trilogy and its dimensions. *Journal of Mixed Methods Research, 11*(3), 291-307. https://doi.org/10.11772F1558689817714066

Fetters, M. D., Curry, L. A., & Creswell, J. W. (2013). Achieving integration in mixed methods designs—principles and practices. *Health Services Research, 48*(6pt2), 2134-2156. https://doi.org/10.1111/1475-6773.12117

Foo, K. M., Sundram, M., & Legido-Quigley, H. (2020). Facilitators and barriers of managing patients with multiple chronic conditions in the community: A qualitative study. *BMC Public Health, 20*(1), 273. https://doi.org/10.1186/s12889-020-8375-8

Frampton, S. B., Guastello, S., & Lepore, M. (2013). Compassion as the foundation of patient-centered care: the importance of compassion in action. *Journal of Comparative Effectiveness Research, 2*(5), 443–455. https://doi.org/10.2217/cer.13.54

Fulton, J. S. (2014). The future of complex care. *Clinical Nurse Specialist, 28*(4), 195-196.

Gauvin, F. P., Ganann, R., Heald-Taylor, G., Markle-Reid, M., McAiney, C., Moat, K. A., & Lavis, J. N. (2019). *Engaging older adults with complex health and social needs, and their caregivers, to improve hospital-to-home transitions in Ontario*. http://hdl.handle.net/11375/26138

Goetz, J. L., Keltner, D., & Simon-Thomas, E. (2010). Compassion: An evolutionary analysis and empirical review. *Psychological Bulletin, 136*(3), 351–374. https://doi.org/10.1037/a0018807

Griffith, L. E., Gruneir, A., Fisher, K., Panjwani, D., Gafni, A., Patterson, C., Markle-Reid, M., & Ploeg, J. (2019). Insights on multimorbidity and associated health service use and costs from three population-based studies of older adults in Ontario with diabetes, dementia and stroke. *BMC Health Services Research, 19*(1), 313. https://doi.org/10.1186/s12913-019-4149-3

Guetterman, T. C., Fetters, M. D., & Creswell, J. W. (2015). Integrating quantitative and qualitative results in health science mixed methods research through joint displays. *The Annals of Family Medicine, 13*(6), 554-561. https://doi.org/10.1370/afm.1865

Hajat, C., & Stein, E. (2018). The global burden of multiple chronic conditions: A narrative review. *Preventive Medicine Reports*, 12, 284-293. https://doi.org/10.1016/j.pmedr.2018.10.008

Hamilton, D. (1994). Constructing the mind of nursing. *National History Review, 2*(1), 3-28.

Hartrick Doane, G., & Varcoe, C. (2015). *How to nurse: Relational inquiry with individuals and families in changing health and health care contexts*. Lippincott Williams & Wilkins.

Haslam, D. (2015). More than kindness. *Journal of Compassionate Health Care, 2*(1), 6. https://doi.org/10.1186/s40639-015-0015-2

Heins, M., Korevaar, J., Schellevis, F., & Rijken, M. (2020). Identifying multimorbid patients with high care needs: A study based on electronic medical record data. *The European Journal of General Practice, 26*(1), 189–195. https://doi.org/10.1080/13814788.2020.1854719

Hem, M. H., & Heggen, K. (2004). Is compassion essential to nursing practice? *Contemporary Nurse, 17*(1-2), 19-31. https://doi.org/10.5172/conu.17.1-2.19

Henderson, A., & Jones, J. (2017). Developing and maintaining compassionate care in nursing. *Nursing Standard, 32*(4), 60–69. https://doi.org/10.7748/ns.2017.e10895

Hoffman, S., Grossman, P., & Hinton, D. (2011). Loving-kindness and compassion meditation: Potential for psychological interventions. *Clinical Psychology Review, 31*(7), 11-26-1132. https://doi.org/10.1016/j.cpr.2011.07.003

Hong, Q. N., Pluye, P., F`abregues, S., Bartlett, G., Boardman, F., Cargo, M., … Vedel, I. (2018). *Mixed methods appraisal tool (MMAT), version 2018*. Registration of Copyright (#1148552), Canadian Intellectual Property Office, Industry Canada. http://mixedmethodsappraisaltoolpublic.pbworks.com/w/file/fetch/127916259/MMAT_2018_criteria-manual_2018-08-01_ENG.pdf.

International Council of Nursing. (2021). *The ICN code of ethics for nurses*. https://www.icn.ch/system/files/2021-10/ICN_Code-of-Ethics_EN_Web_0.pdf

Javed, A., Lee, C., Zakaria, H., Buenaventura, R. D., Cetkovich-Bakmas, M., Duailibi, K., Ng, B., Ramy, H., Saha, G., Arifeen, S., Elorza, P. M., Ratnasingham, P., & Azeem, M. W. (2021). Reducing the stigma of mental health disorders with a focus on low- and middle-income countries. *Asian Journal of Psychiatry,* 58, 102601. https://doi.org/10.1016/j.ajp.2021.102601

Johnson, R. B. (2011a). *Dialectical pluralism: A metaparadigm to help us hear and ‘‘combine’’ our valued differences*. Paper presented in plenary session at the Seventh International Congress of Qualitative Inquiry, Urbana-Champaign, IL.

Johnson, R. B. (2011b). Do we need paradigms? A mixed methods perspective. *Mid-Western Educational Researcher, 24*(2), 31-40

Johnson, R. B. (2012). Dialectical pluralism and mixed research. *American Behavioural Scientist, 56*(6) 751–754. https://doi.org/10.11772F0002764212442494

Johnson, R. B. (2017). Dialectical pluralism: A metaparadigm whose time has come. *Journal of Mixed Methods Research, 11*(2), 156-173. https://doi.org/10.11772F1558689815607692

Jones, J., Winch, S., Strube, P., Mitchell, M., & Henderson, A. (2016). Delivering compassionate care in intensive care units: Nurses' perceptions of enablers and barriers. *Journal of Advanced Nursing, 72*(12), 3137–3146. https://doi.org/10.1111/jan.13064

Karam, M., Chouinard, M. C., Poitras, M. E., Couturier, Y., Vedel, I., Grgurevic, N., & Hudon, C. (2021). Nursing care coordination for patients with complex needs in primary healthcare: A scoping review. *International Journal of Integrated Care, 21*(1), 16. https://doi.org/10.5334/ijic.5518

Keats, M. R., Cui, Y., DeClercq, V., Dummer, T., Forbes, C., Grandy, S. A., Hicks, J., Sweeney, E., Yu, Z. M., & Parker, L. (2017). Multimorbidity in Atlantic Canada and association with low levels of physical activity. *Preventive Medicine*, 105, 326–331. https://doi.org/10.1016/j.ypmed.2017.10.013

Kingston, A., Robinson, L., Booth, H., Knapp, M., Jagger, C., & MODEM project. (2018). Projections of multi-morbidity in the older population in England to 2035: Estimates from the Population Ageing and Care Simulation (PACSim) model. *Age and Ageing, 47*(3), 374-380. https://doi.org/10.1093/ageing/afx201

Kitching, G. T., Firestone, M., Schei, B., Wolfe, S., Bourgeois, C., O'Campo, P., Rotondi, M., Nisenbaum, R., Maddox, R., & Smylie, J. (2020). Unmet health needs and discrimination by healthcare providers among an Indigenous population in Toronto, Canada. *Canadian Journal of Public Health, 111*(1), 40–49. https://doi.org/10.17269/s41997-019-00242-z

Knaak, S., Mantler, E., & Szeto, A. (2017). Mental illness-related stigma in healthcare: Barriers to access and care and evidence-based solutions. *Healthcare Management Forum, 30*(2), 111–116. https://doi.org/10.1177/0840470416679413

Kuluski, K., Ho, J. W., Hans, P. K., & Nelson, M. (2017). Community care for people with complex care needs: Bridging the gap between health and social care. *International Journal of Integrated Care, 17*(4), 2. https://doi.org/10.5334/ijic.2944

Latour, C. H., Huyse, F. J., De Vos, R., & Stalman, W. A. (2007). A method to provide integrated care for complex medically ill patients: The INTERMED. *Nursing & Health Sciences, 9*(2), 150-157. https://doi.org/10.1111/j.1442-2018.2007.00292.x

Lee, S. J., Clark, M. A., Cox, J. V., Needles, B. M., Seigel, C., & Balasubramanian, B. A. (2016). Achieving coordinated care for patients with complex cases of cancer: A multiteam system approach. *Journal of Oncology Practice, 12*(11), 1029–1038. https://doi.org/10.1200/JOP.2016.013664

Lloyd, M., & Carson, A. (2011). Making compassion count: Equal recognition and authentic involvement in mental health care. *International Journal of Consumer Studies, 35*(6), 616-621. https://doi.org/10.1111/j.1470-6431.2011.01018.x

Loeb, D. F., Bayliss, E. A., Binswanger, I. A., Candrian, C., & Degruy, F. V. (2012). Primary care physician perceptions on caring for complex patients with medical and mental illness. *Journal of General Internal Medicine, 27*(8), 945-952. https://doi.org/10.1007/s11606-012-2005-9

Loeb, D. F., Bayliss, E. A., Candrian, C., deGruy, F. V., & Binswanger, I. A. (2016). Primary care providers' experiences caring for complex patients in primary care: A

qualitative study. *BMC Family Practice, 17*(1), 34. https://doi.org/10.1186/s12875-016-0433-z

Lown, B. A., Rosen, J., & Marttila, J. (2011). An agenda for improving compassionate care: a survey shows about half of patients say such care is missing. *Health Affairs (Project Hope), 30*(9), 1772–1778. https://doi.org/10.1377/hlthaff.2011.0539

Luijks, H. D., Loeffen, M. J., Lagro-Janssen, A. L., van Weel, C., Lucassen, P. L., & Schermer, T. R. (2012). GPs' considerations in multimorbidity management: A qualitative study. *British Journal of General Practice, 62*(600), e503-e510.

Manning, E., & Gagnon, M. (2017). The complex patient: A concept clarification. *Nursing & Health Sciences, 19*(1), 13-21. https://doi.org/10.1111/nhs.12320

Marengoni, A., Angleman, S., Melis, R., Mangialasche, F., Karp, A., Garmen, A., Meinow, B., & Fratiglioni, L. (2011). Aging with multimorbidity: A systematic review of the literature. *Ageing Research Reviews, 10*(4), 430–439. https://doi.org/10.1016/j.arr.2011.03.003

Martello, C., Bessière, G., Bigras, M., Boulet, A., Brenner, K., Crist, E., & Pluye, P. (2014). *What do we mean when we say, "This patient is complex."* In NAPCRG Annual Conference. New York: North American Primary Care Research Group.

Nguyen, H., Manolova, G., Daskalopoulou, C., Vitoratou, S., Prince, M., & Prina, A. M. (2019). Prevalence of multimorbidity in community settings: A systematic review and meta-analysis of observational studies. *Journal of Comorbidity*, 9, 2235042X19870934. https://doi.org/10.1177/2235042X19870934

Nicholson, K., Griffith, L. E., Sohel, N., & Raina, P. (2021). Examining early and late onset of multimorbidity in the Canadian longitudinal study on Aging. *Journal of the American Geriatrics Society, 69*(6), 1579–1591. https://doi.org/10.1111/jgs.17096

Nicholson, K., Terry, A. L., Fortin, M., Williamson, T., Bauer, M., & Thind, A. (2019). Prevalence, characteristics, and patterns of patients with multimorbidity in primary care: A retrospective cohort analysis in Canada. *British Journal of General Practice*, *69*(686), e647-e656. https://doi.org/10.3399/bjgp19X704657

O'Connor, S., Deaton, C., Nolan, F., & Johnston, B. (2018). Nursing in an age of multimorbidity. *BMC Nursing*, 17, 49. https://doi.org/10.1186/s12912-018-0321-z

Papadopoulos, I., Lazzarino, R., Koulouglioti, C., Aagard, M., Akman, Ö., Alpers, L. M., Apostolara, P., Araneda Bernal, J., Biglete-Pangilinan, S., Eldar-Regev, O., González-Gil, M. T., Kouta, C., Krepinska, R., Lesińska-Sawicka, M., Liskova, M., Lopez-Diaz, A. L., Malliarou, M., Martín-García, Á., Muñoz-Salinas, M., Nagórska, M., … Zorba, A. (2020). Obstacles to compassion-giving among nursing and midwifery managers: An international study. *International Nursing Review, 67*(4), 453–465. https://doi.org/10.1111/inr.12611

Pehlivan, T., & Güner, P. (2020). Compassionate care: Benefits, barriers and recommendations. *Journal of Psychiatric Nursing, 11*(2), 148-153. https://doi.org/10.14744/phd.2020.88557

Perez-Bret, E., Altisent, R., & Rocafort, J. (2016). Definition of compassion in healthcare: a systematic literature review. *International Journal of Palliative Nursing, 22*(12), 599–606. https://doi.org/10.12968/ijpn.2016.22.12.599

Poitras, M. E., Hudon, C., Godbout, I., Bujold, M., Pluye, P., Vaillancourt, V. T., Débarges, B., Poirier, A., Prévost, K., Spence, C., & Légaré, F. (2020). Decisional needs assessment of patients with complex care needs in primary care. *Journal of Evaluation in Clinical Practice, 26*(2), 489–502. https://doi.org/10.1111/jep.13325

Porr, C., & Egan, R. (2013). How does the nurse educator measure caring? *International Journal of Nursing Education Scholarship, 10*(1), 1-9. https://doi:10.1515?ijnes-2012-011

Public Health Agency of Canada. (2014). *Infection and prevention control guidelines: Critical appraisal toolkit.* http://publications.gc.ca/site/archiveearchived.html?url=http://publications.gc.ca/collections/collection_2014/aspc-phac/HP40- 119-2014-eng.pdf

Reader, T.W., Gillespie, A. (2013). Patient neglect in healthcare institutions: A systematic review and conceptual model. *BMC Health Services Research, 13*(1), 156. https://doi.org/10.1186/1472-6963-13-156

Rich, E., Lipson, D., Libersky, J., & Parchman, M. (2012). *Coordinating care for adults with complex care needs in the patient-centered medical home: Challenges and solutions*. Rockville, MD: Agency for Healthcare Research and Quality. https://pcmh.ahrq.gov/sites/default/files/attachments/coordinating-care-for-adults-with-complex-care-needs-white-paper.pdf

Roach, S. M. (1992). *The human act of caring: A blueprint for the health professions*. Ottawa, ON: Canadian Hospital Association Press.

http://nursing.fau.edu/uploads/images/Caring%20the%20human%20mode%20of%20being_smallsize-PW.pdf

Rudin, R. S., Gidengil, C. A., Predmore, Z., Schneider, E. C., Sorace, J., & Hornstein, R. (2017). *Identifying and coordinating care for complex patients: Findings from the leading edge of analytics and health information technology*. Santa Monica, CA: RAND Corporation, 2016. https://www.rand.org/pubs/research_reports/RR1234.html.

Sakib, M. N., Shooshtari, S., John, P. S., & Menec, V. (2019). The prevalence of multimorbidity and associations with lifestyle factors among middle-aged Canadians: An analysis of Canadian longitudinal study on aging data. *BMC Public Health, 19*(1), 243. https://doi.org/10.1186/s12889-019-6567-x

Sandelowski, M. (2000). Whatever happened to qualitative description? *Research in Nursing & Health*, 23, 334–340. doi: 10.1002/1098-240X(200008)23:4<334::AID-NUR9>3.0.CO;2-G

Sandelowski, M. (2010). What's in a name? Qualitative description revisited. *Research in Nursing & Health*, 33, 77–84. https://doi.org/10.1002/nur.20362

Schoen, C., Osborn, R., How, S. K., Doty, M. M., & Peugh, J. (2008). Experiences of patients with complex health care needs in eight countries, 2008: Chronically ill US patients have the most negative access, coordination, and safety experiences. *Health Affairs*, *27*, w1-w16.

Schou, L., Hostrup, H., Lyngso, E. E., Larsen, S., & Poulsen, I. (2012). Validation of a new assessment tool for qualitative research articles. *Journal of Advanced Nursing, 68*(9), 2086–2094. https://doi.org/10.1111/j.1365-2648.2011.05898.x

Sieben-Hein, D., & Steinmiller, E. A. (2005). Working with complex care patients. *Journal of Pediatric Nursing*, *20*(5), 389-395. https://doi.org/10.1016/j.pedn.2005.06.011

Sinclair, S., Beamer, K., Hack, T. F., McClement, S., Raffin Bouchal, S., Chochinov, H. M., & Hagen, N. A. (2017). Sympathy, empathy, and compassion: A grounded theory study of palliative care patients' understandings, experiences, and preferences. *Palliative Medicine, 31*(5), 437-447. https://doi.org/10.11772F0269216316663499

Sinclair, S., Norris, J. M., McConnell, S. J., Chochinov, H. M., Hack, T. F., Hagen, N. A.,.. & Bouchal, S. R. (2016). Compassion: A scoping review of the healthcare literature. *BMC Palliative Care*, *15*(1), 6. https://doi.org/10.1186/s12904-016-0080-0

Sinclair, S., Torres, M.B., Raffin-Bouchal, S., Hack, T.F., McClement, S., Hagen, N.A., & Chochinov, HM. (2016a). Compassion training in healthcare: What are patients' perspectives on training healthcare providers? *BMC Medical Education, 16*(1), 169. https://doi.org/10.1186/s12909-016-0695-0

Singh, P., King-Shier, K., & Sinclair, S. (2018). The colours and contours of compassion: A systematic review of the perspectives of compassion among ethnically diverse patients and healthcare providers. *PloS One, 13*(5), e0197261. https://doi.org/10.1371/journal.pone.0197261

Straughair, C. (2012a). Exploring compassion: Implications for contemporary nursing. Part 1. *British Journal of Nursing, 21*(3), 160-164. https://doi.org/10.12968/bjon.2012.21.3.160

Straughair, C. (2012b). Exploring compassion: Implications for contemporary nursing. Part 2. *British Journal of Nursing, 21*(4), 239-244. https://doi.org/10.12968/bjon.2012.21.4.239

Straughair, C., Clarke, A., & Machin, A. (2019). A constructivist grounded theory study to explore compassion through the perceptions of individuals who have experienced nursing care. *Journal of Advanced Nursing, 75*(7), 1527–1538. https://doi.org/10.1111/jan.13987

The Schwartz Center for Compassionate Healthcare. (2015). *Building compassion into the bottom line: The role of compassionate care and patient experience in 35 U.S. hospitals and health systems.* https://www.theschwartzcenter.org/media/2019/06/Building-Compassion-into-the-Bottom-Line.pdf

Tonelli, M., Wiebe, N., Manns, B. J., Klarenbach, S. W., James, M. T., Ravani, P., Pannu, N., Himmelfarb, J., & Hemmelgarn, B. R. (2018). Comparison of the complexity of patients seen by different medical subspecialists in a universal health care system. *JAMA Network Open, 1*(7), e184852. https://doi.org/10.1001/jamanetworkopen.2018.4852

Tsasis, P., & Bains, J. (2008). Management of complex chronic disease: facing the challenges in the Canadian health-care system. *Health Services Management Research, 21*(4), 228–235. https://doi.org/10.1258/hsmr.2008.008001

Tuzzio, L., Berry, A. L., Gleason, K., Barrow, J., Bayliss, E. A., Gray, M. F., Delate, T., Bermet, Z., Uratsu, C. S., Grant, R. W., & Ralston, J. D. (2021). Aligning care with the personal values of patients with complex care needs. *Health Services Research, 56*(1), 1037–1044. https://doi.org/10.1111/1475-6773.13862

Valizadeh, L., Zamanzadeh, V., Dewar, B., Rahmani, A., & Ghafourifard, M. (2018). Nurse's perceptions of organisational barriers to delivering compassionate care: A qualitative study. *Nursing Ethics, 25*(5), 580–590. https://doi.org/10.1177/0969733016660881

Van Boekel, L. C., Brouwers, E. P., Van Weeghel, J., & Garretsen, H. F. (2013). Stigma among health providers towards patients with substance use disorders and its consequences for healthcare delivery: Systematic review. *Drug and Alcohol Dependence, 131*(1-2), 23-35. https://doi.org/10.1016/j.drugalcdep.2013.02.018

van der Cingel M. (2011). Compassion in care: A qualitative study of older people with a chronic disease and nurses. *Nursing Ethics, 18*(5), 672–685. https://doi.org/10.1177/0969733011403556

Van der Cingel, M. (2014). Compassion: The missing link in quality of care. *Nurse Education Today, 34*(9): 1253-1257. https://doi.org/10.1016/j.nedt.2014.04.003

Van Lieshout, F., Titchen, A., McCormack, B., & McCance, T. (2015). Compassion in facilitating the development of person-centred health care practice. *Journal of Compassionate Health Care, 2*(1), 5. https://doi.org/10.1186/s40639-015-0014-3

Von Dietze, E., & Orb, A. (2000). Compassionate care: A moral dimension of nursing. *Nursing Inquiry, 7*(3), 166-174. https://doi.org/10.1046/j.1440-1800.2000.00065.x

Watts, S., & Stenner, P. (2005). Doing Q methodology: theory, method and interpretation. *Qualitative Research in Psychology, 2*(1), 67-91. https://doi.org/10.1191/1478088705qp022oa

Watts, S., & Stenner, P. (2012). *Doing Q methodological research: Theory, method & interpretation.* Sage.

Webster, F., Rice, K., Bhattacharyya, O., Katz, J., Oosenbrug, E., & Upshur, R. (2019). The mismeasurement of complexity: Provider narratives of patients with complex needs in primary care settings. *International Journal for Equity in Health, 18*(1), 107. https://doi.org/10.1186/s12939-019-1010-6

Westbrook, J.I., Duffield, C., Li, L., Creswick, N.J. (2011). How much time do nurses have for patients? A longitudinal study quantifying hospital nurses' patterns of task time distribution and interactions with health professionals. *BMC Health Services Research, 11*(1), 319. https://doi.org/10.1186/1472-6963-11-319

Westley-Wise, V., Lago, L., Mullan, J., Facci, F., Zingel, R., & Eagar, K. (2020). Patterns of morbidity and multimorbidity associated with early and late readmissions in an

Australian regional health service. *Chronic Illness*. https://doi.org/10.1177/1742395319899459

Wiseman, T. (1996). A concept analysis of empathy. *Journal of Advanced Nursing, 23*(6), 1162-1167. https://doi.org/10.1046/j.1365-2648.1996.12213.x

Wister, A. (2021). Social determinants and health behaviours among older adults experiencing multimorbidity using the Canadian longitudinal study on aging. *Canadian Journal on Aging*, 1-21. https://doi.org/10.1017/S0714980821000544

World Health Organization (2016). *Multimorbidity*. https://apps.who.int/iris/bitstream/handle/10665/252275/9789241511650-eng.pdf?sequence=1

Younas A. (2020). Relational inquiry approach for developing deeper awareness of patient suffering. *Nursing Ethics*, *27*(4), 935–945. https://doi.org/10.1177/0969733020912523

Younas, A., & Maddigan, J. (2019). Proposing a policy framework for nursing education for fostering compassion in nursing students: A critical review. *Journal of Advanced Nursing, 75*(8), 1621–1636. https://doi.org/10.1111/jan.13946

Younas, A., Pedersen, M., & Durante, A. (2020). Characteristics of joint displays illustrating data integration in mixed-methods nursing studies. *Journal of Advanced Nursing, 76*(2), 676-686. https://doi.org/10.1111/jan.14264

Younas, A., Shahzad, S., & Inayat, S. (2021). Data analysis and presentation in Integrative reviews: A narrative review. *Western Journal of Nursing Research*,

1939459211030344. Advance online publication. https://doi.org/10.1177/01939459211030344

Youngson, R. (2008). *Future debates: compassion in healthcare. The missing dimension of healthcare reform*? The NHS Confederation: London.

Zabala, A., Sandbrook, C., & Mukherjee, N. (2018). When and how to use Q methodology to understand perspectives in conservation research. *Conservation Biology, 32*(5), 1185-1194. https://doi.org/10.1111/cobi.13123

Chapter Two

A Qualitative Descriptive Study to Explore Compassionate Nursing Care of Complex Patients

This chapter is the first manuscript of the dissertation covering the findings from the qualitative phase of the mixed methods research investigation of compassionate nursing care of complex patients. The research objectives of the qualitative phase were to identify the indicators of compassionate nursing care (along with the barriers that are discussed in depth in Chapters 3 and 4) from the perspectives of individuals with experiences as complex patients. This research manuscript addresses the lack of guidelines in the nursing practice literature related to the provision of compassionate care for complex patients, specifically in the local context of Newfoundland and Labrador. The manuscript will be prepared for publication for the general nursing audience in the Journal of Clinical Nursing or in the Journal of Nursing Scholarship. Presented in this chapter is the manuscript abstract, followed by the background, research aims and methods, and findings pertaining, primarily, to six behavioural indicators of compassionate nursing care.

Manuscript (1) Abstract

Background: Complex patients have multiple health conditions that may require ongoing medical treatment, person-centered nursing care, mental health intervention, and family and community resources. They are frequent consumers of health care services; yet, it is not uncommon for complex patients to experience discrimination and substandard care. There is empirical literature indicating compassionate nursing care can improve patient care experiences and health outcomes. However, missing in the practice literature is guidance on how to provide compassionate care for this patient population from the perspectives of complex patients. **Aims:** To explore the indicators of compassionate nursing care from the perspectives of individuals with multimorbidities and complex health care needs. **Methods:** A qualitative descriptive research approach was conducted in an urban setting in eastern Canada from December 2020 to April 2021. Data from in-person and virtual semi-structured interviews with 23 individuals with experiences as complex patients were analyzed using reflexive thematic analysis. **Findings:** Six indicators of compassionate nursing care were generated: sensitivity, awareness, a nonjudgmental approach, a positive demeanour, empathic understanding, and altruism. **Conclusions:** Individuals with multimorbidities perceived that nurses who acknowledge personal biases are better at providing compassionate care by manifesting compassion through their genuine and selfless interest in the complicated health problems and underlying sociocultural determinants of each complex patient. Kindness, positivity, and a respectful nursing approach elicits openness and the sharing of heartfelt concerns. **Implications:** Reflective practice is critical in the compassionate care of complex patients. Pejorative attitudes

toward complex patients adds to the existing knowledge about stigmatization and accounts of substandard patient care. Only with comprehensive health assessment, dedicated efforts to know the patient as a human being, and listening to the patient's viewpoint and preferences will health outcomes improve among complex patients. Health care administrators, too, play a role in effecting change by supporting nurses in their efforts to address complex health and social care needs with compassion.

Keywords: compassion; compassionate care; complex patients; nursing care; qualitative description

Background

Complex patients are individuals with multiple chronic conditions (multimorbidity), and, or, mental health concerns, and, often, with medication and drug-related problems (Manning & Gagnon, 2017; Martello, 2014). The concept of complex patients includes many interconnected terms such as comorbidity, multimorbidity, polypathology, dual diagnosis, and multiple chronic conditions (Manning & Gagnon, 2017). The health and illness of complex patients have become situated within broader sociocultural and economic environments. Increasingly recognized are the various sociocultural determinants (e.g., poverty, education level, and access to resources) that can affect the ability of complex patients to manage their chronic conditions which may result in further instability and deterioration of symptoms (Manning & Gagnon, 2017). Many complex patients experience homelessness, poverty, and are susceptible to drug and medication addictions. Recently observed (Gutwinski et al., 2021) is the escalating prevalence of physical and mental health issues in homeless populations in Britain, Germany, Australia, Japan, and North America. The mean prevalence of mental illness was 76.2%, with 36.7% of individuals living with alcohol abuse and 21.7% experiencing drug abuse.

Care Experiences

Complex patients have repeated episodes of illness and thus require frequent medical attention for treatment changes and close monitoring (Rudin et al., 2017). In addition to medical treatment and mental health support, they require community resources to manage health and social care issues (Bayliss, 2012; Rudin et al., 2017). Complex care needs and accompanying social factors place this patient population at high risk for

inadequate care and negative health outcomes (Hartrick Doane & Varcoe, 2015; Loeb et al., 2016; Manning & Gagnon, 2017; Martello et al., 2014). There have been reports of complex patients being subjected to care neglect and stigmatizing attitudes when seeking medical attention and social support. Marginalization and stigmatization are commonly reported across primary (Loeb et al., 2016; Webster et al., 2019), acute (Kitching et al., 2020; Nyblade et al., 2019; Reader et al., 2013; Van Boekel et al., 2013), and mental health (Knaak et al., 2017; Van Boekel et al., 2013) settings. Health professionals are known to abandon these patients, offer them no regard, ignore their health and social care needs, and restrict them from active participation in decision-making (Nutt et al., 2017; van Boekel et al., 2014). Moreover, complex patients are continuously discriminated against because of unfair policies and practices within the health care system (Nguyen et al., 2018).

Compassionate Nursing Care

Compassionate nursing care can make a difference in the lives of complex patients (Bartlett et al., 2013; Knaak et al., 2017). Compassionate nursing care is the ability of health professionals to recognize the needs of patients and take actions to alleviate patient suffering (Perez-Bret et al., 2016). However, providing compassionate nursing care for complex patients can be challenging for nurses due to several factors including the patient's deteriorating health condition, uncertainties related to care planning, and negative patient-provider interactions (Sieben-Hein & Steinmiller, 2005). To provide compassionate care, Fulton (2014) recommends that nurses should better understand the live situation and circumstances of presenting patients and be more attentive to the multifaceted needs and the physical and emotional suffering.

Attentiveness is achieved through person-centered, relational care by developing a therapeutic relationship, and, by recognizing the impact of intrapersonal, interpersonal, and contextual factors on patient illness, and attempting to address physical, mental, and emotional needs (Hartrick Doane & Varcoe, 2015; Kuluski et al., 2017; Rich et al., 2012). Rich et al. (2012) urge that health professionals adopt a patient-centered and relationship-based approach to care for the whole person to be able to attend to physical, mental, and emotional needs. Authentic relationships are essential for full engagement and to mitigate barriers preventing nurses from being attentive (Kuluski et al., 2017).

Research Rationale

The multifaceted needs of complex patients, the care approaches, and the extent to which compassionate nursing care is provided in health care settings, have not been adequately explored in the nursing practice literature (Manning & Gagnon, 2017). There is some published exploratory research focused on the perspectives of participants from the general patient population of older adults and family members, and health professionals, including nurses, in long-term care facilities (Smith-MacDonald et al., 2019), acute care (Kneafsey et al., 2016; Straughair, 2019; Tehranineshat et al., 2019), and cancer centres (Sinclair et al., 2016; Sinclair et al., 2017). While complex patients are increasingly becoming the caseload of nurses in acute and primary health care settings, broadly, little is known about the nature and quality of the care these patients receive, notwithstanding reports of neglect and stigmatization (Kitching et al., 2020; Nyblade et al., 2019; Reader et al., 2013; Van Boekel et al., 2013). It is apparent that complex patients experience stigmatization, care neglect, and are susceptible to name calling, labelling, and stereotypes,

and substandard care in health care settings (Kitching et al., 2020; Nyblade et al., 2019). Research is warranted to promote positive experiences of complex patients in health care settings through qualitative exploration of how compassionate nursing care can be delivered and manifest in practice.

Aims

A qualitative descriptive research approach was employed to explore the behavioural indicators of compassionate nursing care from the perspectives of individuals with multimorbidities and complex health care needs.

Methods

Qualitative description enables researchers to gain understanding of real-life, firsthand experiences and perspectives related to a particular phenomenon (Doyle et al., 2020; Sandelowski, 2000, 2010). Instrumental to achieving the research aims was the ability to recognize and to place emphasis on the subjective nature (i.e., individuals with personal experiences of care in hospitals as complex patients) of the phenomenon (Bradshaw et al., 2017). Qualitative description enabled exploration of subjective perspectives and experiences of the phenomenon of compassionate nursing care of complex patients in a local context (an eastern Canadian tertiary care setting). The findings were culturally- and contextually-sensitive because qualitative description is not about theorizing or transforming, abstractly, but about producing "largely unadorned answers" for informing practice and policymaking (Sandelowski, 2000, p.337).

Setting and Sample

The research was conducted in a small urban city in eastern Canada. There are two

tertiary care centres and one psychiatric hospital in the city that offer medical, surgical, and mental health care services, support, and resources. Face-to-face interviews took place in a community health centre that provides food, clothing, medical and dental help, and counselling services for individuals who live in poverty and have multiple chronic conditions. Programs and services are primarily for individuals who are homeless. Many of the clients have multiple chronic health issues, mental health concerns, and live with substance abuse. Permission was granted from the director to hold interview sessions at the community health centre. Recruitment included posters at the designated places in the community health centre, on social media (Facebook and Twitter) through newspaper advertisements, and via electronic contact with patient support groups. The inclusion criteria were individuals with multimorbidities (i.e., two or more chronic conditions) who had received care in the tertiary care centres or the psychiatric hospital within the last 3 years. Those interested in being research participants made contact via email or by telephone. The registered nurses at the community health centre also informed potential participants about the research interviews.

Data Collection

Prior to interviews, participants were given information about the study and a consent form to review. Appointments were made at a time suitable to the participant, usually on the same or following day. At the beginning of each face-to-face interview, the purpose and interview process were explained in plain language and the consent form was reviewed. All questions about the research were addressed along with participant rights before written consent was received. All participants were encouraged to ask questions

before, during, and after the interview and were reminded of the right to leave the session at any time. The interviews lasted from 6 to 59 minutes. Only three interviews were less than 10 minutes. Participants received an honorarium of $20 for their participation.

Semi-structured interviews are an effective method of data collection in qualitative descriptive designs because they enable researchers to explore the views and beliefs of participants pertaining to sensitive and personal issues (Bradshaw et al., 2017; Doyle et al., 2020). Twenty-three individuals agreed to participate in face-to-face and virtual semi-structured interviews (see questions in Table 3) that were conducted between December

Table 3

Semi-Structured Interview Guide

Questions
1. Please describe how nurses practice compassion towards you or your family members during your visits to the hospital.
2. Could you please tell me how to identify that a nurse or another health professional is compassionate?
3. In your view what are the benefits of compassionate care for patients and their families?
4. What suggestions would you give nurses to enhance compassionate nursing care?
5. Do you think patients and their families could influence the ability of nurses to provide compassionate care? If yes, can you please describe what patient and family-related factors hinder or facilitate the provision of compassionate care?

2020 and May 2021. During data collection the questions were tailored to address the research aims and revised accordingly. Rich data were collected through active listening

along with notes and personal observations consistent with the techniques outlined in Doody et al. (2013): a) clarifying (i.e., seeking clarification when needed), b) paraphrasing (i.e., restating important responses to participants), c) reflecting feelings (i.e., mirroring the participants' expressed feelings), and d) summarizing (i.e., main points).

Virtual interviews were also conducted with individuals who met the recruitment criteria. Before interviews, a written electronic information sheet was provided in addition to the research purpose, estimated duration of the interview session, and the recording process. Participants signed an electronic consent form to authorize their consent. At the time of the interview, information was repeated and questions addressed if necessary.

Data Analysis

Interview data were analyzed using Braun and Clarke's (2021) reflexive thematic analytic approach. During reflexive thematic analysis, researchers are able to analyze data about perspectives and experiences of individuals and formulate themes that are patterns of shared meanings (Braun & Clarke, 2019). Reflexive thematic analysis was chosen because it is theoretically flexible allowing for the generation of meaningful knowledge (Braun & Clarke, 2019, 2021). Out of the several research orientations (including inductive, deductive, semantic, latent, critical or essentialist, and constructionist), the inductive orientation was adopted because it allows researchers to stay close to the data and generate a rich narrative of the participant's views. The data drive generation of themes, whereas in a deductive approach, preconceived themes or concepts are used to analyze the data (Braun & Clarke, 2019).

Reflexive thematic analysis requires interpretive work which entails reflecting on

the implied and apparent meanings of the experiences and perspectives and formulating themes that adequately capture nuanced meanings (Braun & Clarke, 2021). The process was as follows: a) the verbatim transcripts were carefully and thoroughly read several times to develop an understanding of the overall meaning of the participant's views, b) initial content-driven codes (i.e., using invivo and open coding techniques) were developed which is consistent with the inductive orientation, c) the generated codes were collated for further refinement based on similar meanings and linkages, d) the refined codes were named and combined into subthemes, and d) the relevant and similar subthemes were combined into final themes. The final themes were described and named (Clarke et al., 2019). The complete analysis was undertaken using MAXQDA Plus Version 2020 which is an efficient software equipping researchers to develop a coding framework, assign color codes, write memos, and compare the frequency and extensiveness of codes and common phrases (Kuckartz & Rädiker, 2019).

Rigour

To establish rigour, the trustworthiness criteria (Lincoln & Guba, 1985) comprising credibility, dependability, confirmability, and transferability were applied. Credibility was demonstrated by the fact that appropriate methods were used to achieve the research aims including the relevant qualitative design and methods (descriptive qualitative approach, interviews, and thematic analysis) and by debriefing with members of the supervisory committee. For dependability (i.e., the consistency between research findings and the extent to which details about research methods were shared) a rich description of methods and findings was presented. An audit trail was also maintained during data collection and

analysis. Confirmability is the extent to which the study findings can be confirmed by others. It was achieved through reflective journaling because the observations made in the reflective journal were shared within the team. Also, the codes, the data analytic process, and the themes were shared with supervisory committee members. Confirmability was established by debriefing with members the decisions made throughout data collection and analysis and verification of data analysis processes and strategies. Transferability refers to the extent to which the findings can be applied to other settings which was fostered by providing a rich description of the sample and research context (Shenton, 2004).

Findings

Sample Characteristics

A total sample of 23 participants (15 males and eight females) participated in face-to-face and virtual interviews. Ages ranged between 30 and 70 years. Participants had two or more chronic conditions such as diabetes, chronic respiratory diseases, cardiovascular problems, alcohol and substance abuse issues, schizophrenia, generalized anxiety, bipolar disorders, and depression. Sample characteristics are presented in Table 4. The majority

Table 4

Sample Characteristics

Age	Gender	Chronic Health Conditions
70	Female	Cancer, history of falls, sinusitis, GERD, generalized anxiety
59	Female	Autism, generalized anxiety, depression, arthritis
65	Female	Decompression/spinal fusion, nerve pain/drop foot, history of falls, permanent problem with walking

64	Female	Cancer, chronic pancreatitis, diabetes
53	Female	Stroke, generalized anxiety, diabetes
59	Female	Bad back, leg problems, perforated ulcer
35	Female	Borderline personality disorder, bladder infection, renal problems, surgery of the ureter
30	Female	Depression, appendectomy, suicidal ideation, stab wound, gall bladder issues
24	Male	Hemiplegic migraine, generalized anxiety, diabetes
39	Male	Depression, personality disorder, gallbladder problems
60	Male	Lung disease, arthritis, anxiety
50	Male	Depression, seizures, leg problems
53	Male	Addiction, alcoholism, liver problems, diabetes
58	Male	Gall bladder problems, arthritis, generalized anxiety, depression
43	Male	Depression, anxiety, substance abuse, diabetes.
59	Male	Heart problems, open heart surgery, diabetes, hypertension, depression
34	Male	Bipolar disorder, traumatic brain injury surgery, diabetes
37	Male	Addiction, stab wound, emergency surgery, diabetes
38	Male	Crohn's disease, asthma, bipolar disorder, post-traumatic stress disorder
38	Male	Depression, anxiety, insomnia, gout, gastrointestinal reflux disease, accident and injury surgery
47	Male	Stent placement, diabetic neuropathy, ADD, depression
43	Male	Anxiety, depression, substance abuse, diabetes
52	Male	HTN, depression, anxiety, GERD, gastric problems

were homeless and lived in a downtown shelter.

Behavioural Indicators

Six core behavioural indicators of compassionate nursing care were generated (i.e., sensitivity, awareness, a nonjudgmental approach, a positive demeanour, empathic understanding, and altruism) as shown in Table 5, below. Concrete examples of each core indicator are also portrayed under "Descriptions."

Table 5

Behavioural Indicators of Compassionate Nursing Care

Core Indicators	Descriptions
Sensitivity	Understanding patients' perspectives and circumstances. Seeking better awareness of patients' needs. Taking patients' concerns seriously. Acknowledging the presence and suffering of patients. Assessing for pain and level of suffering.
Awareness	Not thinking you are better than your patient. Altering your internal thoughts to accommodate patients. Fully recognizing the distinct needs of patients. Acknowledging that social factors impact patient health.
A Nonjudgmental Approach	Being accepting. Taking cues from patients' facial expressions. Gentle communication. Listening to patients.
A Positive Demeanour	Showing kindness and warmth. Exuding positive body language. Being respectful. Laughing with your patients.
Empathic Understanding	Treating patients as human beings. Feeling patients' pain.

	Putting yourself in others' shoes. Fully engaging with patients.
Altruism	Making patients feel valued. Checking in with the patient. Refraining from rushed care. Making an extra effort to respond to physical and emotional needs. Practicing therapeutic touch.

Sensitivity

Sensitivity was described as understanding patients' perspectives and circumstances; seeking better awareness of patients' needs; taking patients' concerns seriously; acknowledging the presence and suffering of patients; and, assessing for pain and level of suffering. Participants expressed that nurses who are compassionate toward complex patients are sensitive to the multifaceted nature of their illness or life situation. Sensitivity means being attentive to their suffering. Sensitivity takes the form of "looking just beyond the illness and just seeing how and what impact that has made overall, who that person is" (Participant 23). One participant shared that sensitivity is apparent when nurses recognize "if someone is in so much pain, that they feel like they're dying" (Participant 11).

Several other participants discussed their experiences with nurses who were "understanding" (Participant 19), who would "hear what we tell them, but also try to hear what we don't tell them" (Participant 23), and nurses who would "study the person, take a minute or two, even three, just look at that person—see how that person is reacting, see how they're moving, see what they're saying" (Participant 2). Seeking and developing a greater understanding of patients and their ongoing needs in accordance with the severe complexity of their disease processes was considered essential. Nurses talking with patients

to better understand their health experiences means that nurses are thinking more intentionally about the patients' interconnected health care issues and are genuinely trying to be more sensitive, to be able to anticipate how the issues could be affecting their well-being.

It was shared that, often, nurses focus solely on the physical needs of their patients and ignore the multifaceted, holistic needs. One participant discussed the importance of nurses going beyond the patient's visible issues and understanding implicit needs as patients with complex issues cannot always clearly communicate their needs. Another participant informed:

> We have to hear what the patient is, first, hear what they're telling us, but also hear what they're not telling us. Sometimes, it's very difficult for patients to articulate exactly what it is that we're experiencing, [as it goes] above or beyond the obvious like, 'Oh, yes, I'm in pain,' or 'Yes, you know, I can't get my diabetes [under control].' There're other issues that impact on them, as people, you know, and as individuals, and sometimes it is difficult for them to tell you. (Participant 23)

Participants noted that nurses should not pretend they care for the patients holistically. Rather, they need to demonstrate a genuine interest in patients and their health and social needs. Expressing sensitivity towards patients' health status and their current situation enables nurses to recognize, for example, the effects of sociocultural determinants, such as poverty and lifestyle behaviours, on patients' health. One participant commented:

> I think probably that is the best advice I can give to nurses. Just to understand, you know, for the grace of God. I mean focus on the lived experience. This could be you [nurses] facing those terrible complex issues like poverty, addiction, and social isolation. I mean, so putting yourself in another person's shoes, not to judge, but see them as a person who need all the care and compassion. (Participant 4)

One participant shared an experience of an insensitive nursing care experience that occurred while trying to get out of bed shortly after major spinal surgery.

> When I was trying to sit up, and they were telling me, 'You have to sit up now. We have to get you ready for, you know, to go to the washroom,' and I was trying, but it was quite difficult. My back was still causing me a lot of pain. I didn't know how to sit up without assistance. And they were saying, 'Okay, you have one set this way not one set to the other' [referring to back exercises]. One set to the other way now, 'No, don't let her do this. Don't let her do that.' And I didn't understand what they were talking about. But I just had that sense that I had to follow certain rules in terms of the way I sat up, and I didn't really understand that. And they weren't amenable to me asking for clarification. (Participant 3)

Other nurses demonstrated insensitivity by being "a little bit sassy" (Participant 7); or the nurses who would "brush her [patient] off" (Participant 2) when she [the patient] was trying to explain the problem. One nurse, in fact, "came in screaming, yelling at me [patient], pushed me down on to the bed" (Participant 2).

Awareness

Awareness refers to showing compassion by not thinking you are better than your patient; fully recognizing the distinct needs of patients; acknowledging that social factors impact patient health; and, altering your internal thoughts to accommodate patients. Participants explained that some nurses gave them the impression that "they were better." That is, some participants thought that any input from them when they were seeking medical help in the emergency department or when they were under nursing care as hospitalized patients were dismissed and deemed insignificant. One participant shared an incident of a friend with multimorbidities who was in hospital following a motor vehicle accident:

> One of my friends was in a car accident. She went to the hospital to be treated and that she has a multitude of health issues, ranging from juvenile arthritis to fibromyalgia, she also has diabetes and a long range of other ones in a seizure disorder. When she came into the hospital with her medical alert on, she informed them as she best she could in her state of shock of what she has, how to be treated and what can be careful of and what drugs she may not be able to have. The nurses

> then seemed to brush her off and say like, ‘We know what's best for you and that we've seen this all the time kind of things’ like, ‘You'll be okay.’ The nurses were adamant that they knew the health history and completely ignored the patient perspective. (Participant 5)

Conversely, a nurse who demonstrates compassion is aware that each complex patient is unique, although the patient may have similarities to previous patients in the nurse’s care. A participant explained that awareness is having that sense as a patient “that you’re being looked at as an individual, as a person who may have needs that are different from the person in the next room or the person, you know, that they might have encountered earlier” (Participant 3). Awareness includes not having assumptions, recognizing that there are many underlying factors involved in the life of complex patients, such as social factors (e.g., poverty, homelessness, illiteracy). Participants informed that awareness means “seeing people’s lived experience and how different it might be from your own. And how hard people are trying, you know, people who, you know, really are trying to make changes in their lives, but with who have very complex health issues, but are not able to do that” (Participant 4). Nurses who are compassionate acknowledge that patients did not deliberately engage in negative health behaviours such as addictions. Participants shared that these nurses are conscious of the social problems contributing to the complexity of their health problems.

Participants noted that it is also critical that nurses recognize their inherent biases against this population because pejorative attitudes can lead nurses to ignore patients’ views and can prevent nurses from understanding and addressing their patients’ needs. Nurses who provide compassionate care are able to expand their thinking, put more effort into reflecting on their attitude and approach and how their negatively behaviours may

potentially impact their patient's care. The ability to provide compassionate care for complex patients may require self-reflection and adaptation by finding new ways of viewing the patient's presenting issue and circumstances. One of the participants added,

> But you have to adjust your inner self to accommodate another person. Because if you don't accommodate another person in their time of suffering and pain, and you're getting all uptight about it, which is, you know, is making your patient uptight and it's going to make them react even worse. (Participant 2)

A Nonjudgmental Approach

Participants described a nonjudgmental approach as being accepting; taking cues from patients' facial expressions; gentle communication; and listening to patients. According to participants who had spent time in medical-surgical and emergency settings and visited the hospital for mental health consultations, compassionate nurses were those health professionals who genuinely made the effort to be available to presence with complex patients, especially during their suffering. When nurses cared in a meaningful, nonthreatening manner, patients felt fully accepted. Nurses could read facial cues of patient discomfort or detect patient gestures of agitation or fear. One participant explained:

> If I look at that person's [nurse's] mouth, and that person's mouth is soft and gentle, and it's not like harsh, or, you know, angry. If, if it's soft and gentle when they're trying to tell me something, then I'll shut up and listen. Because I know that they're not being like, well, you should do this, or you should do this is what's going on. Oh, just like throw it at me. I don't mind if you just tell me straightforward, but don't get like uppity about it up. (Participant 2)

In contrast, communication was sometimes not gentle, but cutting and judgmental. Participants shared that they experienced nurses who were overtly blaming and accusatory. One of the patients shared an example of overt judgment: "She [the nurse] tells me you are here for medicine, and I was 'no I am not'. She says, 'Yes you are, so go talk to the

manager'" (Participant 10). Similarly, "I felt like they judged me because I used to be an intravenous drug user" (Participant 18). This participant elaborated:

> I have diabetes neuropathy. And it was like to the point that I could hardly even walk. And I went to [Name of Hospital] and they pretty much thought that I was only there to try to get drugs, because then the nurse even said, 'Well, we're not giving you any painkillers.' I was like, 'I don't want painkillers, I want to know what the hell is wrong, like, why my feet are numb, like, why am I having intense pain?' (Participant 18)

Many participants stated that they have witnessed complex patients being labeled as "drug addicts" and "junkies," and being treated in a disrespectful manner. One of the participants shared that his wife died because of a drug overdose to which the nurse remarked, "Well, there's only another junkie gone" (Participant 15). Another participant shared the rude verbal reactions of nurses when communicating with elderly patients with complex needs:

> Some nurses don't even care. I have seen elderly people asking the nurse, 'Can you change me? Shut up, I don't have the time. I will be back in a minute; I'll get around in a minute. Excuse me nurse, can you help me? Shut up. I'll be back in a minute.' I see that in every hospital in this town. And I will go back to the same question, why do they join this profession when they don't want to help? (Participant 14)

Judgment was also depicted in covert behaviours. According to one of the participants, when receiving care in the emergency department for an injury, the nurse providing care was subtle but more or less accusing the participant of taking a knife to his wrists: "I had my wrist cut open really bad there. They stitched me up and then it seemed like they told me to go kill myself. More or less in the exact words, 'Go kill yourself'" (Participant 19). Some participants described "behind-the-curtain talk" and thought this was a form of covert judgment. On one occasion according to the participant who recounts his experience as a hospital patient, the nurses behind the drawn curtain abruptly stopped

talking and the participant recalled: “And then, you know, if you ask them, if you can have something to eat, they'll get rude” (Participant 11).

A Positive Demeanour

A positive demeanour also demonstrated compassionate nursing care of complex patients and was described as nurses’ kindness and warmth; exuding positive body language; being respectful; and laughing with your patients. Participants shared that compassion was manifest when nurses “portrayed themselves as caring individuals” and “displayed kindness.” “calmness,” “expressed positive emotions,” and “practiced warmth towards patients.” In particular, a positive demeanour is not only shown by positive words but my gestures. Even when nurses were having “a rough day” they could overcome any negativity to ensure that they projected positivity; examples included a “cheerful attitude” which “displays positivity and optimism”; and, by “talking to patients with a smile.” They noted that a smile could show that nurses genuinely cared for their patients with respect and that nurses were interested in developing a therapeutic relationship that enhances compassionate care. One of the participants noted the significance of a smile during nurse-patient interactions in the following comment:

> I've had nurses who have come into my room, and I have unless I've asked them, I have never known their names. And they have never smiled, you know. There are exceptions, I believe, and it's not the rule, but it can be horribly off putting. (Participant 4)

Participants wanted to emphasize that the nurse’s positive body language (e.g., open posture, relaxed facial expression, a smile) puts complex patients at ease. Patients are then able to establish a trusting, therapeutic relationship with the nurse and open up about genuine concerns and issues.

Participants also placed considerable emphasis on the role of humour. Laughing with patients was for many participants, an example of how a positive demeanour was manifest. One participant shared an encounter with a nurse who made herself available to patients and interacted with patients in a positive manner by sharing jokes and using other displays of humour.

> There was one nurse when I was in the cardiac ward, and I liked her. And I kept pestering my doctor, for her to be my nurse. And she was like, she was so mellow. And she was so sweet. Like, she knew what compassion was all about. But even when I would walk by the nurse's station, she goes, "There she goes again." She starts seeing it. Right. Like crack up laughing. I said, 'You do know, do you realize I have I had a cardiac episode. If you keep making me laugh…she goes, "Laughter is good for your heart, girl." She said, "Laugh away, mix your heart strong." 'Let's say we'll keep making me laugh. And she goes, "No problem."' But yeah, I mean, you need you need a balance. (Participant 2)

Empathic Understanding

Examples of empathic understanding include treating patients as human beings; feeling patients' pain; genuinely trying to understand patient needs; putting yourself in others' shoes, and fully engaging with patients. Nurses who were compassionate saw their complex patients not as things or tasks assigned but as human beings. These nurses demonstrated empathic understanding by acknowledging the human suffering before them and by wanting to understand and even feel the pain of their suffering patients. Nurses made an effort to know how patients thought and feel by trying to imagine the illness experience and life situation of the complex patient. Interactions were genuine person-to-person encounters. It was like nurses who delivered compassionate care really put themselves in the patient's shoes:

> They [nurses] understand you more so than if you're just talking to a regular person or that they don't understand where you're coming from. With the nurses that I deal

> with, they're very understanding. I like that they show compassion. You're not another number, you're an individual with a problem and they try to suit your needs. (Participant 13)

Fully engaging in this way did not allow the nurse's biases and assumptions to interfere. Empathetic understating entails proactive action; that is, participants said nurses devoted their efforts to being ready not to pass judgment or make false accusations as to why, for example, the patient was seeking medical care. They noted that when empathy is practiced and nurses put themselves in their patient's shoes, they can move beyond their preconceived biases about the complexity of their patients' issues. One of the participants added that empathic understanding is demonstrated by nurses who "know how to actually step in that person's shoes. They'd actually be able to understand a lot more, because when you go in, and, you know, everybody does it, but they say, hey, 'I understand' (Participant 18). Similarly,

> Well, you know nothing goes as far as the attitudes. I think nurses need to try to put themselves in others' shoes and understand what other people's lived experience is. To reach out to them with their hearts, not like only with their minds and knowledge. Reach out to your patients. (Participant 4)

Altruism

Participants described examples of how nurses displayed altruism which is the final core indicator of compassionate nursing care. Examples included making patients feel valued; checking in with the patient; refraining from rushed care; putting in an extra effort to respond to physical and emotional needs; and practicing therapeutic touch. Many participants elaborated on their perceptions that altruism was about being made to feel valued and respected; for example, when nurses went beyond what was expected of them, to act or do something which is not asked of them. One participant shared how a nurse went

out of his way and developed a genuine connection with his brother-in-law, a patient with complex health care needs, and the family.

> I actually had a good experience with one of the male nurses, he was actually really nice to me. He was coming in and helping us clean my brother-in-law. He was the only one that we feel comfortable with. I feel like he was the number one, like, we actually got a bond with him. … And he called me and said that somebody wanted to talk to me. The person on the phone was my brother-in-law. He actually woke him up and asked him to call me. He [the nurse] gave my brother-in-law his own personal phone to call me on. So, I find that one nurse we [had] a real good connection with and [then] he had to leave to go to another floor. And actually, [it] broke our heart because we had a good connection with that nurse. And it was like the connection we had with him was now gone. But he [the nurse] still would come on to the other flour my brother-in-law was on and check on him on a daily basis. (Participant 19)

Participants believed that compassionate nurses are altruistic when they are vigilant, monitoring patient progress; for example, by checking in with the patient on a frequent basis:

> Even if you drop in for a moment when someone sits lying in the bed, you know, in pain or having definitely mental issues, and put it inside and close that curtain and lead them through for a half hour time and nobody dropping in. Take a minute, look around the corner and say, 'Are you doing, okay? Do you need anything?' Even though you're busy. (Participant 15)

Altruism is very much portrayed by the nurse who is not rushed, cares for complex patients calmly and attentively. These nurses strive to understand and to respond to both physical and emotional needs. Participants also remarked that the care provided does not have to be overly complicated, simple gestures such as being in close proximity and simply extending comfort through touch. The nursing practice of presencing with patients who were suffering and therapeutic touch were strong examples of altruism. One participant stated, "Just stand by someone side when they're going through a hard time" (Participant 22). Another added that nurses "put their hands on my hands and shoulder and comforted me" (Participant 10).

The significance of touch was reinforced: “Sometimes it was just somebody who put their arm or hand on your hand. So it was that that sense of touch to which was very important” (Participant 4).

Discussion

Complex patients with multimorbidities are susceptible to stigma during interactions with health professionals and when seeking treatment in health care settings (Knaak et al., 2017; Loeb et al., 2016; Nyblade et al., 2019; Webster et al., 2019; Van Boekel et al., 2013). Several behavioural indictors of compassionate nursing care from the perspectives of individuals who had experiences as complex patients have been identified, and include nurse sensitivity and awareness, projecting a nonjudgmental approach and positive demeanour, empathic understanding, and altruism. The findings are consistent with previous studies that focused on compassionate nursing care, but with different patient populations. Sinclair et al. (2016, 2017) concluded that compassionate nurses deliberately get to know their patients which resonates with the core indicators of sensitivity, awareness, and empathic understanding. The researchers also discovered that altruism was characteristic of nurses with compassion, adding that altruism enables nurses to alleviate patient pain and suffering. Other scholars have highlighted that compassionate nursing care entails kind communication, virtue-based care, and practicing empathy (Kneafsey et al., 2016; Smith-MacDonald et al., 2019; Straughair, 2019; Tehranineshat et al., 2019) which align with a nonjudgmental approach and empathic understanding that participants experienced as complex patients when under the care of compassionate nurses. Examples

cited by participants included nurses who speaks softly with “gentle communication” and who are respectful and will put themselves in others’ shoes.

However, not highlighted in previous research are two distinct findings: the importance of nurse sensitivity and nurse awareness. In fact, participants said that they expected nurses who are compassionate to be more sensitive to complex health care issues (i.e., physical, emotional, and psychological needs); that is, nurses should be able to grasp the reality of the patient’s circumstances and comprehend the presence and severity of patient suffering. Participants recommended that nurses broaden their awareness to include self-awareness of stereotypes and biases, explaining that compassionate nurses are flexible and open to different ways of viewing a patient’s situation; for example, there are many reasons why substance abuse is a problem. Compassionate nurses recognize the reasons may be linked to the adverse effects of sociocultural factors and other determinants of health, in particular poverty and lack of social support. These findings bring to attention the importance of self-awareness among health professionals, especially among nurses when they are caring for complex patients. Nurse must be reminded of the social determinants of health impacting on healing and recovery (Porr, 2017) which will enhance their sensitivity to the multifaceted health and social care needs of complex patients. Nurses, too, must be keenly aware of how pejorative attitudes can hinder the provision of compassionate nursing care for complex patients. These findings support previous research about the need to examine contextual factors exacerbating patient suffering and pain and personal biases and assumptions negatively influencing level of care (Hartrick Doane & Varcoe, 2015; Rasheed et al., 2019). Research is warranted, though, to explore nurses’ and patients’ perspectives

related to the impact of sociocultural factors on the provision of compassionate nursing care.

Participants made it clear that compassion is shown by nurses intentionally trying to understand the challenges, hardships, and other circumstances of patients with multimorbidities and who are suffering with substance abuse. It was important to participants that nurses focused on understanding lived experiences to be able to discern underlying factors contributing to life choices that led to health problems. Participants emphasized that nurses should refrain from being judgmental and accusatory. Compassionate nurses do not make accusations about patients' reasons for visiting the health care settings. However, participants also talked about the nurses who judged them in both overt and covert manners and assigned derogatory labels. Participants felt that these nurses considered themselves knowledgeable about the presenting complex health problem and downplayed the patient's legitimate complaints. This phenomenon is referred to as epistemic injustice when a listener implicitly or explicitly devalues the opinions of the speaker, rendering their views less credible, based on sociocultural and identity prejudice and stereotypes (Fricker, 2008). Previous researchers have revealed that nurses may downplay clinically legitimate complaints and accuse complex patients of attention-, drug-, or benefit-seeking or dismiss the complaint as part of a psychiatric disorder (Manning & Gagnon, 2017; Webster et al., 2019). Therefore, it is critical that nurses cognizant of the manner in which they interact with this patient population and not pass judgment, especially if traumatized by social and cultural issues. Complex patients may be more sensitive to the negative behaviours of nurses and other health professionals.

Limitations

The majority of participants (n=19) were recruited from a homeless shelter. Therefore, the transferability of the findings to other contexts may be limited. Further research is required across different contexts to further support the findings. During interviews, participants were specifically asked to share their experiences of compassionate care that they received from *registered* nurses. However, it is possible that many participants may not have had adequate knowledge to differentiate between registered nurses and other nursing personnel who may have provided care. In addition, the participants could not recall with confidence the number of times they visited health care settings, but some participants frequently visited hospitals during the COVID-19 pandemic which could have influenced their views about the level and quality of compassionate care provided by nurses during such unprecedented times. Also, three interviews were under 10 minutes which could be considered superficial or lacking depth by some. Nevertheless, these three interviews provide rich information about the positive and negative nursing care experiences of participants who were complex patients. Moreover, interviewees may have been open and willing to share their perspectives given the research was in no way associated with the setting in which they received care or affiliated with the community health center from which most participants were recruited.

Summary

Presented in this chapter were the findings of the first phase of the MMR dissertation study. Participants with experiences as complex patients in tertiary and psychiatric settings shared their insights about how compassionate nursing care is

demonstrated. Many spoke about nurse sensitivity to, and nurse awareness of, the health and social care needs of complex patients and impacts of their adverse living conditions as being critical behavioural indicators of compassionate care. It is important, they said, that nurses are sensitive; that is, able to understand the circumstances, perspectives, pain and suffering of their patients. This is not surprising given that complex patients are often victims of neglect and discrimination. Other behavioural indicators of compassionate nursing care were awareness, a positive demeanour, empathic understanding, and altruism. Participants appreciated the compassionate nurse who recognized the unique needs of complex patients and could acknowledge that social factors impact the patient's health and often are the underlying reason for drug-related problems. Compassionate care meant they were not judged but treated with kindness and provided opportunity to openly share their problems, concerns, and issues. The qualitative data pertaining to the behavioural indicators in addition to the barriers of compassionate nursing care delivery were key to the subsequent phases of the mixed methods dissertation study including compiling a list of relevant implementation strategies that could operationalized with potential to enhance the capacity of nurses to provide compassionate nursing care to complex patients.

References

Bartlett, R., Brown, L., Shattell, M., Wright, T., & Lewallen, L. (2013). Harm reduction: Compassionate care of persons with addictions. *Medsurg Nursing*, *22*(6), 349–358.

Bradshaw, C., Atkinson, S., & Doody, O. (2017). Employing a qualitative description approach in health care research. *Global Qualitative Nursing Research*, *4*. https://doi.org/10.11772F2333393617742282

Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health, 11*(4), 589-597. https://doi.org/10.1080/2159676X.2019.1628806

Braun, V., & Clarke, V. (2021). Conceptual and design thinking for thematic analysis. *Qualitative Psychology*. https://doi.org/10.1037/qup0000196

Doyle, L., McCabe, C., Keogh, B., Brady, A., & McCann, M. (2020). An overview of the qualitative descriptive design within nursing research. *Journal of Research in Nursing, 25*(5), 443-455. https://doi.org/10.11772F1744987119880234

Firestone, W. A. (1993). Alternative arguments for generalizing from data as applied to qualitative research. *Educational Researcher, 22*(4), 16-23. https://doi.org/10.31022F0013189X022004016

Fricker, M. (2008). Forum on Miranda Fricker's 'epistemic injustice: Power and the ethics of knowing'. *Theoria*, 61, 69–71. https://www.ehu.eus/ojs/index.php/THEORIA/article/viewFile/7/43

Gutwinski, S., Schreiter, S., Deutscher, K., & Fazel, S. (2021). The prevalence of mental disorders among homeless people in high-income countries: An updated systematic

review and meta-regression analysis. *PLoS Medicine, 18*(8), e1003750. https://doi.org/10.1371/journal.pmed.1003750

Hartrick Doane, G., & Varcoe, C. (2015). *How to nurse: Relational inquiry with individuals and families in changing health and health care contexts*. Wolters Kluwer/Lippincott.

Kallio, H., Pietilä, A. M., Johnson, M., & Kangasniemi, M. (2016). Systematic methodological review: Developing a framework for a qualitative semi-structured interview guide. *Journal of Advanced Nursing, 72*(12), 2954–2965. https://doi.org/10.1111/jan.13031

Kitching, G. T., Firestone, M., Schei, B., Wolfe, S., Bourgeois, C., O'Campo, P., Rotondi, M., Nisenbaum, R., Maddox, R., & Smylie, J. (2020). Unmet health needs and discrimination by healthcare providers among an Indigenous population in Toronto, Canada. *Canadian Journal of Public Health, 111*(1), 40-49. https://doi.org/10.17269/s41997-019-00242-z

Knaak, S., Mantler, E., & Szeto, A. (2017). Mental illness-related stigma in healthcare: Barriers to access and care and evidence-based solutions. *Healthcare Management Forum, 30*(2), 111-116. https://doi.org/10.11772F0840470416679413

Kneafsey, R., Brown, S, Sein, K., Chamley, C., & Parsons, J. (2016). A qualitative study of key stakeholders' perspectives on compassion in healthcare and the development of a framework for compassionate interpersonal relations. *Journal of Clinical Nursing*, 25, 70-79. https://doi.org/10.1111/jocn.12964

Kuckartz, U., & Rädiker, S. (2019). *Analyzing qualitative data with MAXQDA*. Springer.

Kuluski, K., Ho, J. W., Hans, P. K., & Nelson, M. (2017). Community care for people with complex care needs: Bridging the gap between health and social care. *International Journal of Integrated Care, 17*(4), 2. https://doi.org/10.5334/ijic.2944

Lewer, D., Aldridge, R. W., Menezes, D., Sawyer, C., Zaninotto, P., Dedicoat, M., Ahmed, I., Luchenski, S., Hayward, A., & Story, A. (2019). Health-related quality of life and prevalence of six chronic diseases in homeless and housed people: A cross-sectional study in London and Birmingham, England. *BMJ Open, 9*(4), e025192. http://dx.doi.org/10.1136/bmjopen-2018-025192

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage.

Loeb, D. F., Bayliss, E. A., Binswanger, I. A., Candrian, C., & Degruy, F. V. (2012). Primary care physician perceptions on caring for complex patients with medical and mental illness. *Journal of General Internal Medicine, 27*(8), 945-952. https://doi.org/10.1007/s11606-012-2005-9

Loeb, D. F., Bayliss, E. A., Candrian, C., deGruy, F. V., & Binswanger, I. A. (2016). Primary care providers' experiences caring for complex patients in primary care: A qualitative study. *BMC Family Practice, 17*(1), 34. https://doi.org/10.1186/s12875-016-0433-z

Manning, E., & Gagnon, M. (2017). The complex patient: A concept clarification. *Nursing & Health Sciences, 19*(1), 13-21. https://doi.org/10.1111/nhs.12320

Martello, C., Bessière, G., Bigras, M., Boulet, A., Brenner, K., Crist, E., & Pluye, P. (2014). *What do we mean when we say, "This patient is complex."* In NAPCRG Annual Conference. New York: North American Primary Care Research Group

Nguyen, T. T., Vable, A. M., Glymour, M. M., & Nuru-Jeter, A. (2018). Trends for reported discrimination in health care in a national sample of older adults with chronic conditions. *Journal of General Internal Medicine, 33*(3), 291–297. https://doi.org/10.1007/s11606-017-4209-5

Nutt, R. A., Gilchrist, G., Marsa Sambola, F., & Baldacchino, A. M. (2017). Staff regard towards working with patients who have co-morbid depression and substance misuse disorders. *Heroin Addiction and Related Clinical Problems, 19* (2), 5-16.

Porr, C. (2017). *Establishing therapeutic relationships in nursing practice: Advancing interpersonal competencies*. [preliminary edition]. Kendall Hunt.

Rasheed, S. P., Younas, A., & Sundus, A. (2019). Self-awareness in nursing: A scoping review. *Journal of Clinical Nursing, 28*(5-6), 762-774. https://doi.org/10.1111/jocn.14708

Reader, T.W., Gillespie, A. (2013). Patient neglect in healthcare institutions: A systematic review and conceptual model. *BMC Health Services Research, 13*(1), 156. https://doi.org/10.1186/1472-6963-13-156

Rich, E., Lipson, D., Libersky, J., & Parchman, M. (2012). *Coordinating care for adults with complex care needs in the patient-centered medical home: Challenges and solutions*. Rockville, MD: Agency for Healthcare Research and Quality. https://pcmh.ahrq.gov/sites/default/files/attachments/coordinating-care-for-adults-with-complex-care-needs-white-paper.pdf

Sandelowski, M. (2000). Whatever happened to qualitative description? *Research in Nursing & Health*, 23, 334–340. https://doi.org/10.1002/1098-240X(200008)23:4<334::AID-NUR9>3.0.CO;2-G

Sandelowski, M. (2010). What's in a name? Qualitative description revisited. *Research in Nursing & Health*, 33, 77–84. https://doi.org/10.1002/nur.20362

Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information, 22*(2), 63-75. https://doi.org/10.3233/EFI-2004-22201

Sieben-Hein, D., & Steinmiller, E. A. (2005). Working with complex care patients. *Journal of Pediatric Nursing, 20*(5), 389-395. https://doi.org/10.1016/j.pedn.2005.06.011

Sinclair, S., Beamer, K., Hack, T. F., McClement, S., Raffin Bouchal, S., Chochinov, H. M., & Hagen, N. A. (2017). Sympathy, empathy, and compassion: A grounded theory study of palliative care patients' understandings, experiences, and preferences. *Palliative Medicine, 31*(5), 437-447. https://doi.org/10.11772F0269216316663499

Sinclair, S., McClement, S., Raffin-Bouchal, S., Hack, T. F., Hagen, N. A., McConnell, S., & Chochinov, H. M. (2016). Compassion in health care: An empirical model. *Journal of Pain and Symptom Management, 51*(2), 193-203. https://doi.org/10.1016/j.jpainsymman.2015.10.009

Smith-MacDonald, L., Venturato, L., Hunter, P., Kaasalainen, S., Sussman, T., McCleary, L., Thompson, G., Wickson-Griffiths, A., & Sinclair, S. (2019). Perspectives and experiences of compassion in long-term care facilities within Canada: A qualitative

study of patients, family members and health care providers. *BMC Geriatrics, 19*(1), 128. https://doi.org/10.1186/s12877-019-1135-x

Straughair, C. (2019). Cultivating compassion in nursing: A grounded theory study to explore the perceptions of individuals who have experienced nursing care as patients. *Nurse Education in Practice,* 35, 98-103. https://doi.org/10.1016/j.nepr.2019.02.002

Tehranineshat, B., Rakhshan, M., Torabizadeh, C., & Fararouei, M. (2019). Nurses', patients', and family caregivers' perceptions of compassionate nursing care. *Nursing Ethics, 26*(6), 1707-1720. https://doi.org/10.11772F0969733018777884

Van Boekel, L. C., Brouwers, E. P., Van Weeghel, J., & Garretsen, H. F. (2013). Stigma among health providers towards patients with substance use disorders and its consequences for healthcare delivery: Systematic review. *Drug and Alcohol Dependence, 131*(1-2), 23-35. https://doi.org/10.1016/j.drugalcdep.2013.02.018

van Boekel, L. C., Brouwers, E., van Weeghel, J., & Garretsen, H. (2014). Healthcare professionals' regard towards working with patients with substance use disorders: comparison of primary care, general psychiatry and specialist addiction services. *Drug and Alcohol Dependence,* 134, 92–98. https://doi.org/10.1016/j.drugalcdep.2013.09.012

Webster, F., Rice, K., Bhattacharyya, O., Katz, J., Oosenbrug, E., & Upshur, R. (2019). The mismeasurement of complexity: Provider narratives of patients with complex needs

in primary care settings. *International Journal for Equity in Health, 18*(1), 107. https://doi.org/10.1186/s12939-019-1010-6

World Health Organization (2016). *Multimorbidity: Technical series on safer primary care*. Geneva: World Health Organization. https://apps.who.int/iris/bitstream/handle/10665/252275/9789241511650-eng.pdf

Chapter Three

The Pathway Building Technique in

Implementation Research Using Mixed Methods Designs

This chapter is the second manuscript of the dissertation during which an exploratory sequential mixed methods research design was used to formulate implementation strategies to enhance compassionate nursing care of complex patients in Newfoundland and Labrador. This second manuscript will be published as a methodological article focused on illustrating how qualitative findings can be integrated using a novel pathway building technique to inform development of a quantitative instrument during mixed methods study designs. The manuscript will be prepared for implementation scientists who are using mixed methods study designs during their implementation research projects and submitted for publication to the Implementation Science journal or to the Research Methods in Medicine and Health Sciences journal. Presented below is the manuscript abstract, background, and goal, followed by an overview of the dissertation study. The emphasis in this manuscript is the introduction of an innovative pathway building technique for data integration in mixed methods research designs. The pathway building technique is clearly displayed and explained in detailed steps.

Manuscript (2) Abstract

Data integration in mixed methods research designs is achieved through several techniques including the building technique. The building technique can achieve development of quantitative instruments by integrating data from the qualitative phase. There are limited examples of data integration using the building technique in mixed methods studies in the field of implementation science. The goal of this methodological article was to illustrate how the pathway building technique can be used to integrate data in mixed methods research through concurrent use of implementation science models and frameworks. Two pathways are illustrated. The first pathway is the integration of qualitative data from the first phase of a mixed methods study with implementation models and frameworks to create a quantitative instrument (i.e., a Q-sort survey) for the subsequent phase. The second pathway is the operationalization of the Q-sort survey results (i.e., implementation strategies) using an implementation science specification framework. The pathway bridging technique contributes to the fields of mixed methods research and implementation science by offering a creative way to tackle integration challenges.

Keywords: building technique; data integration; implementation science; mixed methods research

Background

Mixed methods research (MMR) is an iterative methodology that involves the integration of qualitative and quantitative paradigms and methods for developing a comprehensive understanding of research phenomena that cannot be fully achieved with qualitative and quantitative methods, alone (Bazeley, 2018; Creswell & Plano Clark, 2018). MMR has emerged as an approach to guide researchers across health sciences, nursing, midwifery, management, educational psychology, social sciences, and education (Lopez-Fernandez & Molina-Azorín, 2011). The extensive use of MMR across disciplines is due to its strength in integrating diverse and sometimes opposing paradigms and methods (Creswell & Plano Clark, 2018; Plano Clark & Ivankova, 2016). The application of MMR has been expanded to translational research (Ivankova et al., 2018; Meister, 2018) when seeking to apply basic and pre-clinical research to inform the conduct of human trials, and for the adoption of research for practice and policymaking (Woolf, 2008).

Translational research is referred to as Knowledge Translation (KT). KT is a dynamic and iterative process comprising synthesis, dissemination, exchange, and ethically sound application of knowledge to improve the health of Canadians, to provide more effective health services and products, and to strengthen the health care system (Canadian Institutes of Health Research, 2016, para. 2). Implementation science (IS) can be considered a subset of KT and is defined as "the scientific study of methods to promote the systematic uptake of research findings and other evidence-based practices into routine practice, and, hence, to improve the quality and effectiveness of health services" (Eccles & Mittman, 2006, p. 1). Implementation scientists commonly uses MMR designs along with behaviour change

theories and frameworks to: a) identify factors affecting change, b) assess the quality and uptake of evidence-based practice guidelines, and c) design and evaluate implementation strategies for change (Bauer et al., 2015; Meister, 2018; Palinkas et al., 2011).

During any implementation research project, developing an adequate and comprehensive understanding of individual and group behaviours and social and health processes requires qualitative and quantitative approaches (Bazeley, 2012). Integrating findings from qualitative and quantitative approaches can further enhance understanding (Creswell & Plano Clark, 2018). Integration can be accomplished by combining any of the five standard techniques: connecting, merging, threading, embedding, and building (Fetters et al., 2013). The topic of this methodological manuscript is the building technique using a novel pathway approach that is made up of two pathways. Pathway One is the process that can be used to integrate qualitative data to develop a quantitative instrument. Pathway Two is the process that can be used to operationalize the results of a quantitative method or in this case a data collection instrument. Further description and explanation are provided below.

Integration in Mixed Methods Research

Integration of qualitative and quantitative data is the most essential component of any MMR study. Integration contributes to the generation of robust and plausible knowledge and understanding of a given phenomenon (Bazeley, 2018; Creswell & Plano Clark, 2018) or intended behaviour change. Integration should occur at the theoretical and empirical levels because it involves more than merely assembling, combining, and aggregating qualitative and quantitative data (Tunarosa & Glynn, 2016). There is ample

guidance on integrating qualitative and quantitative data across different MMR designs. Five frequently cited techniques are briefly described below.

1. Connecting involves analyzing one dataset (either qualitative or quantitative) and using results to inform data collection and sampling for the subsequent phase. For example, a researcher conducting a study about patient satisfaction can choose to interview a select sample of patients who had rated higher and lower levels of satisfaction on the survey for the subsequent phase.
2. Building entails development of data collection instruments, tools, methods or interventions for the quantitative phase based on the findings of the first phase. For example, a researcher can develop a questionnaire to measure compassionate care based on interviews with patients by using verbatim quotations as the items in the questionnaire.
3. Merging involves comparing qualitative and quantitative data during the analysis, interpretation, and discussion phases. For example, a researcher can transform qualitative data into quantitative (quantitizing) or quantitative into qualitative data (qualitizing) during analysis to merge the results; or perform separate analyses and then merge the results through presentation in a joint display.
4. Embedding is a complex technique involving connecting, building, or merging techniques at different stages (Fetters et al., 2013). For example, if a researcher conducted a study about patient satisfaction scores on compassionate nursing care, the researcher can first connect the data to choose a select sample of individuals, and then use the building technique to generate a shorter questionnaire to survey

more individuals from the sample who reported higher or lower levels of satisfaction to generate more generalizable data.

5. Finally, threading entails a preliminary analysis of qualitative and quantitative data for generating important themes and exploratory questions, and then selecting one theme or question from one dataset and following it across and between all other components (Moran-Ellis et al., 2006). For example, a researcher conducting an exploratory sequential mixed methods can select one or more key themes to develop key variables for the subsequent quantitative phase and design the second phase only about those themes or variables.

The integration techniques can be employed under broad methods of analysis, namely, sequential, complementary, and linking methods (Bazeley, 2018). The sequential method enables development of tools, variables, programs, interventions, and the generation, testing, and evaluation of theories and models. The complementary method allows for comparing, merging, and contrasting different data sources to compare datasets. The linking method enables development of a comparative (examining differences in research findings across subgroups such as age, gender, and role), relational linkages (identifying changes in patterns and aspects of a phenomenon across cases in relation to the overarching research purpose) for enriched understanding of the phenomenon (Bazeley, 2018).

Implementation scientists using MMR designs employ several integration methods and techniques but there are few, relevant and practical examples. Especially needed are worked examples to demonstrate threading and building techniques (Palinkas et al., 2011).

Goal

The goal is to illustrate how the pathway building technique can be used to integrate data in MMR designs through concurrent use of IS theories and frameworks. Illustrations are drawn from an exploratory sequential MMR study focused on the selection of relevant implementation strategies that would positively influence compassionate nursing care of complex patients.

Overview of the Compassionate Nursing Care Mixed Methods Research Study

To understand the barriers to compassionate nursing care of complex patients and then develop implementation strategies that would overcome barriers, an exploratory sequential three-phase MMR study was conducted. Phase 1 was the qualitative component during which participants were interviewed about the nature of compassionate nursing care when attending to complex patients. The participants (n=23) shared their experiences as complex patients (i.e., had multimorbities, and, or, physical and mental health issues, and, or, substance abuse, and are often impacted by sociocultural factors) in tertiary care centres in eastern Canada. During Phase 2 (instrument development) the pathway building technique was the method of integration created to compile a list of implementation strategies for a data collection instrument (i.e., the Q-sort survey which asks participants to rank various statements in terms of their relative importance). Phase 3 (the quantitative component) involved distributing the Q-sort survey to nurses, nurse managers, health care administrators, policymakers and compassion care experts; 32 stakeholders responded from Australia, Italy, the United States, United Kingdom, and Canada, and ranked 21

implementation strategies based on what they deemed most effective in addressing barriers to compassionate nursing care of complex patients.

The Pathway Building Technique

The pathway approach is a novel building technique. As portrayed in Figure 3, there are two pathways. Pathway One is illustrated by the process of integrating qualitative data related to the barriers to compassionate nursing care that were collected during Phase 1 of the MMR study to inform Phase 2, the development of an instrument for the quantitative phase. Pathway Two is illustrated by the process of integrating qualitative data related to the indicators of compassionate nursing care, also from Phase 1 of the MMR study, to operationalize the highest ranked implementation strategies that were the results of the Q-sort survey distributed in Phase 3.

Pathway One: Developing the Q-Sort Survey

Pathway One is a five-step process. Each of the five steps is described below.

Step 1: Analysis of Qualitative Data

Reflexive thematic analysis of 23 qualitative interviews during Phase 1 of the MMR study resulted in contextually-relevant barriers to compassionate nursing care of complex patients. Of the several paradigmatic orientations represented by reflexive thematic analysis, for this building technique, both inductive (codes and themes are content-driven) and deductive (codes and themes are matched to an existing framework) orientations were adopted to guide the analysis that entailed: familiarization with the data, data coding, developing initial themes, reviewing themes, and defining, and naming themes.

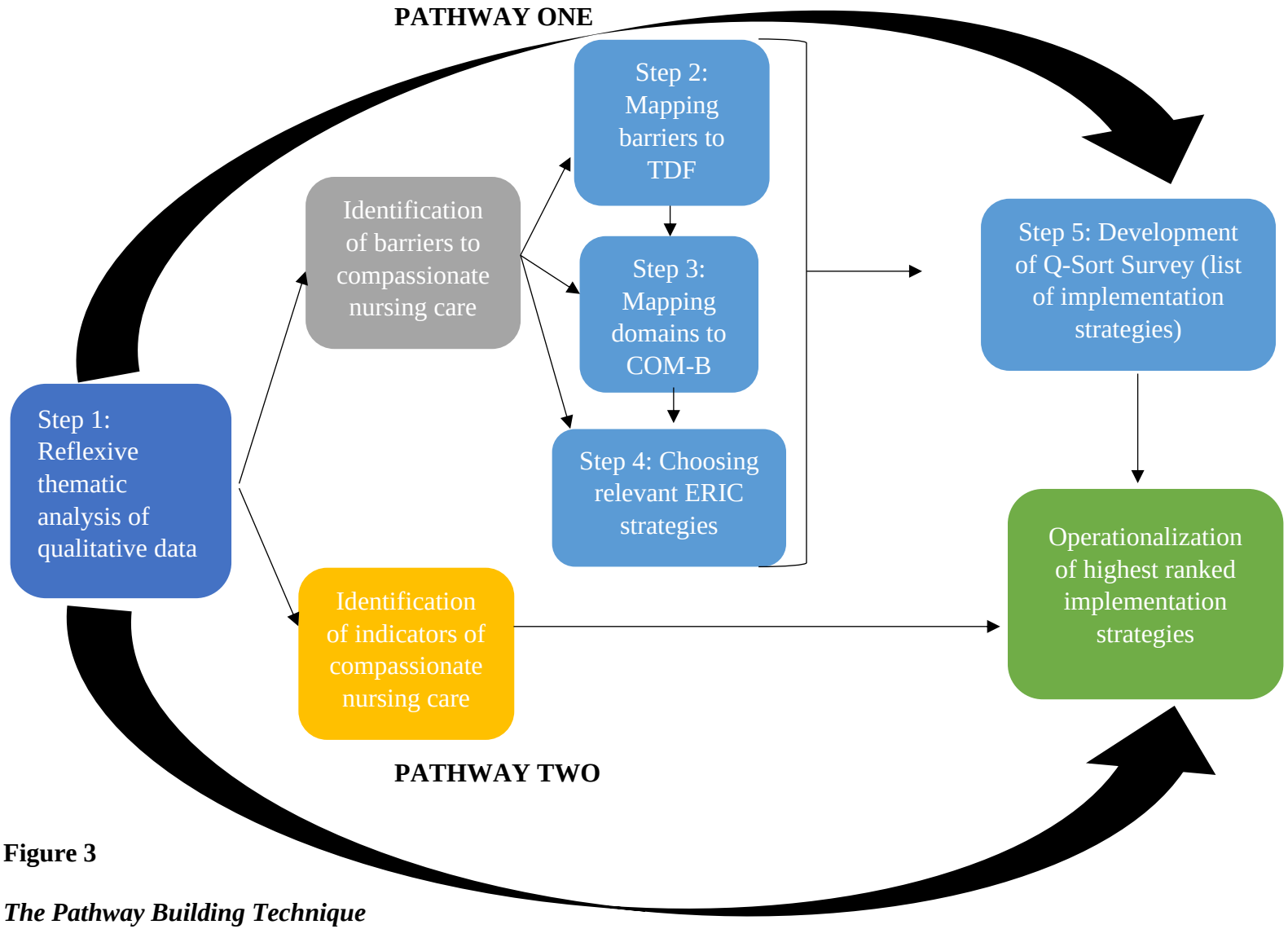


Figure 3

The Pathway Building Technique

Table 6

Barriers to Compassionate Nursing Care

Participant-Perceived Barriers			
Limited knowledge about patient needs	Unrealistic patient demands and expectations	Lack of organizational supports	Lack of compassion modelling
Limited experience	Limited motivation	Lack of appreciation	Routinization of care
Underpaid	Workload	Self-care neglect	Stress and burnout
Fears related to personal safety	Interprofessional conflicts	Nurse-patient conflicts	Negative personal and familial experiences

Step 2: Mapping Barriers

During this step of the process the barriers (see Table 6) to compassionate nursing care were mapped to the Theoretical Domains Framework (TDF) (Atkins et al., 2017) to discern the intellectual, affective, and social factors influencing nursing care behaviours. The TDF includes 84 constructs within 14 domains (Cane et al., 2012). As a determinant framework, the TDF enables researchers to understand and describe various individual and contextual factors influencing the implementation of strategies designed to affect change in behaviours (Nilsen, 2015). The TDF is a theoretically robust framework and was chosen over other frameworks (e.g., Consolidated Framework for Implementa-tion Research) because barriers at the provider level (e.g., nurses' limited knowledge

Table 7

The Theoretical Domains Framework

The 14 Domains			
knowledge	reinforcement	memory	emotion
skills	intentions	social influences	Goals
optimism	behavioural regulation	attention and decision processes	environmental context/resources
social/professional role and identity	beliefs about capabilities		

about patient needs) could be better identified in terms of the behaviours that should be targeted (Atkins et al., 2017; Birken et al., 2017; Michie, 2005). The 16 barriers were mapped to the appropriate domains of the TDF for a more robust analysis (see Table 7 for the 14 TDF domains). This process was repeated until all the barriers were mapped to the TDF domains. For example, the barriers "workload," "negative patient behaviours," "unrealistic patient demands and expectations," and "lack of organizational supports," were consistent with the *environmental context and resources* domain that is defined as "any circumstance of a person's situation or environment that discourages or encourages the development of skills and abilities, independence, social competence and adaptive behaviour" (Cane et al., 2012, p. 12). Interview participants informed that sometimes complex patients and their family members could be verbally abusive toward nurses and not treat them with respect. They could also be dismissive of the challenges that nurses face in the health care setting.

Step 3: Mapping Relevant Theoretical Domains

The relevant theoretical domains were then mapped to the COM-B theoretical model to diagnose the overarching behaviour classification; that is, are the barriers and domains falling under "motivation," "capability," and, or, "opportunity" (Michie et al., 2005, 2008, 2011)? Under these three classifications there are nine integration functions (or interventions): Education, Persuasion, Incentivization, Coercion, Training, Restriction, Environmental Restructuring, Modelling, and Enablement. The COM-B theoretical model enables identification of broader integration functions that are likely to be appropriate for a given context and a specific target population (Michie et al., 2008, 2011). For example, the *environmental context and resources* theoretical domain fell under "opportunity" when mapped to the COM-B theoretical model. The potential integration functions that would target the barriers under the *environmental context and resources* domain were Enablement, Environmental Restructuring, and Training. The integration functions relevant to the remaining barriers included Modelling, Education, and Incentivization.

In addition to sharing perspectives about barriers, interview participants also offered recommendations how to improve compassionate nursing care delivery. The participants suggested education and training focused on compassionate care, health and social needs of complex patients, establishing therapeutic rapport with patients, holistic care, and reflective practice. They also recommended organizational changes in institutional care mandates (e.g., compassionate care), interdisciplinary teamwork, hiring policies, and, changes to address health care budgets, recruitment and retainment practices, salary increases, and staffing issues. Based on these suggestions and recommendations,

Training and Environmental Restructuring were selected as the most pertinent integration functions to address the barriers mapped to the *environmental context and resources* domain.

Step 4: Choosing Implementation Strategies

At this step in Pathway One, for each integration function identified, the key implementation strategies were selected from the Expert Recommendations for Implementing Change (ERIC) guidelines (Powell et al., 2015). The ERIC strategies are derived from a three-round Delphi study of 71 global implementation scientists and experts, offering 73 concrete implementation strategies (refer to Appendix B for full list) that can be used alone or in combination. Some of the examples of the implementation strategies are: accessing new funding, audit and feedback, changing physical structure and equipment, centralizing technical assistance, creating new clinical teams, developing a formal implementation blueprint, academic partnerships, educational materials, and identifying and preparing champions (Powell et al., 2015).

Changing behaviour can be a long, arduous, and challenging process (Braithwaite et al., 2018; May et al., 2016). No single implementation strategy can possibly address all the real and potential barriers. Hence, multiple strategies are required (Powell et al., 2019). An exhaustive list of implementation strategies was compiled during this step. For example, as displayed in Table 8, the ERIC strategies for the integration functions of Environmental Restructuring and Training included: conducting educational meetings, developing academic partnerships, distributing educational materials, shadowing other experts, providing clinical supervision, developing academic partnerships, mandating change,

purposely re-examining the implementation process, altering incentives, accessing new or revisiting existing funding, staging implementation scale-up, involving

Table 8

Chosen ERIC Strategies in Pathway One, Step 4

Integration Function Environmental Restructuring; Training	
Implementation Strategy	Description
Conduct educational meetings:	Hold meetings targeted toward different stakeholder groups (e.g., providers, administrators, other organizational stakeholders, and community, patient/consumer, and family stakeholders) to teach them about the clinical innovation.
Develop academic partnerships:	Partner with a university or academic unit for the purposes of shared training and bringing research skills to an implementation project.
Distribute educational materials:	Distribute educational materials (including guidelines, manuals, and toolkits) in person, by mail, and/or electronically.
Mandate change:	Have leadership declare the innovation a priority and their determination to have it implemented.
Purposely re-examine the implementation:	Monitor progress and adjust clinical practices and implementation strategies to continuously improve the quality of care.
Alter incentives:	Work to incentivize the adoption and implementation of the clinical innovation.

Access new or revisit existing funding:	Access new or existing money to facilitate the implementation.
Stage implementations scale-up:	Phase implementation efforts by starting with small pilots or demonstration projects and gradually move to a system-wide rollout.
Identify and prepare champions:	Identify individuals who dedicate themselves to supporting, marketing, and driving through an implementation, and overcoming indifference or resistance that the intervention may provoke in an organization.

executive boards, recruiting, designating, training for leadership, identifying and preparing champions, and creating learning collaboratives.

Step 5: Refining Survey Statements

At this final step, the selected ERIC strategies became the content of the concourse/statements for the Q-sort survey. Statements were refined, though, to make the implementation strategies more relevant to the intended behaviour change (enhancing compassionate nursing care of complex patients) and context, but deliberately kept broad so that survey stakeholders could comprehend the meaning and objectives:

- **Shadow other experts** (i.e., nurses practicing compassion towards complex patients) and reflect and apply observed compassionate behaviours.
- **Identify and prepare champions (i.e., frontline nurses)** who dedicate themselves to supporting and driving through implementation of compassionate behaviours.

- **Conduct educational meetings** with nurses and administrators to teach patients' expectations of compassionate care.
- **Distribute educational materials (e.g., guidelines, toolkits, and manuals)** about compassionate care of complex patients.
- Organizations and nursing management could **develop academic partnerships** with local colleges for revisiting curricula and developing shared trainings on compassionate care.
- Organizations should **purposely re-examine the implementation** of compassionate behaviours by surveying multiple stakeholders.
- **Alter incentives** for the adoption of compassionate care of complex patients.
- **Access new or revisit existing funding** to facilitate implementation of strategies to enhance the provision of compassionate care.
- **Create a learning collaborative** by forming groups or groups of provider organizations to improve the implementation of strategies to increase compassion.
- **Stage implementation scale-up** by piloting small demonstrations of the strategies focused on compassionate care of complex patients.

Pathway Two: Operationalizing the Implementation Strategies

Indicators of compassionate nursing care that were identified through reflexive thematic analysis of the qualitative data became the basis for operationalizing the highest ranked implementation strategies (i.e., the Q-sort survey results). As illustrated in Figure 4, operationalization included first defining each implementation strategy by specifying the

name, conceptual definition, people implementing the strategy, the required actions, the target population, intended outcomes, and justification for using the strategy in accordance

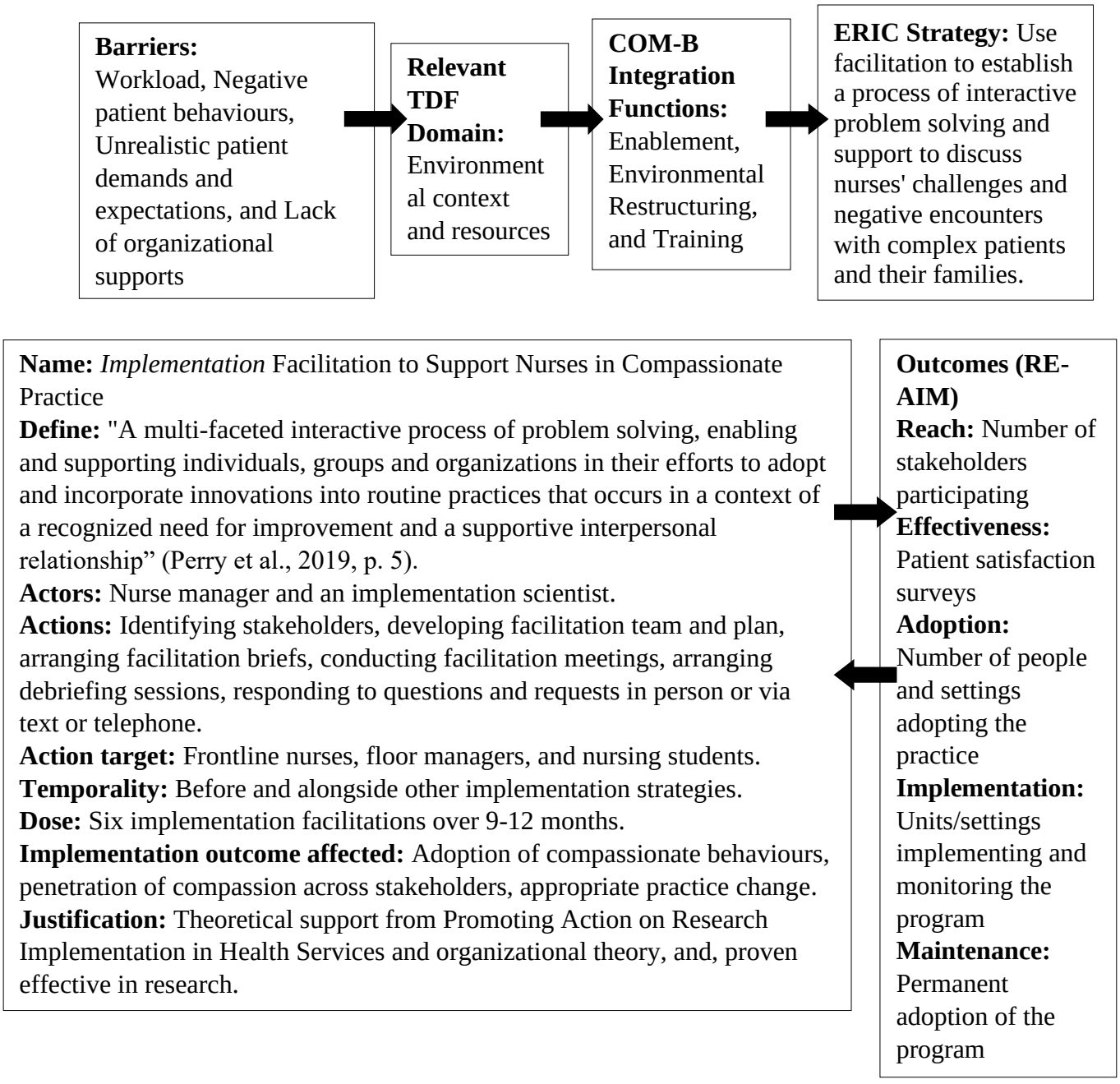


Figure 4

Operationalization of Facilitation as an Example

with the framework and work by Proctor et al. (2013), which required continuous reference to and consultation with the indicators of compassionate nursing care. Then measurable outcomes for all strategies were developed using the Reach, Effectiveness, Adoption, Implementation and Maintenance (RE-AIM) planning and evaluation framework (Glasgow et al., 1999). Refer to Chapter 5 “Operationalizing Implementation Strategies: A Worked Example” for operationalization of all relevant implementation strategies.

Discussion

The goal of this manuscript was to illustrate a novel approach to the building technique that can be useful in implementation research, exploratory sequential MMR designs. Exploratory sequential MMR designs play a significant role in designing context-specific instruments, tools, interventions, and programs (Creswell & Plano Clark, 2018) and when exploring factors that hinder implementation (Proctor et al., 2009). Therefore, MMR designs are commonly employed among implementation scientists to gain a nuanced understanding of contextual factors influencing implementation efforts (Palinkas et al., 2011; Proctor et al., 2009). One criterion of rigour in sequential MMR designs is an adequate and deliberate integration of qualitative and quantitative data which can be ensured by using the building technique (Creswell & Plano Clark, 2018; Fetters et al., 2013). The building technique explicitly links qualitative data to the quantitative phase (Fetters et al., 2013). As illustrated, the proposed pathway building technique enables researchers to make this linkage more explicit, thereby strengthening internal validity.

Generally, there is no common or concrete process how researchers are to apply the building technique because this technique is tailored to meet the study purpose and nature

of the data (Fetters et al., 2013). For example, Younas et al. (2020) designed a six-step building technique to develop a data collection instrument (questionnaire) for measuring the challenges of nurse educators when teaching undergraduate nursing students. After qualitative data analysis they selected key themes and subthemes and then linked them to verbatim quotations. Then, they converted the participants' quotations into items for the questionnaire. Unlike the pathway building technique in this manuscript, there was no underlying theory, framework, or model. Thus, the pathway building technique illustrated here is unique because it affords researchers capacity to develop instruments that are theory-driven as well as grounded in the quotations or perspectives of participants. The proposed pathway building technique may allow researchers to use qualitative findings concurrently with theoretical frameworks and models to develop instruments or other tools for the subsequent quantitative phase.

Integration of theoretical frameworks and models has been recognized as a methodological necessity in MMR (Evans et al., 2011). However, there are limited examples of what the process entails, exactly. Some researchers have elaborated using theory to guide research conceptualization, recruitment, data collection, and analysis (Alavi et al., 2018; Evans et al., 2011; Farmer et al., 2018). The pathway approach contributes to clarifying how theoretical models and frameworks can be integral to the level of data integration in MMR designs. Nevertheless, it is also important to note that researchers unfamiliar with these particular theoretical models may find the pathway approach daunting and may prefer to choose to use other implementation science frameworks which are more familiar and pertinent to their research focus.

The pathway approach offers iterative and incremental building when qualitative findings are the basis of the quantitative phase in exploratory sequential designs (Creswell & Plano Clark, 2018). The application of this pathway approach can be further expanded for development of interventions, programs, and other tools in experimental sequential designs. For example, if qualitative interviews explored stakeholder views about certain implementation strategies, the pathway approach could incorporate design preferences as a mechanism to tailor strategies and achieve contextual relevance. Similarly, here the TDF, COM-B theoretical model, and ERIC guidelines were very much integral to the pathway approach. Future research could be conducted to evaluate the utility of the pathway approach using other theories, frameworks, and models in MMR designs.

Contribution to Mixed Methods Research

The pathway building technique is an innovative data integration technique for addressing the integration challenge in sequential MMR designs. The technique illustrates how qualitative findings can inform development of a data collection instrument and then refine the quantitative results to fit the context. Demonstrated here is robust data integration that is possible in exploratory sequential MMR designs by interconnecting theories and models from IS with MMR techniques. The pathway building technique exemplifies the complexity of integration techniques widely used in MMR designs but contributed in this manuscript are knowledge and guidelines for enabling researchers and implementation scientists to effectively achieve integration.

Summary

The iterative nature of MMR designs requires innovative ways to integrate qualitative and quantitative data to generate meaningful methods for subsequent phases of MMR studies. The pathway building technique presented in this chapter drew from the MMR dissertation study to provide an informative illustration of a novel way to build a data collection instrument from qualitative findings. The two-process pathway approach demonstrates an innovative building technique that incorporated empirical data, and, of equal significance is the demonstration of how theories, frameworks and models from IS can intersect with MMR design components. The pathway building technique was key to producing contextually-relevant implementation strategies during the MMR dissertation investigation of compassionate nursing care that is further discussed in Chapters 4 and 5.

References

Alavi, M., Archibald, M., McMaster, R., Lopez, V., & Cleary, M. (2018). Aligning theory and methodology in mixed methods research: Before design theoretical placement. *International Journal of Social Research Methodology, 21*(5), 527-540.

Bauer, M. S., Damschroder, L., Hagedorn, H., Smith, J., & Kilbourne, A. M. (2015). An introduction to implementation science for the non-specialist. *BMC Psychology, 3*(1), 1-12. https://doi.org/10.1186/s40359-015-0089-9

Bazeley, P. (2018). *Integrating analyses in mixed methods research*. Sage.

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*(1), 1-14. https://doi.org/10.1186/s12916-018-1057-z

Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health, 11*(4), 589-597. https://doi.org/10.1080/2159676X.2019.1628806

Braun, V., & Clarke, V. (2021). Conceptual and design thinking for thematic analysis. *Qualitative Psychology*. https://doi.org/10.1037/qup0000196

Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). Sage.

Eccles, M. P., & Mittman, B. S. (2006). Welcome to implementation science. *Implementation Science*, 1, 1. https://doi.org/10.1186/1748-5908-1-1

Evans, B. C., Coon, D. W., & Ume, E. (2011). Use of theoretical frameworks as a pragmatic guide for mixed methods studies: A methodological necessity? *Journal of Mixed Methods Research, 5*(4), 276–292. https://doi.org/10.1177/1558689811412972

Farmer, J., Carlisle, K., Dickson-Swift, V., Teasdale, S., Kenny, A., Taylor, J., Croker, F., Marini, K., & Gussy, M. (2018). Applying social innovation theory to examine how community co-designed health services develop: Using a case study approach and mixed methods. *BMC Health Services Research, 18*(1), 68. https://doi.org/10.1186/s12913-018-2852-0

Fetters, M. D., Curry, L. A., & Creswell, J. W. (2013). Achieving integration in mixed methods designs—principles and practices. *Health Services Research, 48*(6pt2), 2134-2156. https://doi.org/10.1111/1475-6773.12117

Ivankova, N. V., Herbey, I., & Roussel, L. (2018). Theory and practice of using mixed methods in translational research: A cross-disciplinary perspective. *International Journal of Multiple Research Approaches, 10*(1), 356–372. https://doi.org/10.29034/ijmra.v10n1a24

Lopez-Fernandez, O., & Molina-Azorín, J. F. (2011). The use of mixed methods research in interdisciplinary educational journals. *International Journal of Multiple Research Approaches, 5*(2), 269-283. https://doi.org/10.5172/mra.2011.5.2.269

May, C. R., Johnson, M., & Finch, T. (2016). Implementation, context and complexity. *Implementation Science, 11*(1), 1-12. https://doi.org/10.1186/s13012-016-0506-3

Meister, L. (2018). On methodology: How mixed methods research can contribute to translation studies. *Translation Studies, 11*(1), 66-83. https://doi.org/10.1080/14781700.2017.1374206

Moran-Ellis, J., Alexander, V. D., Cronin, A., Dickinson, M., Fielding, J., Sleney, J., & Thomas, H. (2006). Triangulation and integration: Processes, claims and implications. *Qualitative Research, 6*(1), 45-59. https://doi.org/10.11772F1468794106058870

Palinkas, L. A., Aarons, G. A., Horwitz, S., Chamberlain, P., Hurlburt, M., & Landsverk, J. (2011). Mixed method designs in implementation research. *Administration and Policy in Mental Health and Mental Health Services Research, 38*(1), 44-53. https://doi.org/10.1007/s10488-010-0314-z

Powell, B. J., Fernandez, M. E., Williams, N. J., Aarons, G. A., Beidas, R. S., Lewis, C. C., McHugh, S. M., & Weiner, B. J. (2019). Enhancing the impact of implementation strategies in healthcare: A research agenda. *Frontiers in Public Health*, 7, 3. https://doi.org/10.3389/fpubh.2019.00003

Proctor, E. K., Landsverk, J., Aarons, G., Chambers, D., Glisson, C., & Mittman, B. (2009). Implementation research in mental health services: an emerging science with conceptual, methodological, and training challenges. *Administration and Policy in Mental Health, 36*(1), 24–34. https://doi.org/10.1007/s10488-008-0197-4

Woolf, S. H. (2008). The meaning of translational research and why it matters. *JAMA, 299*(2), 211-213. https://doi.org/10.1001/jama.2007.26

Younas, A., Rasheed, S. P., Zeb, H., & Inayat, S. (2020). Data integration using the building technique in mixed-methods instrument development: Methodological discussion. *Journal of Advanced Nursing, 76*(8), 2198-2207. https://doi.org/10.1111/jan.14415

Chapter Four

An Exploratory Sequential Mixed Methods Study of Implementation Strategies to Promote Compassionate Nursing Care of Complex Patients

This chapter is the third manuscript of the dissertation in which the results from the exploratory sequential mixed methods research study, including all three phases, are presented in full. The manuscript will be prepared for publication as a research article in the International Journal of Nursing Studies or in the Journal of Clinical Nursing for nurse clinicians and nurse researchers. In this chapter, a comprehensive description of the mixed methods study is provided that was designed to explore barriers to compassionate nursing care to determine relevant implementation strategies to promote compassionate care delivery for complex patients. The methods are presented following the manuscript abstract and background. Highlighted in this chapter are the participant-perceived barriers and in-depth analysis of the Q-sort survey results (stakeholder rankings of implementation strategies). Fulsome description of stakeholder perspectives enriches understanding of relevant and viable implementation strategies.

Manuscript (3) Abstract

Background: Individuals with multiple physical and, or, mental health issues and, or, drug-related problems are known as complex patients. Complex patients require frequent care due to episodic and chronic health and social care needs. However, complex patients are often recipients of poor-quality care. There is empirical support for compassionate nursing care as a means to promote better care experiences among this patient population. Implementation strategies should be designed to enhance compassionate nursing care delivery but there is little published on the topic in the practice literature. What are the indicators of compassionate nursing care? What are the barriers? **Aims:** To gain understanding of compassionate care delivery (including indicators and barriers) in order to propose implementation strategies with potential to promote compassionate nursing care of complex patients. **Methods:** An exploratory sequential mixed methods study was conducted. Phase I was the qualitative component during which 23 individuals with multimorbidities and experiences as complex patients were interviewed for their perceptions of the behavioural indicators of compassionate nursing care. The barriers were then integrated with implementation science frameworks using the building technique during Phase 2 to inform development of a Q-sort survey of implementation strategies for distribution during Phase 3. Nurses, nurse managers, health care administrators, policymakers, and compassionate care experts responded to the survey by ranking the 21 implementation strategies, out of which five met the Q-factor analysis criteria. **Results:** Participant-perceived barriers to nurse compassion could be categorized under knowledge, intentions, skills, social influences, behavioural regulation, reinforcement, emotion, and

environmental context and resources. The five highest ranked strategies included facilitation, consultation with stress experts, involvement of patient and families, modelling compassion through shadowing, and utilizing implementation teams. **Conclusions:** Enablement and Modelling were the integration functions represented by the highest ranked implementation strategies. Enabling nurses to provide compassionate care through emotional support and mental health counseling, and, modelling compassion and compassionate care through shadowing were recommended and rated as highly relevant by the majority of stakeholders. **Implications:** If managers model compassion when interacting with nursing staff, nurses in turn would demonstrate compassionate behaviours toward patients. Together this culture of compassion would foster a circle of compassionate care. Nurse managers should strive to create environments that are conducive to the enactment of the circle of compassion. Health care administrators and policymakers should engage in implementation planning for multifaceted strategies.

Keywords: compassionate care; complex patients; implementation strategies; mixed methods research; Q-sort

Background

Complex patients have complicated physical and emotional issues and much suffering as consequence. Caring for complex patients can be challenging for nurses for several reasons related to the patient's condition, the work environment, level of resources and support, staffing, and patient and family dynamics, (Sieben-Hein & Steinmiller, 2005). These challenges may affect nurses' capacities to provide compassionate care and require that they make efforts to gain a comprehensive understanding of patients' lives, and complex health and social care needs (Fulton, 2014) and practice from a person-centered and relational care approach (Kuluski et al., 2017; Rich et al., 2012). Given this complexity, complex patients are also vulnerable to the lack of compassion demonstrated by health professionals, including nurses (Hartrick Doane & Varcoe, 2015; Loeb et al., 2016; Manning & Gagnon, 2017).

Compassion refers to the recognition, understanding, and alleviation of patient physical and emotional suffering (Perez-Bret et al., 2016), and compassionate care is the altruistic and cognitive efforts of nurses to recognize, understand, and alleviate patient suffering (Sinclair et al., 2016; Van der Cingel, 2014). Compassionate nursing care is demonstrated by the recognition and alleviation of suffering through authentic presence, a respectful approach, and openness (Younas & Maddigan, 2019). Compassionate care enables nurses to genuinely understand the suffering of complex patients that may facilitate better health outcomes, better quality of care, and better in-patient experiences (Post, 2011).

Despite the importance of compassionate care, there is limited guidance in the Canadian and global nursing literature about compassionate nursing care delivery in the

context of meeting the needs of complex patients. In addition, there are well-known universal barriers to providing compassionate care but they add little insight into the barriers commonly experienced by nurses in the local context. Therefore, research is warranted to understand the compassionate care of complex patients, especially the contextual barriers. This mixed methods research (MMR) study enabled understanding of these barriers and led to the selection of potentially effective implementation strategies to enhance compassionate nursing care of complex patients.

Aims

The aims of this MMR study were to understand the barriers to compassionate nursing care of complex patients and to then propose relevant strategies to promote compassionate care delivery.

Study Design

MMR designs enable researchers to combine qualitative and quantitative approaches to broaden the depth and breadth of research inquiry (Creswell & Plano Clark, 2018; Schoonenboom & Johnson, 2017). Adopted for this study was the exploratory sequential MMR design (Creswell & Plano Clark, 2018) to both explore the barriers of compassionate care from the perspective of participants who had real-life experiences as complex patients during a qualitative phase, and to then develop an instrument for the quantitative phase to determine the most relevant and viable implementation strategies.

Phase 1: Qualitative Component

A qualitative descriptive approach (Sandelowski, 2000, 2010) was used to understand how compassionate care is provided from the subjective perspectives of study

participants based on their in-patient care experiences in a local setting in Atlantic Canada. The qualitative descriptive approach was also chosen because the approach is valuable in acquiring "largely unadorned (minimally theorized or otherwise transformed or spun) answers to questions of special relevance to practitioners and policymakers" (Sandelowski, 2000, p. 337) and would ultimately contribute to practice change.

Sample

Individuals living with multimorbidities with complex health issues were recruited by putting up posters and flyers, and through social media, newspaper advertisements, and contact with patient support and professional nursing groups. The inclusion criteria were: individuals with multimorbidities who had received care in acute care settings or in a psychiatric hospital in the last 3 years.

Data Collection

Recruitment and data collection for this phase occurred between December, 2020 and May, 2021. Qualitative semi-structured interviews were sources of data during this qualitative phase. A semi-structured interview guide was developed based on the compassionate care literature. Interviews were conducted in a community health centre face-to-face. Due to the COVID-19 pandemic, virtual options (Zoom) were also offered to participants. Virtual interviews were conducted with four participants who had access to the internet (n=4). Before interviews, those interested in participating were provided an information sheet with the purpose, interview procedures, participant rights, protocols to ensure confidentiality, and opportunity to ask questions. Participants completed and signed the informed consent before participating in an interview.

All participants were encouraged to ask questions before, during, and after the interview and were reminded of the right to leave the interview session at any time. The interviews lasted from 6 to 59 minutes. Only three interviews were less than 10 minutes. Participants were given an honorarium of $20 in appreciation for their time.

Data Analysis

Interview data were analyzed using Braun and Clarke's (2019, 2021) reflexive thematic analysis to obtain firsthand perspectives from participants about how complex nursing care is demonstrated and what they perceive are the barriers based on their in-patient experiences as complex patients. The inductive orientation (Braun & Clarke, 2019) was adopted to stay close to the data and to generate a rich narrative of the participants' views.

The complete analysis was undertaken using MAXQDA Plus Version 2020. MAXQDA is efficient software that allows researchers to create a coding framework, assign color codes, write memos while coding, compare the frequency and extensiveness of codes and commonly used words and phrases, and construct coding maps (Kuckartz & Rädiker, 2019). The process of analysis involved reading and rereading for overall meaning of the participants' views; generating initial content-driven codes (in vivo and open codes) consistent with the inductive approach; collating codes for further refinement based on similar meanings and linkages; renaming refined codes; converting to sub-themes; and finally, combining subthemes based on their relevance, content, and meaning into final themes and then naming the final themes (Braun & Clarke, 2019).

Phase 2: Instrument Development

MMR data integration during Phase 2 was achieved using the building technique to inform development of a data collection instrument for the subsequent quantitative phase (Fetters et al., 2013). In line with the MMR study aims, participant-perceived barriers to compassionate care were compiled, and then implementation strategies to address these barriers were designed. The designed implementation strategies became the concourse/statements of the Q-sort data collection instrument. Intersecting with the qualitative findings were theoretical models and frameworks from implementation science (IS) that are described below.

Theoretical Domains Framework

The Theoretical Domains Framework (TDF) is a theoretically robust framework that identifies different intellectual, affective, and social factors, which influence individual behaviour (Atkins et al., 2017). The TDF includes 14 domains: "knowledge," "skills," "social/professional role and identity," "beliefs about capabilities," "optimism," "beliefs about consequences," "reinforcement," "intentions," "goals," "memory," "attention and decision processes," "environmental context and resources," "social influences," "emotions," and "behavioural regulation" (Cane et al., 2012).

Capabilities, Opportunity, Motivation-Behaviour Theoretical Model

The Capabilities, Opportunity, Motivation-Behaviour (COM-B) theoretical model enables researchers to diagnose a behaviour under three key domains: "motivation," "capability," and "opportunity." Once a behaviour is diagnosed, the researcher identifies integration functions (or interventions) that are likely useful for changing the behaviour.

These integration functions include Education, Coercion, Enablement, Environmental Restructuring, Incentivization, Modelling, Persuasion, Restriction, and Training (Michie et al., 2005, 2008). However, the COM-B theoretical model offers very broad integration functions; therefore, specific forms of intervening or implementation strategies were designed by selecting ERIC strategies.

Expert Recommendations for Implementing Change Guidelines

The Expert Recommendations for Implementing Change (ERIC) guidelines are a refined list of discrete implementation strategies with distinct definitions for implementation research. These strategies were developed after a three-round Delphi study of 71 global implementation scientists and experts. The 73 strategies can be used alone or in combination for designing multicomponent effective implementation strategies. Some of the examples of the implementation strategies are: assessing new funding, audit and feedback, changing physical structure and equipment, centralizing technical assistance, creating new clinical teams, developing a formal implementation blueprint, academic partnerships, educational materials, and identifying and preparing champions (Powell et al., 2015).

Phase 3: Quantitative Component

Q methodology is used for exploring and understanding complex and contested concepts and topics from the perspectives of a relevant group of individuals (Watts & Stenner, 2005). Q methodology is beneficial for the structured elicitation of perspectives of multiple stakeholders through the classification of individual viewpoints into clusters of values and beliefs (McKeown & Thomas, 2013). Q methodologists usually seek to

determine the existence of specific opinions and subsequently recognize, elucidate, and compare multiple opinions (Watts & Stenner, 2012). Q methodology was adopted during Phase 3 to collect (using the Q-sort survey) the viewpoints of multiple stakeholders who could provide insights about the study phenomenon (Zabala et al., 2018).

Sample

The recommended sample in a Q-sort survey is 30-40 respondents because a "large numbers of participants are not required to sustain a good Q methodological study" (Watts & Stenner, 2012, p. 72). Frontline nurses, floor managers, hospital administrators, and policymakers from hospitals in an urban setting in Atlantic Canada were invited to respond to the survey because compassionate nursing care is a provider-, managerial- and organizational-level phenomenon. These stakeholders could provide significant insights and build on patient-perspective-driven strategies, strategies that were recommended by participants during the first phase of the study. Compassionate care experts (i.e., researchers, academics, and clinicians) working within Canada and worldwide were also recruited because of their experiences pertaining to research on compassionate care, on understanding the nature of compassionate care approaches across contexts, and on developing and implementing compassionate care interventions. The national and international compassionate care experts were identified through a database search (Cumulative Index of Nursing and Allied Health Literature and PubMed) and invited through email. The nurses, nurse managers, health administrators, and policymakers were also invited through emails.

Inclusion Criteria

The inclusion criteria varied for target groups. Frontline nurses were invited if they had been working in specific hospitals and who been involved in drafting organizational policies. Floor managers and hospitals administrators who had: a) experience in frontline care and policy development (this was identified from their designation and role), b) experience overseeing care in acute care hospitals, and c) policymaking experience with the regional health authority were invited to respond to the survey. Compassionate care experts were invited if they were a) researchers in nursing, medicine, psychology, and mental health and b) had published at least one peer-reviewed paper about compassion in nursing or health care, compassionate interventions, and, or, compassionate nursing care education.

The Data Collection Instrument

The first section of the online Q-sort survey asked respondents to provide demographic information (age range, gender, country of residence, previous or current experience working in Canadian health care settings, and previous academic and research publications on compassion in nursing or health care practice). No identifying information was collected in the online survey. The second section was the Q-sorting statements. Each statement was an implementation strategy targeting the barriers of compassionate nursing care that were identified in Phase 1 of the MMR study. Also in this section was the sorting grid (ranked from +3= most agreeable to -3=most disagreeable) with detailed instructions about the sorting process (Appendix E).

***Procedures*.** The Q-sort survey was distributed between August 2021 and September 2021. Before the Q-sort survey was distributed it was pilot tested with five

respondents to assess feasibility, readability, and potential challenges. After pilot testing no revisions were needed. Surveys were anonymous as they could not be traced back to the sender. Completion and return of the survey were considered research consent. Invitations were sent to 105 stakeholders and 55 responded (response rate = 38%). Out of the 55 Q-sort surveys returned, 32 were fully complete and included in the final analysis (response rate = 22.1%).

Analysis. Demographic profiles were created based on the age range and gender of respondents to assess representation. Q-sort survey responses were analyzed using factor analysis in the QMethod software. Unlike traditional factor analysis, in Q-sort factor analysis, the responses/data are the items, and respondent groupings are the variables. Factor analysis was conducted using principal component analysis (PCA). PCA was chosen because there was no theoretical justification for choosing the number of factors (Watts & Stenner, 2012). The intercorrelations between Q-sorts ranged from -0.02 to 0.74. PCA produced an initial eight-factor solution. Several rules were considered for choosing the most appropriate factor solution, including Eigenvalue assessment, scree plot, parallel analysis, the percentage of variance explained by individual factors, and the cumulative variance. The factors were rotated using Varimax rotation based on these rules. Varimax rotation is the most commonly used rotation in Q-sort analysis (Churruca et al., 2021). A five-factor solution was considered appropriate (Churruca et al., 2021).

The following criteria (see Table 9) were used to select the appropriate number of factors: Eigenvalue >1.00, two or more significant factor loadings, and slope analysis in the scree plot (Kaiser, 1960; Guttman,1954; Watts & Stenner, 2012), at least 5% variance

Table 9

Extracted Factors and Factor Loadings

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
Eigenvalues	9.34	3.92	2.84	2.45	1.98
Explained Variance (%)	29.18	12.26	8.88	7.66	6.17
Cumulative Explained Variance (%)	29.18	41.44	50.32	57.98	64.15
Number of loaded Q-sorts	13	4	4	3	2

explained by an individual factor, and at least 50% variance explained by all five factors (Polit & Yang, 2016). The total variance explained by five factors was 64.15%, with each factor accounting for 29.18%, 12.26%, 8.88%, 7.66%, and 6.17% of the variance. This variance is reasonable because a total variance of 20% to 90.8% is considered appropriate in Q-sort surveys and has been reported in previously published Q-sort studies (Churruca et al., 2021).

The significant factor loadings were estimated using the formula: 2.58 x (1÷√ number of items in the Q-set=0.56) (Brown, 1980). For practical reasons, the aim of the MMR study was to identify five key implementation strategies and then, later, operationalize the content and components of the chosen strategies. Therefore, all the implementation strategies which received the highest rankings across five factors were chosen. Additionally, the interview data from Phase 1 and the respondents' comments to open-ended questions in the Q-sort survey were the basis for reasonable justification for choosing five implementation strategies.

Rigour

Several measures were taken to establish the rigour throughout all phases of the MMR study. The trustworthiness criteria (Lincoln & Guba, 1985) that entails credibility, dependability, confirmability, and transferability were met, for example, by using the descriptive qualitative approach, and appropriate methods of data collection and analysis. In addition, debriefing via meetings with members of the supervisory committee, and an audit trail, and reflective journaling ensured findings and results were verified.

The Q-sort data collection instrument was developed based on data from 23 interviews and was pilot tested before actual use in the quantitative phase. Data integration was accomplished using the building technique and by developing a joint display (Bazeley, 2018; Creswell & Plano Clark, 2018). In addition, the legitimation criteria (Onwuegbuzie & Johnson, 2006) were employed to assess the validity and quality of the MMR results. The paradigmatic/philosophical legitimation, weakness minimization legitimation, and integration legitimation were established (see Appendix I for full details). The paradigmatic/philosophical legitimation refers to the extent to which researchers clearly articulate their ontological and epistemological stances and how those stances guide various aspects of the MMR study (Onwuegbuzie et al., 2011). The weakness minimization legitimation pertains to the extent to which the weakness of the qualitative approaches is addressed by the strengths of the quantitative approaches and vice versa (Onwuegbuzie et al., 2011). In this study, the results of the quantitative phase complemented the findings of the qualitative phase. The integration legitimation pertains to the extent to which the researcher achieves the integration of qualitative and quantitative data. This must be

supported by meta-inferences which give added value beyond the qualitative and quantitative insights (the meta-inferences should be more than the sum of its parts) (Johnson & Christensen, 2017).

Ethical Considerations

Ethics approval was obtained from the Health Research Ethics Board (HREB). Written informed consent was obtained from Phase 1 interview participants and electronic implied consent respondents in the Phase 3 Q-sort survey. The identity of participants remained confidential during online data collection for both qualitative and quantitative phases—the QMethod software assigned automatic codes to respondents. Once the required number of respondents completed the online survey, the data were analyzed and exported from the online software. Exported data were kept in encrypted computers. However, the data were immediately deleted from the online QMethod software.

Results

Phase 1: Qualitative Findings

Demographic Information

In total, 23 individuals (15 males and 8 females) participated in the interviews. Ages ranged between 30 to 70 years. Among the 23 participants, 19 were homeless and lived in a downtown shelter. All participants had more than one health problem. Problems included general medical conditions, addictions and drug-related issues, and mental health concerns. Illnesses and conditions included cancer, depression, generalized anxiety, hemiplegic migraine, illness-induced disabilities, chronic pain, Crohn's disease, and personality disorders.

Barriers to Compassionate Nursing Care

Participant-perceived barriers to compassionate nursing care were associated with several TDF domains: *knowledge, intentions, skills, social influences, behavioural regulation, reinforcement, emotions,* and *environmental context and resources*. Below each of the relevant domains and associated barriers are described in depth.

Knowledge. Participants stated that nurses had limited knowledge about the complexity of their illness and health and social care needs. They complained about the nurses' lack of attention to the influence of social, cultural, and economic factors on their health and illness status. Many nurses assumed that most participants with complex mental health issues only visited the hospital to request a higher dose of prescription pain medications. Some participants believed lack of knowledge and training were the reasons complex patients received inadequate assessment and monitoring. One of the participants stated, "I don't think a lot of them [nurses] have been trained right. They're not trained to deal with suicidal people" (Patient, 19).

Participants also remarked that nurses lacked effective verbal and nonverbal communication skills to engage effectively with complex patients to inquire about issues and concerns. They shared how some nurses have impolite bedside manners such as appearing frustrated when providing care; or nurses undermine patients' views, judge them, and accuse them of attention-seeking behaviours. Participants attributed these behaviours to not having the adequate knowledge and skillset to care for patients with complex health needs. One of the participants felt he was a victim of discrimination: "They should go back

to school and learn how to talk because they know nothing. They look at you like you got a hole in your head" (Participant 10).

Intentions. Some participants felt that nurses lacked the motivation to help them in their distress and difficulties. They questioned nurses' intentions to care for them and to address their needs in a kind and compassionate manner. One of the participants said, "I think it is within the individual themselves, whether it's within them to be compassionate" (Participant 23). It was perceived that most of the nurses rushed into care and were not considerate of patients and their family members. Participants shared their impressions that nurses wanted 'to get rid of them' as soon as possible. Nurses did not spend enough time inquiring about their concerns and did not value their opinions. One participant shared that a nurse told him bluntly that she was not getting paid enough to care for him.

> You don't want to do it because you're not getting enough money. Now that's the impression I got from every nurse I was talking to. And they say it to your face, 'I am not getting paid enough to do this.' Then why did you choose this. Do something else. … this statement makes me upset. … And then when I had my open-heart surgery, I was in more pain, and they give me Tylenol. Because yes, they think you are in for drugs, and they think you are an addict. (Participant 14)

Skills. Nurses gave the impression that they lacked the necessary skillset to provide compassionate care for complex patients. Participants discussed at length how nurses lacked competence in assessing their felt needs, developing therapeutic relationships, communicating in a kind manner, demonstrating compassion, and how nurses had limited experience in disclosing bad news to patients. Participants thought that their incompetence was the result of limited opportunities caring for people with complex health and social care needs. Some participants shared that nurses had psychomotor skills; however, they lacked emotional competence and the interpersonal competencies to develop a therapeutic

relationship that would foster compassion and facilitate compassionate nursing care. Participants shared that many nurses “went by the book” to care for their physical needs but ignored the emotive aspects of care and were not present for their patients. One of the participants shared that experienced nurses were more competent.

> The other nurse is senior in that has been there for a much longer time. She knows the ins and outs, she knows the ropes, she knows what she's comfortable with and how quickly and how to do things quick and easy way for people. And she knows how to make those bonds. (Participant 5)

Social influences. The social influences affecting nurses' capacities to practice compassion were captured in examples shared of nurse-patient conflicts, lack of compassion modelling, and limited organizational and managerial support for nurses. While discussing nurse-patient conflicts, participants acknowledged that negative behaviours and demanding attitudes of complex patients might sometimes affect nurses’ behaviours. Compassionate nurse-patient interaction was believed to be dependent on the attitudes of patients and their families. A few participants also recognized that some patients with complex health care needs only visited hospitals to get morphine. Hence, they influence nurses' impressions of other complex patients with legitimate complaints. Some elaborated on the cultural and social differences between nurses and patients, which may affect the expression of pain and suffering and nurses’ compassionate responses, as well as incite nurse-patient conflict.

Participants also shared that nurses are not often given the respect they deserve in the health care system. Administration does not support nurses and neglects their rights, affecting their ability to provide compassionate care. Participants commented that many nurses might not provide compassionate care because management does not treat them

compassionately. They recommended that it is essential that compassion be integrated within the health care system to create a circle of compassion and compassionate care. One of the participants expounded on this idea of the circle of compassion.

> If you're treated, being treated like dirt, then that's the way you're going to treat the other people around you, and that includes patients. If you're treated with respect, and that's the attitude of the place, your environment. Then you naturally treat others with respect. That means the health care workers should be treated compassionately. And then it becomes a circle which comes first. It's not just compassionate care for the patient; it's compassion for everyone. (Participant 1)

Behavioural regulation. Participants thought that nurses cannot provide compassionate care because they are continuously navigating organizational demands while striving to provide adequate care. Participants described a list of demands including discharging patients as soon as possible, focusing on physical needs, completing the paperwork, and following protocols and procedures. These demands affect nurses' ability to spend time with their patients, to be truly present with them, and to focus on their emotional and psychological needs and not just the physical needs. One of the participants shared how organizational demands hinder compassionate nursing care.

> I think they [nurses] all try to break down barriers and not erect barriers. I mean, [Health Region] is a huge system, it's a real challenge to try to manage, you know, every day, it's hard to be a tune to every nuance that's in that system. But it has a lot of rules. And sometimes those rules get in the way of providing compassionate care, because it may not be the way that things are normally done, but it may be the way that something needs to happen. (Participant 4)

Participants recommended ways to overcome the mismatch between organizational demands and patients' care needs, including focusing on self-monitoring, action planning, and avoiding routinized care. Some participants claimed that compassionate nursing care is possible only if nurses know how to address the emotional and physical health needs of

their patients. One of the participants elaborated on how nurses can break habits to focus on compassionate care.

> When talking, especially at the initial meeting, just to reflect back to the patient, an attempt of understanding how they may be feeling. I would imagine you're feeling quite anxious right? That would be a good first step, just to reflect that back to the patient, I think that kind of establishes a little bit of a connection. And, that's a good first step for exhibiting compassion. (Participant 3)

Reinforcement. According to some participants, the lack of compassion could be attributed to inadequate appreciation and gratitude from management and other health care administrators. Often nurses have a desire to provide the highest quality care but nurses do not feel appreciated for their hard work and compassionate care efforts. Many participants suggested that low wages could be critical drivers behind the lack of compassionate nursing care. Some nurses are blunt about it, and would even "say it to the patient's face." One of the participants was blunt and critical of management, labour unions, and government.

> If you're going to work your nurses to death, then you better pay more. If you're going to put nurses through post-traumatic stress situations. Pay more if you don't lay off telling these nurses through government people that they have to do, this and this, which is totally unrealistic. I mean, like, there's just too much bullshit when it comes to government and the unions, the unions alone, help them if you're going to help them, don't tell them what to do. (Participant 2)

Participants suggested different options for appreciating the work of nurses. One way is to introduce rewards and incentives. Others claimed nurses would be appreciated if spoken to in "encouraging words," or by "offering breaks," or "patting nurses on the back."

Emotion. Participants disclosed that the job of caring for them, especially patients with complex mental health problems, can be overwhelming for nurses. They stated that nurses' capacity to provide compassionate care is affected by several experiential, behavioural, and physiological factors. Participants shared firsthand experiences of nurses

fearing for their personal safety when interacting with patients with complex mental health issues. Nurses encountered unrealistic demands of patients and family members and then felt resentment and were unable to empathize with all patients. It was apparent from patients' accounts that these experiences caused stress, and even burnout. Hence, care of complex patients can affect a nurse's emotional well-being, making it near to impossible to provide compassionate care. One of the participants shared his views about nurses' fears which may prevent them from acting compassionately.

> Because they [nurses] think you are junkies and we're druggies some of us might have AIDS. And that's maybe why they don't treat us so well. I don't know I think they should be treating us like that, if you do get that. If we get a scrap, or we get a cut, it could be that they believe they can catch diseases. It should not be like that; I think they should be acting a little more polite with the people that got diseases and people not with it. (Participant 22)

Nurses, participants believed, become overwhelmed dealing with similar kinds of patients with mental health issues. Dealing with difficult patients and demanding families could be overwhelming, and nurses cannot give the same attention to the needs of every person. A nurse may "harden up" and "you can't always be compassionate" (Participant 15).

Environmental context and resources. Participants perceived that many contextual factors such as workload, non-supportive organizations and managers, unrealistic demands, staffing issues, and time management could interfere with nurses' ability to provide compassionate nursing care. Participants expressed that the government, nurses' unions, and hospitals do not provide nurses with the resources and support systems to address their burnout and stress. They discussed that the organizational culture focused on caring for the physical needs of patients and sending them home as soon as possible. There is a lack of emphasis on genuinely caring for patients by spending time with them. One of the

participants thought that nurses are not offered the opportunity to use their skills withing their full scope of practice, “There's a poor use of the skills that people bring to the table. Our system sadly, is very much an acute care system, which only focuses on illness” (Participant 23).

Participants thought that hospitals are overcrowded because most of the individuals do not have a family doctor. So, all these people visit hospitals for the medical care that could be provided by a physician. When hospitals are overcrowded, nurses are overburdened and understaffed, resulting in nurses neglecting the needs of many of these patients. Therefore, nurses cannot provide the compassionate care that patients truly deserve.

> It could be because they're busy, and it could be because they're doing so many things at the one time. You know, it's in hospitals. I see them, they're just go, go all the time, and sometimes they just don't have the time. Sometimes somebody might ask them to do something and they might just forget about it. That could probably prevent them from, not being as compassionate. (Participant 12)

Phase 2: Integration and the Q-Sort Survey

The concourse/statements for the Q-sort survey were formulated using the building technique. The integration of qualitative findings using the building technique to develop the concourse is illustrated in a joint display in Table 10. First, the barriers identified in Phase 1 (the qualitative component) were mapped against the TDF domains. Second, the relevant TDF domains were mapped against the COM-B theoretical model to identify the corresponding integration functions. This mapping indicated that three relevant TDF domains (*knowledge, skills, and behavioural regulation*) were diagnosed as requiring implementation strategies targeting nurses’ capability, two domains (*environmental context*

and resources, and social influences) required providing nurses with opportunity, and three domains (*emotions, intentions, and reinforcement*) required enhancing nurses' motivation to provide compassionate care. Education and Training were identified as the relevant integration functions to design implementation strategies to enhance nurses' skills and knowledge and to address challenges related to the environmental context and resources. Enablement, Modelling, and Incentivization were appropriate integration functions to provide opportunity and increase nurses' motivation. The integration functions, however, were broad and implementation strategies were later made more specific and culturally- and contextually-relevant. In total, 21 implementation strategies were included in the concourse.

Table 10

Joint Display Illustrating Qualitative Analysis, Building, and Concourse Development

COM-B Domains	Capability				Opportunity		Motivation							
TDF Domains	Knowledge	Skills	Behavioural Regulation	Memory, Attention and Decision Processes'	Environmental Context and Resources	Social Influences	Social/Professional Role and Identity	Beliefs about Capabilities	Optimism	Beliefs about Consequences	Reinforcement	Intentions	Goals	Emotion
Barriers														
Limited knowledge about patient needs	✓													
Limited motivation												✓		
Greater focus on getting things done												✓		
Lack of educational preparation		✓												
Limited experience		✓												
Lack of organizational supports						✓								
Lack of compassion modelling						✓								
Routinization of care			✓											
Interprofessional conflicts						✓								
Nurse-patient conflicts						✓								
Underpaid											✓			
Lack of appreciation											✓			
Nurses fears related to personal safety														✓
Negative personal and familial experiences														
Self-care neglect														✓
Stress and burnout														✓
Workload					✓									
Negative patient behaviours					✓									
Unrealistic patient demands and expectations					✓									

Integration Functions to Address Barriers to Compassionate Nursing Care

Education	**Training**	**Enablement and Modelling**	**Incentivization and Modelling**	**Environmental Restructuring**
• Limited knowledge about patient needs • Limited motivation • Greater focus on getting things done	• Limited experience • Lack of educational preparation • Negative patient behaviours • Unrealistic patient demands and expectations	• Lack of compassion modelling • Lack of organizational supports • Routinization of care • Nurses' fears related to personal safety • Stress and burnout • Self-care neglect • Negative personal and familial experiences • Interprofessional conflicts • Nurse-patient conflicts	• Underpaid • Lack of appreciation	• Workload • Lack of organizational supports

Q-Sort Survey Concourse

Integration Functions	**ERIC Strategies**
Education and Training	1. **Conduct educational meetings** with nurses and administration to teach patients' expectations of compassionate care. 2. **Distribute educational materials** (e.g., guidelines, toolkits, and manuals) about compassionate care of complex patients.

	3. **Educate managers** to provide clinical supervision to those implementing strategies for promoting compassion towards complex patients.
Environmental Restructuring	4. **Identify and prepare champions** (i.e., frontline nurses) who dedicate themselves to supporting and driving through implementing compassionate behaviours. 5. Organizations and nursing management could **develop academic partnerships** with local colleges for revisiting curricula and developing shared trainings on compassionate care. 6. **Mandate change** by having leadership declare the priority of compassionate care and develop policies to bring in change. 7. Organizations should **purposely re-examine the implementation** of compassionate behaviours by surveying multiple stakeholders. 8. **Alter incentive** for adopting compassionate behaviours in care of complex patients. 9. **Access new or revisit existing funding** to facilitate the implementation of strategies to enhance the provision of compassionate care. 10. **Stage implementations scale up** by piloting small demonstration of compassionate care strategies on complex patients.
Enablement and Modelling	11. **Promote network weaving** through building upon the existing high-quality relationships within and outside the organization to promote collaborative problem-solving for fostering compassionate care of complex patients. 12. **Create a learning collaborative** by forming groups or groups of provider organizations to improve the implementation of strategies to increase compassion. 13. Use **facilitation** to establish a process of interactive problem solving and support to discuss nurses' challenges and negative encounters with complex patients and their families. 14. **Recruit, designate, and train leaders** who advocate compassionate behaviours. 15. **Conduct local consensus discussions** to address the importance of compassionate care for complex patients and whether the action plan to improve compassion is appropriate. 16. **Provide ongoing consultation** with stress experts or counselors to address nurse burnout and promote self-care. 17. **Model the intended change** by demonstrating compassionate behaviours toward peers. 18. **Identify early adopters** at the local sites to learn from their experiences of compassionate care towards complex patients. 19. **Involve patients/consumers and family members** in the efforts to promote compassionate care for complex patients. 20. **Organize clinician implementation team meetings** to support providers and allow them to reflect on implementing strategies for compassionate care towards complex patients. 21. **Shadow other experts** (i.e., nurses practicing compassion towards complex patients) and reflect and apply observed compassionate behaviours.

Phase 3: Quantitative Results

Demographic Profile

A total of 32 respondents completed the Q-sort survey. Respondents represented Canada (n=16), United Kingdom (n=3), Pakistan (n=3), Australia (n=2), Italy (n=2), Philippines (n=1), Chile (n=1), Finland (n=1), and New Zealand (n=1). Of these, 18 respondents were female, 12 were male, and two preferred not to disclose their gender. Most were aged 40 years and above (n=17), followed by 31-40 years (n=12), and 21-30 years (n=3). Most respondents were registered nurses (n=29), followed by other health professionals (n=2) and physicians (n=1). Most of the respondents (n=30) had experiences working with patients with complex health care needs in acute and community settings as frontline providers at some stage in their career (n=32). Some of the respondents also worked as hospital administrators (n=3), case managers (n=1), nurse managers (n=3), and policymakers (n=3). The years of experience for most ranged from 4-6 years (n=14) and 1-3 years (n=11), followed by 7 years and above (n=5). In total, most of the respondents had published papers about compassion in health care and nursing with at least one to two publications (n=12), three to five publications (n=4), and six or more publications (n=4).

Description of Factors

Each respondent's Q-sort result (statement/implementation strategy rankings) was the unit of analysis. Similar Q-sort results (sorting distribution of ranking values) emerged as the factors. Factors underwent Varimax rotation and a five-factor solution of Q-sort loadings was decided. Factors were described in relation to the demographic profile/designation of each respondent and in relation to the estimated significance value of the respondent's Q-sort loadings. For example, if Respondent A was a policymaker and Respondent B was a compassionate care expert their respective Q-sort loadings would be displayed in accordance

with significance values based on comparison with the idealized Q-sort. (The idealized Q-sort is the composite arrangement of statements which is most representative of a particular factor; a characteristic statement is the statement in the composite arrangement that received the highest ranking; and, a distinguishing statement is the statement in the composite that received a ranking that is statistically significantly different [$p < .05$] from the other rankings in the composite). In Table 11, for example, the factor loadings of Respondent 1 (0OXL) were more closely related to the idealized Q-sort of Factor 1 with an estimated significance value of 0.747.

Table 11

Respondent Q-Sort Loadings on Factors

Respondent		Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
1	0OXL	**0.747***	-0.044	0.184	0.331	-0.011
2	0PS2	-0.182	**0.743***	-0.078	0.029	-0.123
3	16SO	0.239	-0.032	**-0.730***	0.561	0.081
4	1UX6	**0.849***	0.112	0.136	0.055	0.184
5	1XFT	0.314	0.224	-0.197	0.267	0.191
6	1XP5	0.178	-0.018	0.036	**0.760***	0.151
7	27SF	**0.597***	-0.195	0.346	0.142	0.118
8	3NYV	-0.531	0.060	0.518	0.327	0.171
9	3OWZ	0.041	0.228	0.142	**0.677***	0.073
10	4GPB	0.099	-0.084	**0.742***	0.080	-0.210
11	595T	**0.749***	0.062	0.564	0.054	0.072
12	7SWY	**0.771***	-0.122	-0.080	-0.061	0.018
13	C8X5	0.276	0.050	**0.605***	0.290	0.370
14	DES04	0.342	-0.143	**0.564***	0.088	0.119
15	EREU	**0.721***	0.106	-0.015	0.056	-0.191
16	ET5Z	0.050	0.180	-0.048	0.270	**-0.800***
17	F8UF	0.139	0.033	0.028	0.336	**0.565***

18	FAO3	**0.646***	0.110	0.212	0.290	0.426
19	HULL	**0.654***	0.153	0.105	0.364	0.359
20	HUZ7	**0.562***	0.310	0.394	-0.018	0.160
21	ILS3	-0.148	**-0.722***	-0.006	0.024	0.041
22	JS0A	**0.665***	-0.366	-0.010	0.197	-0.036
23	LGYD	0.052	-0.201	0.090	**0.567***	-0.266
24	MG93	0.501	-0.256	-0.102	0.038	0.529
25	OE6S	0.051	0.549	-0.087	0.555	-0.258
26	QMEN	-0.149	0.474	-0.477	0.490	0.033
27	RE4S	0.360	**0.596***	0.215	0.370	-0.181
28	RSGC	**0.764***	0.115	0.230	0.158	-0.129
29	UFIB	**0.806***	-0.132	-0.091	-0.041	0.212
30	WWA3	0.344	-0.491	-0.021	0.506	0.394
31	XODL	**0.688***	-0.159	0.104	0.336	0.181
32	XX5J	0.313	**-0.644***	0.182	-0.078	-0.359

Note. * Significant factor loadings at $p<0.05$; the significance factors are estimated using the following formula: 2.58 x (1÷√ number of items in the Q-set [N=21] =0.56).

All of the respondents' Q-sort loadings are further explained in the discussion, below, as Factors 1 through 5 are named and described beginning with Factor 1 ("Perspective One: Enablement NOT Incentives to Promote Compassion"). The conflicting views of the respondents under each perspective were addressed through assessment of the consistency of their responses to the open- ended survey questions.

Perspective One: Enablement NOT Incentives to Promote Compassion

A total of 13 respondents shared the perspective that compassionate care of complex patients is better enhanced through enabling and modelling compassion and compassionate nursing behaviours. Most of these respondents were female (n=12) from Canada (n=12), with only one respondent from Italy. Ages ranged between 31 years and above. Canadian respondents had worked in British Columbia, Newfoundland and Labrador, Saskatchewan, Nova Scotia,

Ontario, Quebec, Prince Edward Island, and New Brunswick. Six of these respondents had also published on the topic of compassionate care. However, the remaining preferred not to say anything about their published work—this grouping represented diverse clinical experiences and roles.

The most distinguishing statement (#1, Rank +1) underscored the importance of enablement through network weaving within and outside the organization to promote collaboration for fostering compassion. The four most agreeable characteristic statements (#2, #3, #4, #14) ranked at +3, and +2 dealt with the challenges faced by nurses including negative encounters with complex patients and named facilitation of interactive problem solving and support; ongoing consultation with stress experts; and, involvement of families in moving a compassionate care agenda as key strategies for enhancement and change. Strategies focused on addressing burnout and promoting self-care. The four least agreeable statements (#11, #16, #17, #20) ranked at -3, and -2 indicated that funding or other fiscal incentives to promote compassion were not deemed effective and should be discouraged. Respondents also discouraged distributing educational materials to reiterate the significance of compassion.

Perspective Two: Managers Model Compassion

Four respondents shared the perspective that compassionate care can be enhanced by educating nurse managers and inspiring them to demonstrate compassion towards nurses, which in turn may promote nurse compassion towards complex patients. The respondents were from Finland, the United Kingdom, and Chile, and were 31 years of age and above and were employed in clinical and academic settings. The four most agreeable characteristic statements (#5, #13, #18, #21) ranked at +3 and +2 and were indicative of the crucial role of modelling to promote compassionate care behaviours. Respondents placed emphasis on educating managers

how to supervise and support nurses who are implementing steps to promote compassionate care. One unique perspective was to mandate change by having managers make explicit that compassionate nursing practice is a priority. The four least agreeable statements (#1, #4, #16, #20) ranked at -3, and -2 offered further support that incentives are not an appropriate strategy to enhance compassionate care. Also discouraged are pilot demonstrations to evaluate compassionate care strategies and the establishment of professional networks within and across organizations. Consistent with the first perspective, respondents deemed efforts devoted to enablement and modelling were advantageous and that revisiting funds and initiating incentives should be discouraged. The most distinguishing statements (#21, #18) Rank +3, +2) also underscored the importance of enablement through learning collaboratives.

Perspective Three: Enablement Through Incentivizing and Funding

Four respondents placed emphasis on providing resources and other supports for nurses to mitigate and manage stress and burnout. However, nurses should also be provided with incentives. Respondents commented that health care organizations should restructure environments by accessing new funding sources, altering incentives, and surveying multiple stakeholders. Respondents sharing this perspective were primarily female (n=3) from Canada, Italy, and Pakistan, with an age range of 31 years and above. This respondent group was somewhat homogeneous, made up of nurses, frontline care providers, and one hospital administrator. Two respondents had published at least one to two papers about compassionate care.

The four most agreeable characteristic statements (#5, #15, #16, #17) ranked at +3 and +2 supported modelling compassion as a way to enhance compassion. This group stressed the need to educate managers to supervise and support nurses when they act compassionately towards

their patients and create learning collaboratives to improve strategies for fostering compassion. The four least agreeable statements (#7, #8, #11, #12) ranked at -3, and -2 indicated discouraging the use of champions or recruiting new leadership that advocates compassion or distributing educational materials. Also opposed were partnerships with academic settings such as universities to develop compassionate care training. Consistent with the first perspective, respondents agreed that enablement is essential for providing compassionate care. However, they emphasized restructuring environments to make them conducive to compassionate nursing care. The most distinguishing statements (#8, #15) ranked -3 and +2 further underscored the support for the use of financial means for restructuring environments to foster compassion and the opposition to the use of nurse champions.

Perspective Four: Enablement, Modelling, and Training

Three respondents emphasized that enablement is critical, and emphasis should be placed on modelling and training by shadowing nurses who already provide compassionate care. Inconsistent with the previous perspectives, this group stressed the need for education through reflection for promoting compassion. Nevertheless, consistent with the previous perspectives, it was highlighted that enablement and modelling could be the most relevant strategies to foster compassion. The respondents who shared this perspective were mostly male (n=2) from the United Kingdom and Australia with an age range of 31 years and above. They had published more than six papers about compassionate care. This group was somewhat homogeneous, with nurses, frontline care providers, and one other health professionals.

The four most agreeable characteristic statements (#5, #3, #8, #6) ranked at +3 and +2 underscored that modelling compassion is essential. Nurses should be facilitated to share their negative issues and challenges caring for complex patients. This group stressed the need to use

champions to promote compassion and train nurses to shadow behaviours of champions or other nurses who provide compassionate care. The four least agreeable statements (#2, #13, #16, #15) ranked at -3 and -2 supported two of the previous perspectives that incentives are not useful for fostering compassionate behaviours. Respondents opposed mandating the need for compassionate care remarking that it should be a given. They also discouraged discussions and surveys for supporting the implementation of compassionate practices. Inconsistent with the previous perspectives, these respondents supported using at least one strategy for restructuring the environment, enabling compassionate care, and training nurses. The most distinguishing statements (#8, #4; ranked +2, +1) underscored supporting nurses by providing resources to manage stress and burnout and utilizing champions to foster compassionate care (see Table 12).

Perspective Five: Enablement Through Discussion about Patient Expectations

Two respondents emphasized enablement of nurses by conducting educational meetings with both nurses and administration to teach about patient's expectations of compassionate care and through consensus discussions on the importance of compassion care and appropriate action plans allowing nurses to reflect on the implementation efforts. Two nurses from Canada and Australia shared this perspective. The age range of these participants was 40 years and above. They had published three or more papers on compassionate care. This group was homogeneous, both nurses had experiences as frontline care providers and managers.

The four most agreeable characteristic statements (#19, #9, #2, #3) ranked at +3, and +2 highlighted that discussions in clinical implementation teams are essential to support nurses in providing compassionate care. These respondents advocated for facilitation as a problem-solving process to support nurses in discussing their negative encounters and challenges in demonstrating compassion. The need to develop actions plans through consensus-based discussions was also

emphasized. The four least agreeable statements (#10, #13, #15, #20) ranked at -3 and -2 indicated opposing views concerning mandating compassion in health care settings, piloting demonstrations of implementation strategies, and surveying stakeholders. Consistent with previous perspectives, these respondents supported strategies focused on enablement and training but opposed environmental restructuring. The most distinguishing statements (#19, #9, ranked +3, +2) underscored preferences for enablement through discussion and the use of education and training to enhance compassionate care behaviours.

Table 12

Ranking of Implementation Strategies Across Factors

	Statement/Implementation Strategy	F1	F2	F3	F4	F5
1	Promote network weaving through building upon existing high-quality relationships within and outside the organization to promote collaborative problem-solving for fostering compassionate care of complex patients.	1	-2	0	-1	0
2	Conduct local consensus discussions to address the importance of compassionate care for complex patients and whether the action plan to improve compassion is appropriate.	2	0	0	-2	2
3	**Use facilitation to establish a process of interactive problem solving and support to discuss**	**2**	**0**	**1**	**2**	**2**

	nurses' challenges and negative encounters with complex patients and their families.					
4	**Provide ongoing consultation with stress experts or counselors to address nurse burnout and promote self-care.**	**3**	**-2**	**3**	**1**	**-1**
5	**Model the intended change by demonstrating compassionate behaviours toward peers.**	**1**	**2**	**1**	**3**	**-1**
6	**Shadow other experts (i.e., nurses practicing compassion towards complex patients) and reflect and apply observed compassionate behaviours.**	**1**	**1**	**0**	**2**	**0**
7	Recruit, designate, and train leaders who advocate compassionate behaviours.	-1	0	-2	1	1
8	Identify and prepare champions (i.e., frontline nurses) who dedicate themselves to supporting and driving through implementing compassionate behaviours.	-1	1	-3	2	0
9	Conduct educational meetings with nurses and administration to teach about patients' expectations of compassionate care.	0	-1	-1	-1	2

10	Identify early adopters at the local sites to learn from their experiences of compassionate care towards complex patients.	-1	1	0	0	-2
11	Distribute educational materials (e.g., guidelines, toolkits, and manuals) about the compassionate care of complex patients.	-2	0	-2	-1	0
12	Organizations and nursing management could develop academic partnerships with local colleges for revisiting curricula and developing shared training on compassionate care.	0	-1	-2	0	-1
13	Mandate change by having leadership declare the priority of compassionate care and develop policies to bring in change.	0	2	-1	-2	-2
14	**Involve patients/consumers and family members in the efforts to promote compassionate care of complex patients.**	**2**	**-1**	**1**	**1**	**0**
15	Organizations should purposely re-examine the implementation of compassionate behaviours by surveying multiple stakeholders.	-1	1	2	-3	-2
16	Alter incentives for the adoption of compassionate behaviours in the care of complex patients.	-3	-3	2	-2	1

17	Access new or revisit existing funding to facilitate the implementation of strategies to enhance the provision of compassionate care.	-2	-1	2	-1	1
18	Create a learning collaborative through the formation of groups or groups of provider organizations to improve the implementation of strategies to increase compassionate care.	1	2	-1	0	1
19	**Organize clinician implementation team meetings to support providers and provide them opportunities to reflect on implementing strategies for compassionate care towards complex patients.**	**0**	**0**	**1**	**1**	**3**
20	Stage implementation scale-up by piloting small demonstrations of compassionate care strategies.	-2	-2	-1	0	-3
21	Educate managers to provide clinical supervision to those implementing strategies to promote compassion towards complex patients.	0	3	0	0	-1

Integration of Qualitative Findings and Q-Sort Survey Results

After separate analysis, the qualitative findings and the quantitative results were merged to generate MMR meta-inferences (i.e., conclusions generated after integrated analysis).

Creswell and Plano Clark (2018) highlighted that in exploratory sequential MMR designs the final quantitative results should be merged with the first phase qualitative findings to develop further insights for practice and to generate topics for research. The merging technique (Fetters et al., 2013) was used as illustrated in the joint display in Table 13. During Phase 1 interviews, participants shared recommendations how to foster compassionate care. Their recommended implementation strategies are the qualitative findings that were merged with the Q-sort survey results (stakeholder rankings of 21 implementation strategies) and were compared to identify and explain confirmed and discordant rankings. There were seven confirmed and three discordant rankings/findings. Rankings of implementation strategies were denoted as confirmed if the relevance was supported by the qualitative findings and the Q-sort survey results. If quantitative results were inconsistent with the qualitative or vice versa, the ranking/finding was discordant.

Table 13

Joint Display Illustrating Merging Quantitative Results with Qualitative Findings

Phase 1 Qualitative Findings	Phase 3 Quantitative Results: Highest and Lowest Ranked Strategies and Integration Functions	MMR Meta-Inferences
Participants stated nurses should provide compassionate care but be supported by management to address their own health issues and mental health concerns. Nurses should also be provided better salaries and incentives to support the delivery of compassionate care. *"It's something that while you assume that the nurses have that it doesn't hurt to reinforce it doesn't hurt to, to bring it up to you know, perhaps talk about strategies that nurses can, can utilize to interact with the patients, and then themselves to deal with their mental health, their own physical health to be aware of what they themselves are going through, because it's harder to help a person if*	**Perspective One:** Survey respondents (n=13) emphasized providing support and consultation for nurses to manage stress and burnout and they discouraged introducing incentives. **Integration Function** Enablement **Implementation Strategy** Provide ongoing consultation with stress experts or counselors to address nurse burnout and to promote self-care. **Integration Function** Environmental Restructuring **Implementation Strategy** Alter incentive for the adoption of compassionate behaviours in care of complex patients.	**Confirmed finding for highest ranked strategy.** Nurses, nurse managers, policymakers, and participants stated that nurses should be provided with resources to manage burnout, stress, and challenges when caring for complex patients. **Discordant finding for lowest ranked strategy.** Respondents stated that nurses are not given adequate salaries and incentives to offer compassionate care.

you're feeling ill yourself or feeling worn down" (Participant 3).

Participants recommended educating managers or organizing team meetings to offer clinical supervision to nurses who provide compassionate care. They discussed the need to alter incentives and arrange more compassionate care funding for health care organizations. "*I think that a really good strategy would be grand rounds about compassionate care, something like that. So, you actually talk about the difference from a patient's perspective, that, that care, that compassionate care provided. I don't know how you do that? You know, I don't know the answer to that but I think that somehow, we have to put compassion back in to take as big a place in, in health care as, the clinical skills and that knowledge and skills take. And, you know maybe it's about tapping into the good, the stories that work*

Perspective Two: Survey respondents (n=4) advocated for educating managers regarding clinical supervision of nurses. This strategy addressed enablement and modelling compassionate behaviours. Respondents were opposed to altering incentives to promote adoption of compassionate behaviours.

Integration Function Enablement and Modelling	**Integration Function** Environmental Restructuring
Implementation Strategy Educate managers to provide clinical supervision to those implementing strategies for promoting compassion towards complex patients, and, promote self-care.	**Implementation Strategy** Alter incentives for the adoption of compassionate behaviours in the care of complex patients.

Confirmed finding for highest ranked strategy.

The quantitative results confirmed the qualitative findings because Phase 1 participants also stressed the need to supervise the implementation of strategies to deliver compassionate care.

Discordant finding for lowest ranked strategy.

This finding was discordant because Phase 1 participants indicated that nurses are not given adequate salaries and incentives to offer and affect compassionate care delivery.

out well where people have felt really supported" (Patient 4).

Participants supported the need for organizational support for nurses to manage their own challenges and burnout. However, they did not discuss the need to identify champions who can support nurses in providing compassionate care. "I don't know that they look after their workers anymore. I mean, this, we talked to nurses, they're continuously being called back. So, you know, I don't understand that. I don't agree with it. But I do appreciate why you're here. Nurses say it's very difficult for me to be able to, you know, to really be able to do what it is I think I should be doing for my patients. (Participant, 23).

Perspective Three: Consistent with the first perspective, four additional respondents emphasized the need for ongoing stress and burnout consultation. However, they were opposed to identifying champions dedicated to providing compassionate care.

Integration Function Enablement and Modelling	**Integration Function** Environmental Restructuring
Implementation Strategy Provide ongoing consultation with stress experts or counselors to address nurse burnout and to promote self-care.	**Implementation Strategy** Identify and prepare champions (i.e., frontline nurses) who dedicate themselves to supporting and driving through implementing compassionate behaviours.

Confirmed finding for highest ranked strategy.

Nurses, nurse managers, policymakers, and Phase 1 participants indicated that nurses should be provided with resources to manage their own burnout, stress, and challenges when caring for complex patients.

Confirmed finding for lowest ranked strategy.

Participants did not discuss the need to prepare nurse champions to support the delivery of compassionate care.

Participants stated that managers should practice compassion towards their nurses and foster nurses' capacities to provide

Perspective Four: Three respondents highlighted the need for managers to demonstrate compassion towards the nursing staff. They discouraged the need to re-

Confirmed finding for highest ranked strategy.

compassionate care. They also highlighted that hospitals must revisit their focus and emphasize compassionate care. Participants shared that organizations are more focused on physical care and neglect compassionate care. *"The leader has to show compassion for his or her staff. Okay, that it has to be modeled if I expect you to give compassionate care to our patients. I'm prepared to show you compassionate care in my relationship with you as you know, manager to employee" (Participant 23).*

examine the need for compassionate nursing care because they noted that it should be a given that compassion is essential.

Integration Function Modelling	**Integration Function** Environmental Restructuring
Implementation Strategy Model the intended change by demonstrating compassionate behaviours toward peers.	**Implementation Strategy** Organizations should purposely re-examine the implementation of compassionate behaviours by surveying multiple stakeholders.

Phase 1 participants and stakeholders responding to the survey indicated the need to model compassion.

Discordant finding for lowest ranked strategy.

Phase 1 participants highlighted the need to revisit the goals and focus of care in hospitals. They raised concerns that there is too much focus on physical care and not enough on compassionate care.

Participants suggested that there should be meetings and seminars to discuss: organizational goals related to compassionate care, processes to enhance the provision of compassionate care, and offering nurses opportunities for reflective practice to better demonstrate compassion.

Perspective Five: Two respondents emphasized the need to organize clinical team meetings to support health professionals in the delivery of compassionate care and provide opportunities for reflection on their behaviours that demonstrate compassion. They discouraged the need to pilot small demonstrations of compassionate care.

Confirmed finding for highest ranked strategy.

Patients, nurses, nurse managers, administrators, managers, and policymakers emphasized the need to offer opportunities and resources for reflective practice.

"I think, to encourage some kind of a reflection process so that not only the nurse reflects on the fundamental skills that she used or the medications or whatever, not just from the medical point of view, but respond, think about her own response, and why and how she did it. She, she, I use he or she, but it shouldn't be a he or she felt that way. And then if that became a regular practice, then the nurse might see a pattern in the nurses' own response, and then when the nurse could see the pattern, then the next question is why and how can I improve it?" (Participant 1).

Integration Function Enablement and Modelling	**Integration Function** Environmental Restructuring
Implementation Strategy Organize clinician implementation team meetings to support providers and provide them opportunities to reflect on implementing strategies for compassionate care towards complex patients.	**Implementation Strategy** Stage implementation scale-up by piloting small demonstrations of compassionate care strategies on complex patients.

Confirmed finding for lowest ranked strategy.

Phase 1 participants did not discuss the need to apply compassionate care interventions in small units before implementation across the hospital. Instead, they recommended compassionate care be provided immediately and consistently.

Discussion

This MMR study provided an understanding of the barriers to compassionate nursing care delivery from the perspectives of individuals with experiences as complex patients. Several implementation strategies were delineated to address participant-perceived barriers by combining their perspectives with those of other stakeholders (nurses, nurse managers, health care administrators, policymakers, and national and international compassionate care experts).

Contributions to Practice Change

This is the first MMR study during which IS theoretical models and frameworks were used to identify implementation strategies that have the potential to overcome barriers in health care contexts and enhance compassionate nursing care delivery. Within the Canadian context, research on compassion has primarily focused on articulating the basis for compassion (Sinclair et al., 2016c); conceptualizing compassion and compassionate approaches from the perspective of patients in palliative care settings (Sinclair et al., 2016b); differentiating compassion from empathy and sympathy (Sinclair et al., 2017); exploring patients' suggestions for compassionate training of health professionals (Sinclair et al., 2016a); and describing the experiences and significance of compassion in diverse cultural populations (Singh et al., 2018). The research is still in its infancy. Although researchers have reported patients have recommended compassionate care training (Sinclair et al., 2016a), to date, the progress on developing interventions to change nursing practice to enhance compassionate care; in particular, when caring for complex patients, is minimal. Also, arguably, the research has been somewhat limiting given the exclusive focus on palliative care settings. Compassion, when examined in the palliative care context becomes a spotlight but a narrow focus (i.e., only in palliative care settings). Therefore, the research on compassion should move beyond palliative care because

compassion is required across patient populations and in diverse health care contexts (Perez-Bret et al., 2016). The results from this MMR study will contribute to practice in Canadian and international primary, tertiary, and long-term care settings because the target population was individuals with multimorbidities who often present with multiple physical, mental, and drug-related issues. These individuals are known as complex patients and are generally marginalized.

Potential Implementation Strategies

The most significant participant-perceived barriers to compassionate nursing care were categorized under the TDF domains of environmental context and resources, and social influences. The barriers are consistent with previous research reports following investigation of what nurses from diverse health care settings perceived were barriers hindering compassionate practice (Christiansen et al., 2015; Tehranineshat et al., 2019). Motivation, time constraints, limited organizational emphasis on compassionate care, understaffing, high patient acuity, intergenerational differences among nurses, and workplace factors and forces were the key factors hindering compassionate care (Christiansen et al., 2015; Tehranineshat et al., 2019 Valizadeh et al., 2018).

In addition to sharing their experiences as complex patients, participants disclosed that often it was the negative behaviour of the patient that precipitated a nurse's poor response. Participants, despite having several physical and psychological health concerns, were willing to acknowledge their role in the nurse-patient dynamic. Participants freely shared their negative encounters with health professionals and offered suggestions how to improve the nurse-patient relationship and promote compassionate nursing practice. Such willingness supports the need for greater involvement of the patient and their family members in improving compassionate practice behaviours.

Also, participants emphasized the necessity to address mental health distress and other issues experienced by nurses; for example, mitigating the stressors that lead to burnout as opposed to developing strategies to motivate nurses or to incentivize nurses to adopt a more compassionate nursing approach when caring for complex patients. This brings to attention the interplay of personal, interpersonal, and organizational factors that affect nurses' capability to provide compassionate care for marginalized patient populations, indicating that greater efforts are required at the organizational level to support nurses in their compassionate care efforts.

Based on the Q-sort survey rankings, Enablement and Modelling were the integration functions representing the greater proportion of highest ranked implementation strategies. As depicted in Table 8, several implementation strategies that were ranked high for relevance were categorized as Enablement and Modelling:

- Use facilitation to establish a process of interactive problem solving and support to discuss nurses' challenges and negative encounters with complex patients and their families.
- Recruit, designate, and train leaders who advocate compassionate behaviours.
- Conduct local consensus discussions to address the importance of compassionate care of complex patients and whether the action plan to improve compassion is appropriate.
- Provide ongoing consultation with stress experts or counselors to address nurse burnout and promote self-care.
- Model the intended change by demonstrating compassionate behaviours towards peers.

- Involve patients/consumers and family members in efforts to promote compassionate care for complex patients.

Exploration of the available literature indicates that Enablement has been recognized and implemented worldwide in various forms; an example is the "Schwartz Rounds" (The Schwartz Center, 2018) and the "6Cs Strategy" (Care, Compassion, Communication, Courage, Competence, and Commitment) (NHS, 2016). These strategies, though, do not build on the perspectives and opinions of patient populations, particularly marginalized patient groups (e.g., complex patients).

Education and Training are widely cited as interventions or implementation strategies most effective to promote compassionate patient care. Blomberg et al., (2016) conducted a systematic review of 24 studies and identified 25 interventions to promote compassionate care, of which almost half focused on training health professionals (e.g., topics such as verbal communication, communicating spiritual care needs, and empathy). Nine of the interventions involved using different care models (i.e., changing health care team functioning), and six interventions were about supporting staff in their practice (i.e., through individual or group programs to support and manage burnout and compassion fatigue). However, the interventions underwent evaluation in hospitals, nursing homes, and community settings in different countries such as the United States, Europe, Australia, Canada, China, and Turkey and results indicated weak methodological quality; and, interventions were developed without considering compassionate care enablers and barriers and interventions lacked theoretical support. The interventions (i.e., the implementation strategies) were not fully described to allow replication and testing in other settings. Therefore, none of the interventions were recommended for further research without developing a comprehensive theoretical basis (Ball et al., 2017; Blomberg et al.,

2016). Recently, Sinclair et al. (2021) reviewed 103 interventions aimed at compassion training for health professionals in practice and in educational settings. The training approaches included programs for curricula and clinical rotations using humanities-based reflective practices, clinical simulation, role modelling, and contemplative practices. Sinclair et al., reported that most of the compassion education interventions focused on only a single aspect of compassion or that compassion was not adequately defined. Moreover, interventions were not evaluated for sustainability. Sinclair et al. concluded that the training and education interventions could not be fully recommended for improving compassion patient care.

Education and Training are some of the implementation strategies listed in the Q-sort survey but stakeholders did not advocate for educational approaches, and participants interviewed during Phase 1 of the MMR study were endorsing emotional supports for nurses as opposed to education to address stress and burnout. Rather, managers should be educated on assisting and supervising nurses in the delivery of compassionate care. Additionally, managers should be educated to conduct ongoing clinical implementation team meetings and discussions to evaluate and revisit action plans for promoting compassionate care. Other stakeholders identified the need for conducting grand rounds to train health professionals how to supervise compassionate care implementation strategies and to instruct patients and families how to engage in implementation efforts. Also recommended was Education and Training focused on improving the reflective practice of nurses by providing them with the opportunities to shadow nurses who are already identified to have been providing compassionate care for complex patients.

Limitations

For the qualitative component, 19 participants were recruited from a shelter for homeless people with multiple chronic conditions in one location in Atlantic Canada. Therefore, the

transferability of the findings to other contexts may be limited. Some of these participants frequently visited health care settings during the COVID 19 pandemic which given the unprecedented circumstances, participant views and perspectives about compassionate nursing care delivery may have been considerably impacted. Moreover, participants were not nurses reflecting on the barriers to care but participants with experiences under the care of nurses. Therefore, some of the perceived barriers to compassionate nursing care could be considered potential barriers because those were merely the observations of participants. During the quantitative component, selection bias resulted from recruiting specific stakeholders (nurses, managers, health care administrators, policymakers, and compassionate care experts) to complete the Q-sort survey. Due to the nature of the Q-sort survey, the results only offer a shared viewpoint about relevant implementation strategies from a select group of people. Further research is warranted to explore the viewpoints about compassionate nursing care from the general public.

Summary

As presented in this chapter, the exploratory sequential MMR study enabled identification of six potential implementation strategies to enhance compassionate care behaviours when nurses are caring for complex patients. Participants interviewed during the qualitative phase shared recommended strategies to improve compassionate care. Then, frontline nurses, nurse managers, health care administrators, policymakers, and compassionate care experts completed the Q-sort survey during the quantitative phase and ranked the following implementation strategies the highest:

1. Use facilitation to establish a process of interactive problem solving and support to discuss nurses' challenges and negative encounters with complex patients and

their families.

2. Provide ongoing consultation with stress experts or counselors to address nurse burnout and promote self-care.
3. Model the intended change by demonstrating compassionate behaviours toward peers.
4. Shadow other experts (i.e., nurses practicing compassion towards complex patients) and reflect and apply observed compassionate behaviours.
5. Involve patients/consumers and family members in the efforts to promote compassionate care of complex patients.
6. Organize clinician implementation team meetings to support providers and provide them opportunities to reflect on implementing strategies for compassionate care towards complex patients.

Some contradictions in rankings were noted when comparing rankings among stakeholder groups. Policymakers and interview participants emphasized the need for enablement of compassionate nursing care through facilitating problem solving and discussion of the challenges and negative encounters experienced by nurses and by providing nurses with ongoing consultation with stress experts or counselors to address nurse burnout and to promote self-care. However, frontline nurses stressed the use of incentives to adopt compassionate behaviours along with enablement through stress experts and, additionally, placed emphasis on modelling the intended change by demonstrating compassion towards peers. However, the strategies remain broad. In Chapter 5 these highest ranked strategies are operationalized making them accessible for implementation and evaluation in a real-life clinical context.

References

Atkins, L., Francis, J., Islam, R., O'Connor, D., Patey, A., Ivers, N., ... & Lawton, R. (2017). A guide to using the Theoretical Domains Framework of behaviour change to investigate implementation problems. *Implementation Science, 12*(1), 77. https://doi.org/10.1186/s13012-017-0605-9

Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health, 11*(4), 589-597. https://doi.org/10.1080/2159676X.2019.1628806

Braun, V., & Clarke, V. (2021). Conceptual and design thinking for thematic analysis. *Qualitative Psychology*. https://doi.org/10.1037/qup0000196

Ball, J., Griffiths, P., Hope, J., & Bridges, J. (2017). Are interventions to support delivery of more compassionate nursing care effective? *Nursing Times, 113*(11), 57-58.

Bazeley, P. (2018). *Integrating analyses in mixed methods research*. Thousand Oaks, CA: Sage.

Blomberg, K., Griffiths, P., Engstrom, Y., May, C., & Bridges, J. (2016). Interventions for compassionate nursing care: A systematic review. *International Journal of Nursing Studies*, 62, 137-155. https://doi.org/10.1016/j.ijnurstu.2016.07.009

Bradshaw, C., Atkinson, S., & Doody, O. (2017). Employing a qualitative description approach in health care research. *Global Qualitative Nursing Research*, 4, 1-8. https://doi.org/10.11772F2333393617742282

Brown, S.R. (1980). *Political subjectivity: Applications of Q Methodology in political science*. Yale University Press.

Cane, J., O'Connor, D., & Michie, S. (2012). Validation of the theoretical domains framework for use in behaviour change and implementation research. *Implementation Science, 7*(1), 37. https://doi.org/10.1186/1748-5908-7-37

Christiansen, A., O'Brien, M. R., Kirton, J. A., Zubairu, K., & Bray, L. (2015). Delivering compassionate care: the enablers and barriers. *British Journal of Nursing, 24*(16), 833-837. https://doi.org/10.12968/bjon.2015.24.16.833.

Churruca, K., Ludlow, K., Wu, W., Gibbons, K., Nguyen, H. M., Ellis, L. A., & Braithwaite, J. (2021). A scoping review of Q-methodology in healthcare research. *BMC Medical Research Methodology, 21*(1), 1-17. https://doi.org/10.1186/s12874-021-01309-7

Cole-King, A., & Gilbert, P. (2011). Compassionate care: The theory and the reality. *Journal of Holistic Healthcare, 8*(3), 29-37. http://hdl.handle.net/10545/621778

Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). Sage.

DeJonckheere, M., & Vaughn, L. M. (2019). Semi structured interviewing in primary care research: a balance of relationship and rigour. *Family Medicine and Community Health, 7*(2), e000057. https://doi.org/10.1136/fmch-2018-000057

Hartrick-Doane, G., & Varcoe, C. (2015). *How to nurse: Relational inquiry with individuals and families in changing health and health care contexts*. Lippincott.

Doyle, L., McCabe, C., Keogh, B., Brady, A., & McCann, M. (2020). An overview of the qualitative descriptive design within nursing research. *Journal of Research in Nursing, 25*(5), 443–455. https://doi.org/10.1177/1744987119880234

Feely, A., Lix, L. M., & Reimer, K. (2017). Estimating multimorbidity prevalence with the Canadian Chronic Disease Surveillance System. *Health Promotion and Chronic Disease Prevention in Canada: Research, Policy and Practice, 37*(7), 215–222. https://doi.org/10.24095/hpcdp.37.7.02

Fetters, M. D., Curry, L. A., & Creswell, J. W. (2013). Achieving integration in mixed methods designs—principles and practices. *Health Services Research, 48*(6pt2), 2134-2156.

Fulton, J. S. (2014). The future of complex care. *Clinical Nurse Specialist, 28*(4), 195-196.

Haslam, D. (2015). More than kindness. *Journal of Compassionate Health Care, 2*(1), 6. https://doi.org/10.1186/s40639-015-0015-2

Johnson, R. B., & Christensen, L. (2017). *Validity of research results in quantitative, qualitative and mixed research*. In R. B. Johnson, & L. Christensen (Eds.), Educational research. Quantitative, qualitative, and mixed approaches (6th ed., pp. 306–310): Sage.

Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher, 33*(7), 14-26.

Johnson, R. B., & Schoonenboom, J. (2017). Adding qualitative and mixed methods research to health intervention studies: Interacting with differences. *Qualitative Health Research, 26*(5), 587-602. https://doi.org/10.1177/1049732315617479

Kitching, G. T., Firestone, M., Schei, B., Wolfe, S., Bourgeois, C., O'Campo, P., ... & Smylie, J. (2020). Unmet health needs and discrimination by healthcare providers among an Indigenous population in Toronto, Canada. *Canadian Journal of Public Health, 111*(1), 40-49. https://doi.org/10.17269/s41997-019-00242-z

Knaak, S., Mantler, E., & Szeto, A. (2017). Mental illness-related stigma in healthcare: Barriers to access and care and evidence-based solutions. *Healthcare Management Forum, 30*(2), 111-116.

Kuluski, K., Ho, J. W., Hans, P. K., & Nelson, M. L. (2017). Community care for people with complex care needs: bridging the gap between health and social care. *International Journal of Integrated Care, 17*(4), 2. http://doi.org/10.5334/ijic.2944

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. sage.

Loeb, D. F., Bayliss, E. A., Binswanger, I. A., Candrian, C., & Degruy, F. V. (2012). Primary care physician perceptions on caring for complex patients with medical and mental illness. *Journal of General Internal Medicine, 27*(8), 945-952. https://doi.org/10.1007/s11606-012-2005-9

Lown, B. A., Manning, C. F., & Hassmiller, S. B. (2020). Does organizational compassion matter? A cross-sectional survey of nurses. *JONA: The Journal of Nursing Administration, 50*(2), 78-84.

Manning, E., & Gagnon, M. (2017). The complex patient: A concept clarification. *Nursing & Health Sciences, 19*(1), 13-21.

Mannion, R. (2014). Enabling compassionate healthcare: Perils, prospects and perspectives. *International Journal of Health Policy and Management, 2*(3), 1-3. https://doi.org/10.15171/ijhpm.2014.34

Martello, C., Bessière, G., Bigras, M., Boulet, A., Brenner, K., Crist, E., & Pluye, P. (2014). *What do we mean when we say, "This patient is complex."* In NAPCRG Annual Conference. New York: North American Primary Care Research Group.

Nyblade, L., Stockton, M. A., Giger, K., Bond, V., Ekstrand, M. L., Mc Lean, R., ... & Turan, J. (2019). Stigma in health facilities: why it matters and how we can change it. *BMC Medicine, 17*(1), 25. https://doi.org/10.1186/s12916-019-1256-2

Perez-Bret, E., Altisent, R., & Rocafort, J. (2016). Definition of compassion in healthcare: A systematic literature review. *International Journal of Palliative Nursing, 22*(12), 599-606. https://doi.org/10.12968/ijpn.2016.22.12.599

Pfaff, K., & Markaki, A. (2017). Compassionate collaborative care: an integrative review of quality indicators in end-of-life care. *BMC Palliative Care, 16*(1), 1-24

Post, S. G. (2011). Compassionate care enhancement: benefits and outcomes. *International Journal of Person Centered Medicine, 1*(4), 808-813. https://doi.org/10.12968/ijpn.2016.22.12.599

Powell, B. J., Waltz, T. J., Chinman, M. J., Damschroder, L. J., Smith, J. L., Matthieu, M. M., Proctor, E.K., & Kirchner, J. E. (2015). A refined compilation of implementation strategies: results from the Expert Recommendations for Implementing Change (ERIC) project. *Implementation Science, 10*(1), 21. https://doi.org/10.1186/s13012-015-0209-1

Reader, T. W., & Gillespie, A. (2013). Patient neglect in healthcare institutions: A systematic review and conceptual model. *BMC Health Services Research, 13*(1), 156. https://doi.org/10.1186/1472-6963-13-156

Rich, E., Lipson, D., Libersky, J., & Parchman, M. (2012). *Coordinating care for adults with complex care needs in the patient-centered medical home: Challenges and solutions*. Rockville, MD: Agency for Healthcare Research and Quality. https://pcmh.ahrq.gov/sites/default/files/attachments/coordinating-care-for-adults-with-complex-care-needs-white-paper.pdf

Roberts, K. C., Rao, D. P., Bennett, T. L., Loukine, L., & Jayaraman, G. C. (2015). Prevalence and patterns of chronic disease multimorbidity and associated determinants in Canada. *Health Promotion and Chronic Disease Prevention in Canada: Research, Policy and Practice, 35*(6), 87–94. https://doi.org/10.24095/hpcdp.35.6.01

Sandelowski, M. (2000). Whatever happened to qualitative description? *Research in Nursing & Health*, 23, 334–340. https://doi.org/10.1002/1098-240X(200008)23:4<334::AID-NUR9>3.0.CO;2-G

Sandelowski, M. (2010). What's in a name? Qualitative description revisited. *Research in Nursing & Health*, 33, 77–84. https://doi.org/10.1002/nur.20362

Schoonenboom, J., & Johnson, R. B. (2017). How to construct a mixed methods research design. *KZfSS Kölner Zeitschrift für Soziologie und Sozialpsychologie, 69*(2), 107-131.

Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information*, 22, 63-75. https://doi.org/10.3233/EFI-2004-22201

Sieben-Hein, D., & Steinmiller, E. A. (2005). Working with complex care patients. *Journal of Pediatric Nursing, 20*(5), 389-395. https://doi.org/10.1016/j.pedn.2005.06.011

Simpson, A. V., Farr-Wharton, B., & Reddy, P. (2020). Cultivating organizational compassion in healthcare. *Journal of Management & Organization, 26*(3), 340-354. https://doi.org/10.1017/jmo.2019.54

Sinclair, S., Kondejewski, J., Jaggi, P., Dennett, L., des Ordons, A. L. R., & Hack, T. F. (2021). What is the state of compassion education? A systematic review of compassion training in health care. *Academic Medicine, 96*(7), 1057–1070. https://doi.org/10.1097/ACM.0000000000004114

Sinclair, S., McClement, S., Raffin-Bouchal, S., Hack, T. F., Hagen, N. A., McConnell, S., & Chochinov, H. M. (2016b). Compassion in health care: An empirical model. *Journal of Pain and Symptom Management, 51*(2), 193-203. http://doi.org/10.1016/j.jpainsymman.2015.10.009

Sinclair, S., Norris, J. M., McConnell, S. J., Chochinov, H. M., Hack, T. F., Hagen, N. A., Neil McClement, S., & Bouchal, S. R. (2016a). Compassion: A scoping review of the healthcare literature. *BMC Palliative Care, 15*(1), 6. https://doi.org/10.1186/s12904-016-0080-0

Sinclair, S., Torres, M. B., Raffin-Bouchal, S., Hack, T. F., McClement, S., Hagen, N. A., & Chochinov, H. M. (2016c). Compassion training in healthcare: What are patients' perspectives on training healthcare providers? *BMC Medical Education, 16*(1), 169. http://doi.org/10.1186/s12909-016-0695-0

Singh, P., King-Shier, K., & Sinclair, S. (2018). The colours and contours of compassion: A systematic review of the perspectives of compassion among ethnically diverse patients and healthcare providers. *PloS One, 13*(5), e0197261. https://doi.org/10.1371/journal.pone.0197261

Tehranineshat, B., Rakhshan, M., Torabizadeh, C., & Fararouei, M. (2019). Compassionate care in healthcare systems: A systematic review. *Journal of the National Medical Association, 111*(5), 546-554.

Valizadeh, L., Zamanzadeh, V., Dewar, B., Rahmani, A., & Ghafourifard, M. (2016). Nurse's perceptions of organisational barriers to delivering compassionate care: A qualitative study. *Nursing Ethics, 25*(5):580-590. https://doi.org/10.1177/0969733016660881

Van Boekel, L. C., Brouwers, E. P., Van Weeghel, J., & Garretsen, H. F. (2013). Stigma among health providers towards patients with substance use disorders and its consequences for healthcare delivery: Systematic review. *Drug and Alcohol Dependence, 131*(1-2), 23-35. https://doi.org/10.1016/j.drugalcdep.2013.02.018

Van der Cingel, M. (2014). Compassion: The missing link in quality of care. *Nurse Education Today, 34*(9), 1253-1257. https://doi.org/10.1016/j.nedt.2014.04.003.

Watts, S., & Stenner, P. (2005). Doing Q methodology: Theory, method and interpretation. *Qualitative Research in Psychology*, *2*(1), 67-91.

Watts, S., & Stenner, P. (2012). *Doing Q methodological research: Theory, method & interpretation*. Sage.

Webster, F., Rice, K., Bhattacharyya, O., Katz, J., Oosenbrug, E., & Upshur, R. (2019). The mismeasurement of complexity: Provider narratives of patients with complex needs in primary care settings. *International Journal for Equity in Health, 18*(1), 107. https://doi.org/10.1186/s12939-019-1010-6

Younas, A., & Maddigan, J. (2019). Proposing a policy framework for nursing education for fostering compassion in nursing students: A critical review. *Journal of Advanced Nursing, 75*(8), 1621-1636. https://doi.org/10.1111/jan.13946

Chapter Five

Operationalizing Implementation Strategies: A Worked Example

This chapter is the fourth and final manuscript of the dissertation. As presented in Chapter 4, the results of the exploratory sequential mixed methods research study are five potential implementation strategies (i.e., facilitation, consultation with stress experts, involvement of patients and families, modelling compassion, and utilizing implementation teams) for improving compassionate nursing care of complex patients. The strategies were ranked the highest for relevance (among a list of 21 potential implementation strategies) by stakeholders who responded to a Q-sort survey during the quantitative phase. Operationalization of the implementation strategies for the local health care context in Newfoundland and Labrador is demonstrated in this manuscript that will be prepared as a methodological article for publication in the International Journal of Nursing Studies or in the Implementation Science Communications journal. Following the manuscript abstract, background, and goal, the study phases, findings and results that were the sources of the implementation strategies, are described and then the operationalization process for each implementation strategy is illustrated.

Manuscript (4) Abstract

Uptake of clinical practice guidelines and practice change require strategies that target the intended change and that are contextually relevant. Systematic reviews indicate that implementation strategies are poorly operationalized for specified use in practice. The goal of this methodological article is to show how implementation strategies can be operationalized. Operationalization is illustrated by drawing on the results of a mixed methods study that was aimed at developing implementation strategies to improve compassionate nursing practice when caring for complex patients. A Q-sort survey of stakeholders during the quantitative phase resulted in six implementation strategies that were ranked the highest for relevance. Using the merging technique, findings from the qualitative phase were compared with the survey results and rankings were confirmed. Guided by the Proctor, Powell and McMillen's (2013) framework for specifying implementation strategies, these six highest ranked strategies are operationalized by outlining the name, conceptual definition, action, actors, action target, dose, temporality, and justification. The Reach, Effectiveness, Adoption, Implementation, Maintenance (RE-AIM) evaluation framework is then applied to construct measurable outcomes. Poorly and inadequately defined and articulated implementation strategies are detrimental to implementation efforts, leading to a waste of time and human and material resources. Offered in this article is a theory-guided approach to operationalize implementation strategies with potential to change nursing practice behaviours.

Keywords: behaviour change; compassionate care; implementation science; implementation strategies; nursing practice

Background

Implementation science (IS) is a relatively new field that involves bringing new initiatives into practice and enhancing the uptake of evidence-based practice (EBP) guidelines and other research results (Bauer et al., 2015). Strategies to enhance evidence uptake is an essential component of implementation research. Implementation strategies are defined as the techniques or methods to enhance uptake and use of evidence-based guidelines and innovative approaches to change and improve practice (Proctor et al., 2013; Kirchner et al., 2020). Implementation strategies could consist of a single component or multiple components. Single component strategies are called discrete implementation strategies, and multiple component strategies are often described as bundled strategies (Powell et al., 2012; Fernandez et al., 2019). Using relevant discrete or bundled implementation strategies in diverse contexts is critical (Waltz et al., 2019; Kirchner et al., 2020). Changing practice is a challenging undertaking due to contextual differences across settings and the need to tailor implementation strategies to meet requirements for each setting (Powell et al., 2019; Kirchner et al., 2020). Therefore, it is essential that implementation strategies are described in adequate detail so that they can be tailored and reproduced for use in diverse contexts (Michie et al., 2009; Rudd et al., 2020; Spoon et al., 2020).

Despite the importance of adequately operationalizing implementation strategies, implementation strategies are often poorly and inadequately described in the literature (Hooley et al., 2020; Kirchner et al., 2020; Pinnock et al., 2017; Spoon et al., 2020). Researchers have documented several issues in the reporting of implementation strategies such as limited information about the context, implementation frequency, and components, and, inadequate empirical and theoretical supports (Hooley et al., 2020; Spoon et al., 2020). Hooley et al. (2020)

conducted a systematic review of 81 articles in the mental health literature. They found that the implementation strategies included only some of the required domains. The least reported domains were the conceptual definition, theoretical and empirical justification, temporality, and intended outcomes. Such incomplete description and reporting affect revision, replication, tailoring, uptake in diverse contexts, and the synthesis of the literature to evaluate the usefulness of strategies (Hooley et al., 2020; Kirchner et al., 2020; Proctor et al., 2013).

IS has been crucial for the nursing discipline especially in designing strategies to advance EBP change (Curtis et al., 2017; Dolansky et al. 2017; Williams et al., 2017). However, the uptake of EBP has possibly been hindered by inadequate reporting of implementation strategies, inhibiting nurse clinicians and researchers from fully grasping the change mechanisms, thereby affecting reproducibility and replication (Blomberg et al., 2016; Munten et al., 2010; Spoon et al., 2020). This challenge is particularly prevalent in the reporting of implementation strategies to enhance compassionate practice behaviours. For example, a systematic review of 24 studies (Blomberg et al., 2016) identified 25 interventions to promote compassionate care in hospitals, nursing homes, and community settings in several countries including the United States, Europe, Australia, Canada, China, and Turkey. Training of health professionals (n = 10), care model-based interventions (n = 9), and supporting staff in their practice (n=6) were most prominent but the overall quality of reporting was rated as 45%, 33%, and 46%, respectively. Missing was theoretical support and sufficient descriptions to allow for replication and testing across settings. Given these issues of implementation reporting, Spoon et al. (2020) recommended that nurse researchers should use standardized formats for reporting implementation strategies. However, no practical examples of operationalizing implementation strategies for specific use by using IS frameworks have been published in the nursing literature. Offered here is a worked example

utilizing an IS framework to operationalize implementation strategies.

Goal

The goal of this methodological article is to illustrate the process of operationalizing implementation strategies (i.e., organize clinician implementation team meetings, involve patients and families, modelling, *implementation* facilitation, and ongoing consultation with stress experts) that were selected to promote compassionate nursing care of complex patients.

Data Sources

An exploratory sequential MMR study was conducted to promote compassionate nursing care of complex patients by identifying implementation strategies. Phase 1 (qualitative component) provided information about the barriers of compassionate nursing care from the perspectives of participants with hospital experiences as complex patients. These findings were then integrated in Phase 2 (instrument development) to construct a Q-sort survey of potential implementation strategies that would address the barriers. The Q-sort survey was distributed during Phase 3 (quantitative component). Integration of Phase 1 data and Phase 3 results to formulate implementation strategies was achieved by applying the building technique and IS frameworks.

The Q-sort survey of potential implementation strategies was electronically distributed to 140 stakeholders for ranking, out of which 32 frontline nurses, nurse managers, health care administrators, policymakers, and compassionate care experts responded and returned the survey. Highest rankings were determined via principal components analysis. A five-factor solution was generated using Varimax rotation. The Varimax rotation was used because it is an appropriate rotation for the assumption that individual Q-sorts from all survey respondents were assumed to have no intercorrelations. Initially there were six implementation strategies with

highest ranking scores but two of the implementation strategies were combined: “Shadow other experts (i.e., nurses practicing compassion towards complex patients) and reflect and apply observed compassionate behaviours” was combined with “Model the intended change by demonstrating compassionate behaviours toward peers” because they were somewhat consistent in their purpose and meaning (i.e., model the intended change). Hence, five highly ranked implementation strategies are operationalized, below, using the IS framework proposed by Proctor et al., (2013) and by integrating Phase 1 qualitative data that pertained to participant recommendations for improving compassionate nursing care of complex patients.

Operationalization Framework

Proctor et al. (2013) proposed a framework to operationalize implementation strategies for specific use in practice and to avoid vagueness, ambiguities, and inconsistent language during implementation and evaluation. This framework was chosen because it ensures details like why, how, where, and when of implementation strategies are provided in a fulsome manner to achieve implementation and translation in real-life settings.

The framework includes the following components: name, definition, and specification. Specification of implementation requires further elaboration of: the individuals enacting the strategies (the actor), the actions or steps required for unambiguous enaction (the action), the individual and, or, targets to which the implementation strategies are directed (action target), the order or sequence of strategies (temporality), the intensity or frequency of the implementation strategy (dose), the intended outcome of the strategy (implementation outcome), and the pragmatic, empirical, or theoretical evidence supporting the strategy (justification).

Operationalization

Strategy One: Clinician Implementation Team Meetings

Name

This strategy is named “Implement Team Meetings to Support Compassionate Practice” consistent with the language used in the literature (Perry et al., 2019). The word clinician was removed from the name to indicate that any individual with needed skills and expertise in the clinical context can play their part in designing and implementing these team meetings.

Definition

The conceptual definition is adopted from Perry et al. (2019) who emphasized that these team meetings should include multiple stakeholders not only the clinicians. Therefore, this implementation strategy was redefined as supporting multiple stakeholders such as clinicians, staff, patients, and families involved in the implementation plans to support compassionate practice. Also included is the provision of adequate time for the teams to reflect on the progress of implementation, issues, challenges, and lessons learned and the revise the implementation plans, accordingly, to support one another’s learning.

Specification

Actors. Multiple members representing health care organizations, management, nursing personnel, and complex patients and their family members.

Action. The action is divided into distinct phases: pre-implementation, during implementation, and post-implementation. In the pre-implementation phase, the team members organize meetings to finalize the practice changes (i.e., compassionate behaviour indicators are demonstrated), and provide the necessary information to frontline nurses and managers involved in implementation. During the implementation, the team members are actively involved in

implementing the practice changes, responding to any questions or requests for clarification through in-person, telephone, or online communication, and ensuring that adequate organizational resources are available to promote implementation and uptake of practice change. After the implementation, team members organize meetings to discuss the challenges of implementing the practice change and design surveys to assess the outcomes such as patient and family satisfaction with compassion and reflective accounts of frontline nurses providing compassionate care.

Action target. Frontline nurses and nursing students who care for complex patients.

Temporality. Implementation teams should be established before implementing action to oversee and design the process and approaches to implementation.

Dose. An implementation team should be involved in each implementation strategy. The team should meet monthly to assess the implementation process and gather outcome assessment data.

Implementation outcome. The anticipated outcomes are: a) the adoption of compassionate behaviours by frontline nurses in the care of complex patients, b) penetration of practice change among patients, frontline nurses, and managers, c) fidelity of the implementation protocol, and d) sustainability of the practice change.

Justification. Substantiated in the IS literature is the inclusion of implementation teams to support practice change (Aijaz et al., 2021; Higgins et al., 2012; Metz, & Bartley, 2020). Empirical studies also highlight the critical role of implementation teams in supporting implementation efforts and affecting practice (Nelson et al., 2014; Schubert et al., 2016). Nelson et al. (2014) demonstrated that a team-based approach supported implementation of various elements (i.e., care coordination, shared decision-making, delegation, staffing, self-management,

patient-centered care, and communication) of a model of care in primary care clinics. The use of implementation teams improved implementation of the model resulting in increased patient satisfaction and higher performance on clinical quality measures. The team-based approach also yielded benefits for clinical personnel with less staff burnout, reduced hospitalization rates, and lower emergency department utilization rates.

To facilitate implementation of this strategy in Newfoundland and Labrador (NL), alliances could be brokered with existing groups, associations and teams associated with hospitals and other health care settings.

Strategy Two: Involve Patients and Family Members

Name

This strategy is named "Patient and Informal Caregiver Involvement to Foster Compassion." The word family was changed to informal caregivers because many of the complex patients did not have families as indicated by their homelessness. These patients consider their friends, distant relatives, or neighbors their families. These individuals and groups were considered informal caregivers.

Definition

Patient and family engagement is defined as efforts devoted to preparing patients/consumers to participate in their care actively, to ask questions, and to "specifically inquire about care guidelines, the evidence behind clinical decisions, or about available evidence-supported treatments" (Powell et al., 2015, p. 10).

Specification

Actors. Nurse managers, health administrators, and patient and family representatives from hospital settings.

Action. Nurse managers or health administrators leading the implementation team should arrange meetings with patients and their family members to decide on the implementation plan. Patients and family members should be invited to share their positive and negative encounters with nurses during implementation team meetings. Patients and families should be encouraged to discuss their level of satisfaction with care and openly disclose their issues with managers or administrators who are leading the implementation teams.

Action target. Frontline nurses caring for complex patients.

Temporality. Based on the review of patient engagement evidence (Bombard et al., 2018), patient involvement should be a continuous ongoing process during implementation planning and activities. Therefore, this strategy should be combined with other strategies such as implementation team meetings and facilitation.

Dose. The patients and families should be invited to be actively involved with each implementation strategy.

Implementation outcome. This implementation strategy is expected to enhance adoption of compassionate nursing behaviours when frontline nurses care for complex patients; advance penetration of practice change among patients, frontline nurses and managers; and ensure sustainability.

Justification. The greater involvement of patients and their families in implementation efforts has been strongly advocated in the IS literature (Bombard et al., 2018; Davis et al., 2016; Gray-Burrows et al., 2018; Park & Giap, 2020; Sharma et al., 2018). Bombard et al. (2018) reviewed 48 studies and determined that patients and their family members had been involved as co-designers and consultants to improve implementation strategies. Sharma et al. (2018) conducted a systematic review of 52 studies related to patient engagement interventions to

promote health care safety in ambulatory and acute care. Patient engagement positively impacted self-management, medication adherence, chronic disease self-management, adverse event reporting, and medical record accuracy. Systematic reviews in nursing and health care literature on complex practice behaviours such as compassionate care, also provided evidence that involvement of patients and families is instrumental in promoting behaviour change. These reviews also highlighted that greater involvement of patients and families fosters better understanding of preferences and values (Pehlivan & Güner, 2020; Pfaff & Markaki, 2017; Sinclair et al., 2016).

In NL there has been a transformation in the care of complex patients. In 2021, the government announced a new health services program called the Home First Initiative. This initiative aims to deliver health care services to individuals with complex health needs who want to be cared for in their homes. The program advances three critical actions including: a) establishing a Home First Integrated Network to support community care of complex patients and patients who are discharged from acute care, b) integrating a palliative care approach to advance support and coordination of care services, and c) enhancing services for persons with dementia primarily focusing on supporting caregivers (Government of Canada, 2021). With the initiation of this program, health professionals, like nurses, are already in contact with patient support groups and organizations, family members, and informal caregivers. Therefore, furthering the involvement of patients and informal caregivers can be advantageous because while focusing on preparing health professionals to provide care in home and community settings, nurses can be gaining new understanding of the significance of compassionate nursing care for complex patients and their family members.

Strategy Three: Modelling

Name

This strategy is named "Model Compassionate Behaviours Through Reflective Sessions and Shadowing the Experts." According to Proctor et al. 2013, the name of the strategy should be close to the language used in the existing literature. This name captures the overall implementation strategy and its two components. The first component is modelling compassion through reflective sessions and the second component is shadowing compassionate care experts. The language of this strategy is consistent with the language used in the Expert Recommendations for Implementing Change (ERIC) guidelines (Powell et al., 2015).

Definition

Proctor et al. (2013) recommended that the strategy should be defined conceptually to clarify its meaning for users. If the strategy is multifaced, a conceptual definition should be developed for each component. Therefore, three conceptual definitions were developed to illustrate the meaning of this strategy. Modelling is defined as "a process in which behaviours directed towards other individuals prompt those individuals to observe and imitate the behaviours and perform them in their practice." Shadowing is defined as "an in-person process involving observing others who are viewed as experts and implementing those behaviours in personal practice." Finally, reflection is defined as "a process of observing and evaluating one's own practice, identifying areas of improvement, and implementing the refined practice."

Specification

Actors. Nurse managers or floor managers in charge of the clinical units where the strategies will be implemented. The nurse managers could also select nurses identified as expert

providers of compassionate care and then invite those nurses who would benefit from shadowing these experts.

Action. Treat peer and frontline nurses with compassion. Compassion shown towards peers such as frontline nurses can be demonstrated through sensitivity to practice issues and challenges. Nurse managers should regularly inquire about the general stressors and issues of caring for complex patients among nursing staff. de Zulueta (2015) based on an integrative review of the literature, recommended that health care leaders should engage frontline nurses in decision-making, value and respect them as unique individuals, and recognize their contributions to compassion care delivery. Compassion towards staff is also manifest by efforts to reduce incivility, dismantle hierarchical structures, and, by meeting staff when requested, accommodating requests appropriately, advocating, and actively listening to issues (de Zulueta, 2015; Papadopoulos et al., 2021). Frontline nurses should shadow experts and observe how they communicate with other nurses and patients and their family members and then be encouraged to discuss issues over the telephone or in person after reflecting on the shadowing experience.

Action target. Novice nurses and nursing students working in the unit. Participants from the qualitative phase of the MMR study recommended that modelling compassion and training how to deliver compassionate care should begin during undergraduate education or provided for novice nurses to hone their compassionate nursing skills.

Temporality. Modelling should precede other implementation strategies; for example, before clinician implementation team meetings, which would allow shadowing opportunities during these meetings.

Dose. Dose estimation for this implementation strategy was based on role modelling literature. Education scholars implemented a role modelling program for 9 months (Blanco et al.,

2013). Shadowing initiatives on average run for 5.5 hours (Porter et al., 2009) or shadowing can occur for a full day (Lalleman et al., 2017). There are reports of a mean time as high as 10.4 hours (Sarver et al., 2020) or 16 hours over 4 days (Schuler, 2016). Based on the shadowing averages and the length of the modelling program, it would be feasible to implement this strategy for about 10 hours per week over 9 months with adjustments to accommodate availability and scheduling.

Implementation outcome. Implementation strategies could have several outcomes: acceptability, adoption, appropriateness, feasibility, fidelity, implementation cost, penetration, and sustainability (Proctor et al., 2011). It is anticipated that this implementation strategy would enable adoption of compassionate care behaviours by frontline nurses and demonstrated as they provide care to complex patients.

Justification. Modelling through reflective practice and shadowing experts have proven beneficial in changing many complex practice behaviours. Sinclair et al. (2016) reported that patients with advanced cancer suggested using modelling and reflective practice to train health professionals compassionate patient care. Blanco et al. (2013) designed a resident-teacher program to train residents through role modelling and by facilitating application of learned behaviours during interactions with patients and with students and other health professionals. The strategy included: a) a 1-day workshop to engage residents in reflective exercises, case discussions, and role-play, b) journal writing during the program, c) follow-up meetings to allow residents to share their experiences of applying new behaviours, and d) presentations from residents discussing the design, execution, evaluation, and the lessons learned during this training. Efficacy was assessed through self-report using reflection, external assessments by a standardized patient, individuals who attended the presentations, and the Jefferson Scale of

Physician Empathy. Self-report demonstrated enhanced understanding of the importance of mindfulness, active presence, and slowing down for patients, students, and themselves.

Several studies demonstrated the effectiveness of reflective practice and shadowing to enhance the learning of complex behaviours including: enhancing interprofessional collaboration in nursing students (Schuler, 2016), improving high school students' perceptions of nurses' roles (Porter et al., 2009), promoting teamwork and nurse communication (Sarver et al., 2020), and enhancing leadership practices of middle managers (Lalleman et al., 2017).

Additionally, the qualitative findings from Phase 1 of the MMR study reflected strong participant advocacy for modelling and shadowing as valuable strategies to foster compassionate nursing behaviours. One of the participants stated, **"**The leader has to show compassion for their staff. It has to be modelled that if I expect you to give compassionate care to our patients, I'm prepared to show you compassionate care in my relationship with you as a manager to employee."

Strategy Four: *Implementation* Facilitation

Name

The strategy is named "*Implementation* Facilitation to Support Nurses in Compassionate Practice" based on the revised terminology by Perry et al. (2019) and in accordance with how facilitation has been operationalized. That is, facilitation is more than the facilitator role, but the skills of a facilitator such as interactive problem solving, in combination with being responsible for a broad scope of a strategies (Kirchner et al., 2014; Olmos-Ochoa et al., 2021). Perry et al. (2019) discovered "implementation facilitation was used to support practices in accomplishing their QI goals on the path to improving ABCS outcomes; it involves performing interrelated and

complex roles and skillfully applying diverse strategies in a flexible and dynamic manner to meet the local needs and priorities" (n.p.).

Definition

Facilitation is defined as a "multi-faceted interactive process of problem-solving, enabling and supporting individuals, groups and organizations in their efforts to adopt and incorporate innovations into practices that occur in a context of a recognized need for improvement and a supportive interpersonal relationship" (Perry et al., 2019, p. 5).

Specification

Actors. A nurse manager from the organization who is motivated to support nurses who want to demonstrate compassionate behaviours in practice and who is familiar with the organizational structures and processes would serve as an internal facilitator. A locally recognized nurse or an implementation scientist familiar with the context would be an external facilitator.

Action. The actions are grouped under pre-, intra-, and post-implementation phases. Pre-implementation actions includes: a) identifying stakeholders, facilitation recipients, and developing a facilitation team, and b) designing a facilitation plan. Intra-implementation actions include: a) organizing facilitation briefs, b) conducting frequent meetings with the facilitation team, c) arranging debriefing and reflective sessions with the facilitation recipients, and d) responding to essential requests from the facilitation recipients via telephone and text messaging. The facilitation strategy targets barriers such as limited experience, interprofessional confits, motivation, and workload. Therefore, separate intra-facilitation sessions aim to: a) bring professionals with conflicts to discuss their issues and resolve them through managerial support, b) address workload issues by designing alternative plans to address staff shortage, c) provide

nurses with the opportunity to buddy with a nurse who has more experience caring for complex patients, and c) discuss factors impacting motivation to care for complex patients and to develop collaborative solutions to address those factors. When post-implementation is reached, the facilitators should designate protected time for reflection and evaluation.

Action target. Frontline nurses, floor managers, and nursing students in clinical rotation.

Temporality. The strategy should be initiated before implementing other strategies and used alongside other strategies to assist frontline nurses to manage their challenges and issues associated with adopting the practice change behaviours.

Dose. The precise frequency and intensity of facilitation would vary across settings and units and is contingent on the nature of the setting and available resources. However, implementation facilitation should be conducted over 9-12 months. The first 2-3 months can be devoted to the pre-implementation phase. Kirchner et al. (2014) implemented an external/internal implementation facilitation strategy to incorporate primary care–mental health integration in the Department of Veterans Affairs in the United States. "Early, late, and maintenance" implementation facilitation phases lasted for 9, 6, and 6 months, respectively. Olmos-Ochoa et al. (2021) used implementation facilitation in the Coordination Toolkit and Coaching project to improve patient experience of care coordination between outpatient settings within and outside the Veterans Health Administration. They conducted six facilitation meetings over 12 months, including weekly facilitation calls by the facilitators. Pimentel et al. (2019) designed an implementation facilitation named "Developing and Implementing Resident-Centered Efforts in Cultural Transformation" to enhance positive interactions among residents and staff and to improve resident engagement in nursing homes. They implemented blended facilitation for 6

months comprising 5-week series of teleconferences and “getting to know you” sessions and weekly 15-minute check-in telephone calls.

Implementation outcome. Implementation facilitation is expected to achieve a) adoption of compassionate behaviours by frontline nurses in their interaction with complex patients, b) penetration among patients, managers, and frontline nurses, and c) appropriateness of the intended practice change for the clinical setting.

Justification. Implementation facilitation is informed by the integrated–Promoting Action on Research Implementation in Health Services (i-PARIHS) framework (Kirchner, 2014) and is conceptually supported by organizational learning theory (Pimentel et al., 2019). Both theories posit that implementing EBP and other research-based initiatives are an organizational endeavour but uptake of evidence at the individual level can affect change at an organizational level (Argote & Miron-Spektor, 2011; Kitson et al., 1998).

Implementation facilitation has successfully promoted complex behaviour change in clinical practice in acute and community care settings and in nursing homes (Bauer et al., 2019; Hartmann et al., 2018; Kirchner et al., 2014). Kirchner et al. (2014) proved the effectiveness of external/internal implementation facilitation strategy to incorporate primary care–mental health integration (PC-MHI) in the Department of Veterans Affairs. They implemented the strategy at two medical centers and five community-based outpatient clinics with patients and health professionals. The strategy encompassed facilitating participation of local change agents, educating primary care and mental health personnel, engaging organizational stakeholders, auditing, and offering consultations with strong evaluation results. Kirchner et al. (2014) reported higher reach and adoption of the mandated PC-MHI initiative, with patients at implementation sites having nine times the odds (OR=8.93, p p<0.001) of being seen at the PC-

MHI clinic and providers having seven times the odds (OR=7.12, p=0.029) of referring patients. Hartmann et al. (2018) used implementation facilitation to promote positive interactions among residents and staff and improve resident engagement in nursing homes. They utilized a team-based approach that included nursing home personnel identifying bright spots in resident-staff interactions, discussion of the observations, problem-solving, and collaborative communication to strengthen the relationship. Implementation facilitation increased staff communication with residents during the provision of direct care and decreased negative staff interactions with residents.

Strategy Five: Ongoing Consultation with Stress Experts

Name

This strategy is named "Supporting Nurses in Stress Management through Consultations."

Definition

The conceptual definition is: a process of formal discussions among nurses and stress experts or counselors to enhance nurses' stress management and self-care abilities.

Specification

Actors. Stress management experts and counselors who can support health professionals.

Action. Counselors and stress experts offer in-person, virtual, or telephonic consultations for nurses to manage the stressors caring for complex patients and mitigate burnout.

Action target. Frontline nurses who regularly care for complex patients.

Temporality. The implementation strategy should be an ongoing initiative within health care organizations.

Dose. There is no empirical data to discern the dose of this implementation strategy.

However, from published qualitative and quantitative studies, it appears that nurses should receive frequent support to address burnout and stress (Babaei & Taleghani, 2019; Barratt, 2017; Mahon et al., 2017; O'driscoll et al., 2018). Therefore, this strategy should initially be implemented weekly for 3-6 months. Long-term implementation of this strategy can be costly. Therefore, a screening process can be developed to identify nurses who are on the path to stress and burnout. The screening process may be linked to the strategies of modelling and facilitation For example, during modelling or facilitation sessions the managers could identify nurses who are experiencing stress to the extent that it affects their ability to perform self-care and patient care and then arrange stress counseling. Discussions about workload, interprofessional conflicts, and motivation during facilitation sessions can be another way to assess nurses who require stress counseling. In addition, screening tools and surveys could be distributed during facilitation sessions.

Implementation outcome. Implementation facilitation would increase adoption of compassionate behaviours by frontline nurses in their care for complex patients.

Justification. Researchers have not directly examined the effect of supporting nurses in managing their stress and burnout and its impact on compassionate care. However, there is evidence that providing stress consultation and mental health support for health professionals reduces burnout and promotes high quality care. Zhang et al. (2020) conducted a systematic review and meta-analyses of 22 studies reporting interventions to reduce stress and burnout among nurses and physicians. They concluded that various individual and organizational interventions such as workload or schedule-rotation, group and face-to-face stress management training, and debriefing and focus group sessions with stress experts and health coaches have been found effective in reducing work-related stress and burnout and improving resilience. The

World Health Organization implemented an intervention named Self-Help Plus (SH+) (Epping-Jordan et al., 2016). The SH+ intervention is based on the principles of cognitive-behavioural therapy. It includes a pre-recorded course and a self-help book. The course participants receive stress management training and perform guided exercises in five 2-hour sessions. A facilitator can conduct the course both online and in person. The SH+ intervention was developed for health professionals during times of adversity such as community and gender-based violence, long-term conflicts, and displacement (Epping-Jordan et al., 2016) However; this strategy has been recommended for use in health care settings for addressing pandemic-induced stress and burnout (Søvold et al. 2021). The first phase qualitative findings also identified that stress and burnout were exacerbated during the pandemic as more and more nurses experienced mounting issues caring for complex patients. Strategies like SH+ to offer stress consultations to nurses could prove promising.

In NL it has been broadcasted in the news media that nurses are thinking about leaving the workplace due to the workload and other pandemic-induced stressors. Nurses who choose to stay out of their commitment to care for their patients, are at the tipping point, on the verge of leaving the profession (Canadian Broadcasting Corporation, 2021, 2016). Under these circumstances, offering consultation sessions with stress experts and providing nurses opportunities to vent can be affirming and instrumental to improving compassionate care.

Implementation Plan

Presented above is the operationalization of five implementation strategies with potential to enhance the compassionate nursing care of complex patients. See Table 14 for an implementation plan that features a brief background to the nature of the practice problem, the intended practice change, the behavioural indicators of compassionate nursing care, the

operationalized implementation strategies, and the outcomes measures.

Table 14

Implementation Plan

Background	
Complex patients have multiple chronic conditions, and, or, mental health issues, and, or, drug and medication-related problems, and often lack personal and social resources for self-management. Complex patients are frequent consumers of health care services but are often victims of marginalization and stigmatization when seeking assistance for health and social care needs.	
Intended Practice Change	
Nurses demonstrate compassion towards complex patients.	
Compassionate Nursing Care According to Individuals with Complex Health and Social Care Needs	
Behavioural Indicators	**Descriptions**
Sensitivity	1. Understanding patients' perspectives and circumstances. 2. Seeking better awareness of patients' needs. 3. Taking patients' concerns seriously. 4. Acknowledging the presence and suffering of patients. 5. Assessing for pain and level of suffering.
Awareness	6. Not thinking you are better than your patient. 7. Altering your internal thoughts to accommodate patients. 8. Fully recognizing the distinct needs of patients. 9. Acknowledging that social factors impact patient health.

A nonjudgmental approach	10. Being accepting. 11. Taking cues from patients' facial expressions. 12. Gentle communication. 13. Listening to patients.
A Positive Demeanour	14. Showing kindness and warmth. 15. Exuding positive body language. 16. Being respectful. 17. Laughing with your patients.
Empathic Understanding	18. Treating patients as human beings. 19. Feeling patients' pain. 20. Putting yourself in others' shoes. 21. Fully engaging with patients.
Altruism	22. Making patients feel valued. 23. Checking in with the patient. 24. Refraining from rushed care. 25. Making an extra effort to respond to physical and emotional needs. 26. Practicing therapeutic touch.

Highest Ranked Implementation Strategies

Strategies	Barriers Addressed	Implementation Teams	Outcomes (RE-AIM)
Implement Team Meetings to Support Compassionate Practice	• Workload • Lack of organizational supports • Underpaid	• Multiple stakeholders such as health care administrators, management, nursing	**Reach:** Number/proportion of settings, units, management, frontline nurses, patients and family members participating

	• Routinization of care	personnel, complex patients and their family members • Implementation scientists or nurses with experiences in implementation	**Effectiveness/efficacy:** 1) Patient and family satisfaction scores for quality of compassionate care and 2) Decreased stress and burnout levels among nursing staff **Adoption:** 1) Number of team members involved in the implementation and 2) Level of stakeholder representativeness in delivering the implementation **Implementation:** 1) Percentage of funding devoted to the implementation and 2) Number of units/settings that implemented the program and monitored the outcomes **Maintenance:** Percentage and number of settings/units that permanently adopted this strategy
Patient and Informal Caregiver Involvement to Foster Compassion	• Nurse-patient conflicts • Negative patient behaviours • Unrealistic patient demands and expectations • Limited knowledge about patient needs	• One or more patient or family representatives • Nurse managers and frontline nurses	**Reach:** Number/proportion of settings, units, frontline nurses, nurse managers, and patients and family members participating in the implementation **Effectiveness/efficacy:** 1) Patient and family satisfaction scores for the quality of compassionate care and 2) Reflective accounts of patients and family members **Adoption:** 1) Number of people who delivered the strategy and 2) Number of patients and family members who participated in the strategy

			Implementation: Number of units/settings that implemented the strategy and monitored the outcomes **Maintenance:** 1) Percentage and number of settings/units that permanently adopted this strategy and 2) Number of patients and family members regularly bringing forward their concerns
Model Compassionate Behaviours Through Reflective Sessions and Shadowing the Experts	• Lack of compassion modelling • Lack of appreciation	• One or more nurse managers in charge of their respective units for shadowing and modelling compassion	**Reach:** Number/proportion of settings, units, frontline nurses, and nurse managers participating in the implementation **Effectiveness/efficacy:** 1) Patient and family satisfaction scores rating the quality of compassionate care and 2) Decreased stress and burnout levels among nursing staff **Adoption:** 1) Number of people who delivered the strategy, 2) Number of nurse managers who worked as mentors, and 3) Number of mentees **Implementation:** 1) Number of units/settings that implemented the program and monitored the outcomes **Maintenance:** The growth of the modelling and shadowing program and percentage and number of settings/units that permanently adopted the strategy

Implementation Facilitation to Support Nurses in Compassionate Practice	• Interprofessional conflicts • Limited motivation • Limited experience • Workload	• Multiple stakeholders such as health care organizations, management, nursing personnel, complex patients, and their families. • Implementation scientists or nurses with experiences in implementation	**Reach:** Number/proportion of settings, units, frontline nurses participating in the implementation **Effectiveness/efficacy:** 1) Patient and family satisfaction scores rating the quality of compassionate care and 2) Decreased stress and burnout levels among nursing staff **Adoption:** Number of people who delivered the strategy and 2) Number of stakeholders who participated in the implementation **Implementation:** 1) Number of units/settings that implemented the program and monitored the outcomes and 2) Percentage of funding devoted to implementation **Maintenance:** Percentage and number of settings/units that permanently adopted the strategy
Supporting Nurses in Stress Management through Consultations	• Nurses' fears related to personal safety • Stress and burnout • Self-care neglect • Negative personal and familial experiences	• One or more nurse managers in charge of their respective units, frontline nurses • Certified stress experts or counselors	**Reach:** 1) Number/proportion of settings, units, frontline nurses, nurse managers, and stress experts participating in the implementation and 2) Number of stress consultations arranged with experts **Effectiveness/efficacy:** 1) Decreased levels of stress and burnout among nursing staff and 2) Reflective accounts of nurses, patients and family members

Adoption: 1) Number of people who delivered the strategy and 2) Number of consultations

Implementation: 1) Percentage of funding devoted to implementation and 2) Number of units/settings that implemented the program and monitored the outcomes

Maintenance: Percentage and number of settings/units that permanently adopted the strategy

Evaluation Outcomes

The outcome measures for the implementation strategies were developed using the RE-AIM evaluation framework. RE-AIM is "R" for *Reach* for the number of individuals or organizations willing to participate in the implementation efforts. "E" is for *Effectiveness* which refers to the usefulness of implementation efforts to bring about the desired change. "A" is for *Adoption* which is the number of individuals or organizations involved in implementing change interventions or strategies. "I" is *Implementation* which pertains to the fidelity of the intervention or implementation strategies including critical components of the time, cost, and implementation process. "M" is Maintenance for how the intervention or implementation strategies become a part of everyday organizational practices and policies (Glasgow et al., 1999).

Implementation Strategies and Contextual Issues

Two key contextual issues should be considered when carrying out the implementation plan (i.e., Table 12) in a local context such as in health care settings in NL. First, will there be equitable implementation across settings and contexts? For example, there could be differences in the availability of human and material resources to implement these strategies. Some of the operationalized implementation strategies (e.g., Implement Team Meetings to Support Compassionate Practice and *Implementation* Facilitation to Support Nurses in Compassionate Practice) might be more feasible in high-resource settings. Second, the acceptability of these strategies among patients and families, frontline nurses, nurse managers, and administration could vary across settings. Given that nurses are already overburdened, there is a higher chance of resistance from frontline nurses if administrators act on the implementation plan using a 'top-down' approach. Therefore, nursing management should be on board first, and they should be involved in the refinement and tailoring of the action plan/operationalized strategies. One way to

involve nurse managers is by putting them in control, making them in charge of the implementation process and collaborating with them to revisit the plan as needed.

Summary

In this chapter the operationalization of the highest ranked implementation strategies resulting from the quantitative phase of the MMR dissertation study aimed at finding ways to promote compassionate nursing care of complex patients, was illustrated. Compassionate nursing care is a complex practice behaviour. Nurse researchers and implementation scientists require interventions or implementation strategies that are well-articulated to affect change in practice. The worked example illustrated here provides much needed guidance how to operationalize implementation strategies to ensure accessibility, replication, and use in specific practice areas such as in health care settings in NL. The highest ranked implementation strategies were named: "Implement Team Meetings to Support Compassionate Practice," "Patient and Informal Caregiver Involvement to Foster Compassion," "Model Compassionate Behaviours Through Reflective Sessions and Shadowing the Experts," "*Implementation* Facilitation to Support Nurses in Compassionate Practice," and "Supporting Nurses in Stress Management through Consultations" and then underwent specification as part of the operationalization process. An action plan was then created that includes the RE-AIM evaluation measures.

References

Aijaz, M., Fixsen, D., Schultes, M. T., & Van Dyke, M. (2021). Using implementation teams to inform a more effective response to future pandemics. *Public Health Reports, 136*(3), 269-273. https://doi.org/10.11772F0033354920988613

Argote, L., & Miron-Spektor, E. (2011). Organizational learning: From experience to knowledge. *Organization Science, 22*(5), 1123-1137. https://doi.org/10.1287/orsc.1100.0621

Babaei, S., & Taleghani, F. (2019). Compassionate care challenges and barriers in clinical nurses: A qualitative study. *Iranian Journal of Nursing and Midwifery Research, 24*(3), 213–219. https://doi.org/10.4103/ijnmr.IJNMR_100_18

Barratt C. (2017). Exploring how mindfulness and self-compassion can enhance compassionate care. *Nursing Standard, 31*(21), 55–63. https://doi.org/10.7748/ns.2017.e10671

Bauer, M. S., Damschroder, L., Hagedorn, H., Smith, J., & Kilbourne, A. M. (2015). An introduction to implementation science for the non-specialist. *BMC Psychology, 3*(1), 32. https://doi.org/10.1186/s40359-015-0089-9

Bauer, M. S., Miller, C. J., Kim, B., Lew, R., Stolzmann, K., Sullivan, J., Riendeau, R., Pitcock, J., Williamson, A., Connolly, S., Elwy, A. R., & Weaver, K. (2019). Effectiveness of Implementing a collaborative chronic care model for clinician teams on patient outcomes and health status in mental health: A randomized clinical trial. *JAMA Network Open, 2*(3), e190230. https://doi.org/10.1001/jamanetworkopen.2019.0230

Blanco, M. A., Maderer, A., Price, L. L., Epstein, S. K., & Summergrad, P. (2013). Efficiency is not enough; you have to prove that you care: Role modelling of compassionate care in an innovative resident-as-teacher initiative. *Education for Health, 26*(1), 60–65.

https://doi.org/10.4103/1357-6283.112805

Bombard, Y., Baker, G. R., Orlando, E., Fancott, C., Bhatia, P., Casalino, S., Onate, K., Denis, J. L., & Pomey, M. P. (2018). Engaging patients to improve quality of care: A systematic review. *Implementation Science, 13*(1), 98. https://doi.org/10.1186/s13012-018-0784-z

Canadian Broadcasting Corporation (2016). *Budget 'tipping point' for young nurse's decision to leave N.L.* https://www.cbc.ca/news/canada/newfoundland-labrador/budget-taylor-kerr-nurse-leave-newfoundland-1.3543125

Canadian Broadcasting Corporation (2021). *Exhausted nurses have 'had enough,' leader says as N.L. rallies highlight staffing shortage*. https://www.cbc.ca/news/canada/newfoundland-labrador/nursing-shortage-protest-nl-1.6179384

Cassidy, C. E., Harrison, M. B., Godfrey, C., Nincic, V., Khan, P. A., Oakley, P., Ross-White, A., Grantmyre, H., & Graham, I. D. (2021). Use and effects of implementation strategies for practice guidelines in nursing: A systematic review. *Implementation Science, 16*(1), 102. https://doi.org/10.1186/s13012-021-01165-5

Curtis, K., Fry, M., Shaban, R. Z., & Considine, J. (2017). Translating research findings to clinical nursing practice. *Journal of Clinical Nursing*, *26*(5-6), 862–872. https://doi.org/10.1111/jocn.13586

Davis, S., Berkson, S., Gaines, M. E., Prajapati, P., Schwab, W., Pandhi, N., & Edgman-Levitan, S. (2016). Implementation science workshop: engaging patients in team-based practice redesign - critical reflections on program design. *Journal of General Internal Medicine, 31*(6), 688–695. https://doi.org/10.1007/s11606-016-3656-8

de Zulueta P. C. (2015). Developing compassionate leadership in health care: An integrative review. *Journal of Healthcare Leadership*, 8, 1–10. https://doi.org/10.2147/JHL.S93724

Dolansky, M. A., Schexnayder, J., Patrician, P. A., & Sales, A. (2017). Implementation science: New approaches to integrating quality and safety education for nurses competencies in nursing education. *Nurse Educator, 42*(5S), S12-S17.

Epping-Jordan, J. E., Harris, R., Brown, F. L., Carswell, K., Foley, C., García-Moreno, C., Kogan, C., & van Ommeren, M. (2016). Self-Help Plus (SH+): a new WHO stress management package. *World Psychiatry, 15*(3), 295–296. https://doi.org/10.1002/wps.20355

Fernandez, M. E., Ten Hoor, G. A., van Lieshout, S., Rodriguez, S. A., Beidas, R. S., Parcel, G., Ruiter, R., Markham, C. M., & Kok, G. (2019). Implementation mapping: Using intervention mapping to develop implementation strategies. *Frontiers in Public Health*, 7, 158. https://doi.org/10.3389/fpubh.2019.00158

Giguère, A., Zomahoun, H., Carmichael, P. H., Uwizeye, C. B., Légaré, F., Grimshaw, J. M., Gagnon, M. P., Auguste, D. U., & Massougbodji, J. (2020). Printed educational materials: Effects on professional practice and healthcare outcomes. *The Cochrane Database of Systematic Reviews, 8*(8), CD004398. https://doi.org/10.1002/14651858.CD004398.pub4

Glasgow, R. E., Vogt, T. M., & Boles, S. M. (1999). Evaluating the public health impact of health promotion interventions: the RE-AIM framework. *American Journal of Public Health, 89*(9), 1322–1327. https://doi.org/10.2105/ajph.89.9.1322

Goorts, K., Dizon, J., & Milanese, S. (2021). The effectiveness of implementation strategies for promoting evidence informed interventions in allied healthcare: A systematic review. *BMC Health Services Research, 21*(1), 1-11.

Government of Canada (2020). *Canada-Newfoundland and Labrador home and community care and mental health and addictions services funding agreement*. https://www.canada.ca/en/health-canada/corporate/transparency/health-agreements/shared-health-priorities/newfoundland-labrador.html

Gray-Burrows, K. A., Willis, T. A., Foy, R., Rathfelder, M., Bland, P., Chin, A., Hodgson, S., Ibegbuna, G., Prestwich, G., Samuel, K., Wood, L., Yaqoob, F., & McEachan, R. (2018). Role of patient and public involvement in implementation research: A consensus study. *BMJ Quality & Safety*, *27*(10), 858–864. https://doi.org/10.1136/bmjqs-2017-006954

Hart, S. M., & Warren, A. M. (2015). Understanding nurses' work: Exploring the links between changing work, labour relations, workload, stress, retention and recruitment. *Economic and Industrial Democracy, 36*(2), 305-329. https://doi.org/10.11772F0143831X13505119

Hartmann, C. W., Mills, W. L., Pimentel, C. B., Palmer, J. A., Allen, R. S., Zhao, S., Wewiorski, N. J., Sullivan, J. L., Dillon, K., Clark, V., Berlowitz, D. R., & Snow, A. L. (2018). Impact of intervention to improve nursing home resident-staff interactions and engagement. *The Gerontologist, 58*(4), e291–e301. https://doi.org/10.1093/geront/gny039

Higgins, M. C., Weiner, J., & Young, L. (2012). Implementation teams: A new lever for organizational change. *Journal of Organizational Behavior, 33*(3), 366-388. https://doi.org/10.1002/job.1773

Hooley, C., Amano, T., Markovitz, L., Yaeger, L., & Proctor, E. (2020). Assessing implementation strategy reporting in the mental health literature: A narrative review. *Administration and Policy in Mental Health and Mental Health Services Research, 47*(1), 19-35. https://doi.org/10.1007/s10488-019-00965-8

Kemeny, M. E., Foltz, C., Cavanagh, J. F., Cullen, M., Giese-Davis, J., Jennings, P., ... & Ekman, P. (2012). Contemplative/emotion training reduces negative emotional behavior and promotes prosocial responses. *Emotion, 12*(2), 338–350. https://doi.org/10.1037/a0026118

Kirby, J. N. (2017). Compassion interventions: The programmes, the evidence, and implications for research and practice. *Psychology and Psychotherapy: Theory, Research and Practice, 90*(3), 432-455. https://doi.org/10.1111/papt.12104

Kirchner, J. E., (2014). *The use of facilitation as an implementation strategy*. https://www.hsrd.research.va.gov/for_researchers/cyber_seminars/archives/1233-notes.pdf

Kirchner, J. E., Ritchie, M. J., Pitcock, J. A., Parker, L. E., Curran, G. M., & Fortney, J. C. (2014). Outcomes of a partnered facilitation strategy to implement primary care-mental health. *Journal of General Internal Medicine, 29*(4), 904–912. https://doi.org/10.1007/s11606-014-3027-2

Kirchner, J. E., Smith, J. L., Powell, B. J., Waltz, T. J., & Proctor, E. K. (2020). Getting a clinical innovation into practice: An introduction to implementation strategies. *Psychiatry Research*, 283, 112467. https://doi.org/10.1016/j.psychres.2019.06.042

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

Lalleman, P., Bouma, J., Smid, G., Rasiah, J., & Schuurmans, M. (2017). Peer-to-peer shadowing as a technique for the development of nurse middle managers clinical

leadership. *Leadership in Health Services, 30*(4), 475–490. https://doi.org/10.1108/LHS-12-2016-0065

Mahon, M. A., Mee, L., Brett, D., & Dowling, M. (2017). Nurses' perceived stress and compassion following a mindfulness meditation and self compassion training. *Journal of Research in Nursing, 22*(8), 572-583. https://doi.org/10.11772F1744987117721596

Metz, A., & Bartley, L. (2020). View of Leading and Sustaining Change. In: Albers B, Shlonsky A, Mildon R, eds. *Implementation Science,* 30. Springer (pp. 199-225).

Michie, S., Fixsen, D., Grimshaw, J. M., & Eccles, M. P. (2009). Specifying and reporting complex behaviour change interventions: The need for a scientific method. *Implementation Science,* 4, 40. https://doi.org/10.1186/1748-5908-4-40

Munten, G., Van Den Bogaard, J., Cox, K., Garretsen, H., & Bongers, I. (2010). Implementation of evidence-based practice in nursing using action research: A review. *Worldviews on Evidence-Based Nursing, 7*(3), 135-157. https://doi.org/10.1111/j.1741-6787.2009.00168.x

Nelson, K. M., Helfrich, C., Sun, H., Hebert, P. L., Liu, C. F., Dolan, E., Taylor, L., Wong, E., Maynard, C., Hernandez, S. E., Sanders, W., Randall, I., Curtis, I., Schectman, G., Stark, R., & Fihn, S. D. (2014). Implementation of the patient-centered medical home in the Veterans Health Administration: associations with patient satisfaction, quality of care, staff burnout, and hospital and emergency department use. *JAMA Internal Medicine, 174*(8), 1350–1358. https://doi.org/10.1001/jamainternmed.2014.2488

O'Driscoll, M., Allan, H., Liu, L., Corbett, K., & Serrant, L. (2018). Compassion in practice-Evaluating the awareness, involvement and perceived impact of a national nursing and

midwifery strategy amongst healthcare professionals in NHS Trusts in England. *Journal of Clinical Nursing, 27*(5-6), e1097–e1109. https://doi.org/10.1111/jocn.14176

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

Papadopoulos, I., Lazzarino, R., Koulouglioti, C., Aagard, M., Akman, Ö., Alpers, L. M., Apostolara, P., Araneda-Bernal, J., Biglete-Pangilinan, S., Eldar-Regev, O., González-Gil, M. T., Kouta, C., Krepinska, R., Lesińska-Sawicka, M., Liskova, M., Lopez-Diaz, A. L., Malliarou, M., Martín-García, Á., Muñoz-Solinas, M., Nagórska, M., … Zorba, A. (2021). The importance of being a compassionate leader: The views of nursing and midwifery managers from around the world. *Journal of Transcultural Nursing, 32*(6), 765–777. https://doi.org/10.1177/10436596211008214

Park, M., & Giap, T. T. (2020). Patient and family engagement as a potential approach for improving patient safety: A systematic review. *Journal of Advanced Nursing, 76*(1), 62–80. https://doi.org/10.1111/jan.14227

Pehlivan, T., & Güner, P. (2020). Compassionate care: Benefits, barriers and recommendations. *Journal of Psychiatric Nursing, 11*(2), 148-153. https://doi.org/10.14744/phd.2020.88557

Perry, C. K., Damschroder, L. J., Hemler, J. R., Woodson, T. T., Ono, S. S., & Cohen, D. J. (2019). Specifying and comparing implementation strategies across seven large implementation interventions: a practical application of theory. *Implementation Science, 14*(1), 1-13. https://doi.org/10.1186/s13012-019-0876-4

Pfaff, K., & Markaki, A. (2017). Compassionate collaborative care: An integrative review of quality indicators in end-of-life care. *BMC Palliative Care, 16*(1), 65. https://doi.org/10.1186/s12904-017-0246-4

Pimentel, C. B., Mills, W. L., Palmer, J. A., Dillon, K., Sullivan, J. L., Wewiorski, N. J., Snow, A. L., Allen, R. S., Hopkins, S. D., & Hartmann, C. W. (2019). Blended facilitation as an effective implementation strategy for quality improvement and research in nursing homes. *Journal of Nursing Care Quality, 34*(3), 210–216. https://doi.org/10.1097/NCQ.0000000000000376

Pinnock, H., Barwick, M., Carpenter, C. R., Eldridge, S., Grandes, G., Griffiths, C. J., Rycroft-Malone, J., Meissner, P., Murray, E., Patel, A., Sheikh, A., Taylor, S. J., & StaRI Group (2017). Standards for Reporting Implementation Studies (StaRI) Statement. *BMJ*, 356, i6795. https://doi.org/10.1136/bmj.i6795

Porter, G., Edwards, P. B., & Granger, B. B. (2009). Stagnant perceptions of nursing among high school students: Results of a shadowing intervention study. *Journal of Professional Nursing, 25*(4), 227–233. https://doi.org/10.1016/j.profnurs.2009.01.014

Powell, B. J., Fernandez, M. E., Williams, N. J., Aarons, G. A., Beidas, R. S., Lewis, C. C., ... & Weiner, B. J. (2019). Enhancing the impact of implementation strategies in healthcare: A research agenda. *Frontiers in Public Health*, 7, 3. https://doi.org/10.3389/fpubh.2019.00003

Powell, B. J., McMillen, J. C., Proctor, E. K., Carpenter, C. R., Griffey, R. T., Bunger, A. C., ... & York, J. L. (2012). A compilation of strategies for implementing clinical innovations in health and mental health. *Medical Care Research and Review, 69*(2), 123-157. https://doi.org/10.11772F1077558711430690

Powell, B. J., Waltz, T. J., Chinman, M. J., Damschroder, L. J., Smith, J. L., Matthieu, M. M., ... & Kirchner, J. E. (2015). A refined compilation of implementation strategies: Results from the Expert Recommendations for Implementing Change (ERIC) project. *Implementation Science, 10*(1), 1-14. https://doi.org/10.1186/s13012-015-0209-1

Proctor, E. K., Powell, B. J., & McMillen, J. C. (2013). Implementation strategies: Recommendations for specifying and reporting. *Implementation Science, 8*(1), 1-11. https://doi.org/10.1186/1748-5908-8-139

Proctor, E., Silmere, H., Raghavan, R., Hovmand, P., Aarons, G., Bunger, A., Griffey, R., & Hensley, M. (2011). Outcomes for implementation research: Conceptual distinctions, measurement challenges, and research agenda. *Administration and Policy in Mental Health, 38*(2), 65–76. https://doi.org/10.1007/s10488-010-0319-7

Reeves, S., Perrier, L., Goldman, J., Freeth, D., & Zwarenstein, M. (2013). Interprofessional education: Effects on professional practice and healthcare outcomes (update). *Cochrane Database of Systematic Reviews*. https://doi.org/10.1002/14651858.CD002213.pub3

Rouleau, G., Gagnon, M. P., Côté, J., Payne-Gagnon, J., Hudson, E., Dubois, C. A., & Bouix-Picasso, J. (2019). Effects of e-learning in a continuing education context on nursing care: Systematic review of systematic qualitative, quantitative, and mixed-studies reviews. *Journal of Medical Internet Research, 21*(10), e15118. https://doi.org/10.2196/15118

Rudd, B. N., Davis, M., & Beidas, R. S. (2020). Integrating implementation science in clinical research to maximize 14 implementation research and practice public health impact: A call for the reporting and alignment of implementation strategy use with implementation

outcomes in clinical research. *Implementation Science, 15*(1), 103. https://doi.org/10.1186/s13012-020-01060-5

Sarver, W. L., Seabold, K., & Kline, M. (2020). Shadowing to improve teamwork and communication: A potential strategy for surge staffing. *Nurse Leader, 18*(6), 597–603. https://doi.org/10.1016/j.mnl.2020.05.010

Schubert, C. C., Myers, L. J., Allen, K., & Counsell, S. R. (2016). Implementing geriatric resources for assessment and care of elders team care in a veterans affairs medical center: lessons learned and effects observed. *Journal of the American Geriatrics Society, 64*(7), 1503–1509. https://doi.org/10.1111/jgs.14179

Schuler M. S. (2016). Shadowing in early baccalaureate nursing education and its influence on professional role perspectives. *Nurse Educator, 41*(6), 304–308. https://doi.org/10.1097/NNE.0000000000000276

Sharma, A. E., Rivadeneira, N. A., Barr-Walker, J., Stern, R. J., Johnson, A. K., & Sarkar, U. (2018). Patient engagement in health care safety: An overview of mixed-quality evidence. *Health Affairs, 37*(11), 1813-1820. https://doi.org/10.1377/hlthaff.2018.0716

Sinclair, S., Kondejewski, J., Jaggi, P., Dennett, L., Roze des Ordons, A. L., & Hack, T. F. (2021). What is the state of compassion education? A systematic review of compassion training in health care. *Academic Medicine, 96*(7), 1057–1070. https://doi.org/10.1097/ACM.0000000000004114

Sinclair, S., Kondejewski, J., Jaggi, P., Roze des Ordons, A. L., Kassam, A., Hayden, K. A., Harris, D., & Hack, T. F. (2021). What works for whom in compassion training programs offered to practicing healthcare providers: A realist review. *BMC Medical Education, 21*(1), 455. https://doi.org/10.1186/s12909-021-02863-w

Sinclair, S., Torres, M. B., Raffin-Bouchal, S., Hack, T. F., McClement, S., Hagen, N. A., & Chochinov, H. M. (2016). Compassion training in healthcare: What are patients' perspectives on training healthcare providers? *BMC Medical Education, 16*(1), 1-10. https://doi.org/10.1186/s12909-016-0695-0

Søvold, L. E., Naslund, J. A., Kousoulis, A. A., Saxena, S., Qoronfleh, M. W., Grobler, C., & Münter, L. (2021). Prioritizing the mental health and well-being of healthcare workers: An urgent global public health priority. *Frontiers in Public Health*, 9, 679397. https://doi.org/10.3389/fpubh.2021.679397

Spoon, D., Rietbergen, T., Huis, A., Heinen, M., van Dijk, M., van Bodegom-Vos, L., & Ista, E. (2020). Implementation strategies used to implement nursing guidelines in daily practice: a systematic review. *International Journal of Nursing Studies*, 111, 103748. https://doi.org/10.1016/j.ijnurstu.2020.103748

Waltz, T. J., Powell, B. J., Fernández, M. E., Abadie, B., & Damschroder, L. J. (2019). Choosing implementation strategies to address contextual barriers: Diversity in recommendations and future directions. *Implementation Science, 14*(1), 1-15. https://doi.org/10.1186/s13012-019-0892-4

Williams, J. K., Feero, W. G., Leonard, D. G., & Coleman, B. (2017). Implementation science, genomic precision medicine, and improved health: A new path forward? *Nursing Outlook, 65*(1), 36-40. https://doi.org/10.1016/j.outlook.2016.07.014

Zhang, X. J., Song, Y., Jiang, T., Ding, N., & Shi, T. Y. (2020). Interventions to reduce burnout of physicians and nurses: An overview of systematic reviews and meta-analyses. *Medicine, 99*(26), e20992. https://doi.org/10.1097/MD.0000000000020992

Chapter Six

Conclusions

Presented in the final chapter of this four-manuscript style dissertation are some of the key results from this exploratory sequential mixed methods research (MMR) study of compassionate nursing care of complex patients. Following a brief synopsis of participant-perceived indicators and barriers and potential implementation strategies, key results are discussed in terms of implications for nursing practice, research, and education, and for, health care policy, knowledge translation (KT), and implementation science (IS).

Participant-Perceived Indicators and Barriers

During Phase 1 (qualitative component) participant-perceived behavioural indicators of compassionate nursing care were identified by interviewing 23 individuals with multimorbidities, drug and medication-related problems, and sociocultural issues. Based on their hospital experiences as complex patients, participants explained that compassionate nursing care is manifest through sensitivity, awareness, a nonjudgmental approach, a positive demeanour, empathic understanding, and altruism (see Chapter 2 “A Qualitative Descriptive Study to Explore Compassionate Nursing Care of Complex Patients” for full description). Also identified during Phase 1 were a range of participant-perceived barriers to compassionate nursing care delivery: limited knowledge about patient needs, limited experience, unrealistic patient demands and expectations, nurses’ fears related to personal safety, nurse-patient conflicts, negative personal and familial experiences, lack of organizational supports, lack of compassion modelling, limited motivation, lack of appreciation, routinization of care, underpaid, workload, self-care neglect, interprofessional conflicts, and, stress and burnout (see Chapter 4 “An

Exploratory Sequential Mixed Methods Study of Implementation Strategies to Promote Compassionate Nursing Care of Complex Patients" for detailed discussion).

Potential Implementation Strategies

The TDF was used to map and categorize the identified barriers under the relevant domains as part of data integration in Phase 2 (instrument development). The instrument was developed as a Q-sort survey for use in Phase 3 where priority ranking of contextually-relevant implementation strategies was completed by participants. The relevant TDF domains (i.e., knowledge, intentions, skills, social influences, behavioural regulation, reinforcement, emotion, and environmental context and resources) were critical to development of the Q-sort survey. Also important, was pinpointing the compassionate behaviours that should be targeted and the associated integration functions (e.g., Education and Training) to effect practice change. If the intended behaviours and their integration functions are not identified, it can result in development of vague implementation strategies with limited use for practice change (Michie et al., 2008, 2011). Diagnosing the behaviours for change was achieved by mapping barriers to the Capabilities, Opportunity, Motivation-Behaviour (COM-B) theoretical model. According to the model, compassionate nursing care of complex patients would mean affecting behaviours linked to capability, opportunity, and motivation. Capability, opportunity, and motivation necessitated developing implementation strategies addressing several integration functions from the COM-B theoretical model, including: Enablement, Modelling, Education and Training, Environmental Restructuring, and Incentivization.

By referring to the Expert Recommendations for Implementing Change (ERIC) guidelines, 21 implementation strategies (that were consistent with the integration functions) were selected, modified, and compiled for the Q-sort survey concourse. During Phase 3

(quantitative component) the Q-sort survey was distributed to stakeholders for ranking in terms of relevance to promoting compassionate nursing care of complex patients. Survey results were analyzed to determine highest ranked strategies using principal component analysis. A five-factor solution was generated using Varimax rotation. Rankings were then confirmed through merging technique by integrating Phase 1 qualitative findings with Phase 2 quantitative results for comparison. Enablement and Modelling strategies were ranked the highest by stakeholders (i.e., 32 nurses, nurse managers, health care administrators, policymakers, and compassionate care experts). See Table 15 for the highest ranked implementation strategies and integration functions. The fact that most of the highly ranked strategies tapped into Enablement and

Table 15

Highest Ranked Implementation Strategies and Integration Functions

Implementation Strategy	Integration Function
Use facilitation to establish a process of interactive problem solving and support to discuss nurses' challenges and negative encounters with complex patients and their families.	Enablement and Modelling
Provide ongoing consultation with stress experts or counselors to address nurse burnout and promote self-care.	Enablement and Modelling
Model the intended change by demonstrating compassionate behaviours toward peers.	Enablement and Modelling
Shadow other experts (i.e., nurses practicing compassion towards complex patients) and reflect and apply observed compassionate behaviours.	Education and Training
Involve patients/consumers and family members in efforts to promote compassionate care of complex patients.	Enablement and Modelling
Organize clinician implementation team meetings to support providers and provide them opportunities to reflect on implementing strategies for compassionate care towards complex patients.	Enablement and Modelling

Modelling integration functions suggests that nurses should receive consistent support to address practice issues and, ultimately, prevent burnout.

The six highest ranked implementation strategies were then operationalized to fit the practice context of Newfoundland and Labrador (NL) by using Proctor's et al., (2013) specification framework. For example, "model the intended change" and "shadow other experts" were combined as one implementation strategy: "Model the intended change by shadowing other experts (i.e., nurses practicing compassion towards complex patients) and by reflecting and applying observed compassionate behaviours." The strategy was then named: "Model Compassionate Behaviours Through Reflective Sessions and Shadowing the Experts." Among the barriers, this strategy mainly addressed lack of compassion modelling and lack of appreciation. For each strategy operationalized, the Reach, Effectiveness, Adoption, Implementation, and Maintenance (RE-AIM) evaluation measures were applied to determine anticipated outcomes. For example, the anticipated outcome of the modelling strategy was adoption of compassionate care behaviours by frontline nurses and demonstration of the behavioural indicators as nurses provide care for complex patients. The outcome measures to assess the effectiveness of this strategy included patient and family satisfaction scores related to nurse compassion, and, lower stress and burnout among nurses. The adoption of this strategy would be measured by the number and proportion of nurse managers modelling compassion and by the number of nurses participating in shadowing. Maintenance of the strategy would be evaluated by the number of health care settings and units permanently adopting the strategy.

Implications for Nursing Practice

Compassionate care is the cornerstone of excellent nursing practice. Compassionate nursing care is instrumental in improving health outcomes of complex patients and, equally

important, for their positive care experiences. During this MMR dissertation study participants were able to make known the complexity of their health and social care needs and also the barriers nurses may face attempting to provide compassionate nursing care. The interplay of factors can be useful information for health care administrators and managers striving to enhance compassionate nursing care of complex patients. Health care administrators and managers should take collective actions to enhance the delivery of compassionate care in their units and organizations.

This MMR study was the first to explore the meaning of compassionate nursing care from the perspectives of individuals with experiences as complex patients. Participants' views about the lack of compassionate nursing care in health care settings indicates the need for a greater focus on compassionate nursing care delivery for this marginalized patient population. It is essential that compassion be incorporated as the key tenet of nursing practice to improve health outcomes for complex patients.

There are significant implications for nurse leaders. Given that the highest ranked implementation strategies represented Modelling and Enablement integration functions, nurse managers should play important roles facilitating nurses' capacity to provide compassionate care and encouraging nurses to fully engage with complex patients. Managers should work with administrators to ensure that there is adequate staffing and support and resources, and reasonable workload demands to create a 'nursing care system' conducive to the practice of compassionate care.

Circle of Compassion

A simple yet powerful contribution of this dissertation research is the notion of a nursing care system or a 'circle of compassion' that is led by administrators. That is, administrators

model compassion toward managers who model compassion toward nursing staff and other personnel who in turn demonstrate compassion toward patients and family members so that compassion permeates the health care organization. The circle of compassion could extend to care delivery outside the organization. Community-based care agencies such as home care services, and community support groups, patient support organizations could be part of the alliance that makes up the circle of compassion.

Administrators and managers could foster enactment of this circle of compassion through grand rounds highlighting the significance of compassion, and by holding discussion groups and similar meetings to develop actions plans to promote compassionate nursing care of complex patients. Based on the dissertation results the involvement of patients and families is also critical in promoting the delivery of compassionate nursing care. Therefore, the combined efforts of nurse leaders, direct care nurses and patients/families are recommended to effectively enact the circle of compassion within and beyond health organizations.

Misuse of Education and Training

The integration function of Education and the associated implementation strategies such as "Distribute educational materials (e.g., guidelines, toolkits, and manuals)" and "Educate managers to provide clinical supervision to those implementing strategies for promoting compassionate care of complex patients" were not ranked high by stakeholders who completed the Q-sort survey. Only training through shadowing (i.e., "Shadow other experts [i.e., nurses practicing compassion towards complex patients] and reflect and apply observed compassionate behaviours") was considered relevant. Therefore, managers should encourage shadowing accompanied by reflection to promote compassionate nursing behaviours.

Training and education interventions have generally been popular for fostering compassion in health professionals (Kirby, 2015, 2017; Sinclair, et al., 2021a; Sinclair, et al., 2021b) despite a growing body of evidence that education interventions/implementation strategies, especially when used alone, only result in slight changes in targeted practice behaviours (Cassidy et al., 2021; Giguère et al., 2020; Goorts et al., 2021; Reeves et al., 2013; Rouleau et al., 2019). Giguère et al. (2020) reviewed 32 randomized controlled trials, two control before-after interventions studies, and 50 interrupted time series studies comparing the effectiveness of printed educational material to no intervention. The researchers found that educational materials may produce a small beneficial effect (absolute risk difference +4%) on professional behaviour change. Moreover, evaluation of effectiveness of education strategies is limited or carried out in poorly designed studies with little or no long-term follow-up. Goorts et al. (2021), based on their review, recommended a multifaceted approach combining several interventions coupled with education strategies. Sinclair et al. (2021), too, concluded that education strategies are not effective unless combined with other interventions such as role modelling and reflective practice.

Implications for Nursing Research

The implementation strategies ranked highest for promoting and enhancing compassionate nursing care included modelling compassion, involving patients and families, facilitation, organizing clinician implementation team meetings, and ongoing consultation with stress experts (see Chapter 5 “Operationalizing Implementation Strategies: A Worked Example”). Although these implementation strategies have been operationalized and an implementation plan created, research is warranted to evaluate feasibility, adoption, uptake, and context of NL.

Designing Implementation Studies

Implementation feasibility could be explored, for example, by pilot-testing individual implementation interventions using pretest/posttest control (before-after) experimental designs prior to investing in implementation studies. Measures informing refinement of the implementation strategy could include acceptability, adaptability, and compatibility. Hybrid Type I effectiveness-implementation designs would be pertinent to assessing effectiveness of highly ranked implementation strategies on enhancing compassionate nursing care delivery while concurrently collecting data about the implementation process to assist successive implementation (Bauer et al., 2015). Hybrid type 1 designs are a precursor to implementation trials as feasibility and pilot studies, offering opportunity to improve design features before the main implementation trial (Bauer et al., 2015; Curran, 2012).

Randomised or cluster randomised designs could measure impact of implementation. Unlike traditional experimental designs in which the focus is on hypothesis testing and comparing intervention and control groups, implementation experimental designs are concerned with adoption, uptake, and sustainability of implementation strategies (Bauer et al., 2015). Hybrid effectiveness-implementation designs would be more suitable to measuring implementation effectiveness on implementation outcomes (demonstration of behavioural indicators of compassionate care by frontline nurses). Hybrid effectiveness-implementation designs allow for dual focus: a priori assessment of the effectiveness of implementation strategies for promoting practice change and the impact of practice change on clinical and patient outcomes (Curran, 2012).

Evaluation of the Process of Implementation

The operationalized implementation strategies would be tested in terms of the process of

implementation as well as the impact as illustrated in the implementation plan (again, see Chapter 5 "Operationalizing Implementation Strategies: A Worked Example"). Implementation studies are primarily designed to evaluate the process of implementation and its impact on the intended behaviour change. Three types of evaluation can be completed, namely, process evaluation, formative evaluation, and summative evaluation (Bauer et al., 2015). Process evaluation would entail observing how frontline nurses care for complex patients, observing for indicators of compassionate nursing care before, during, and, or, after the implementation. However, results are not shared with the implementation team (Bauer et al., 2015; Hulscher & Ridde et al., 2020; Winseng, 2020). Formative evaluation is similar to process evaluation, but data would be shared with the implementation team (nursing staff and managers) to revisit and improve the implementation plan (Bauer et al., 2015; Elwy et al., 2020). Finally, summative evaluation is conducted at the completion of implementation to evaluate the impact (Bauer et al., 2015; Handley et al., 2016). All three types of evaluation could be completed after the implementation evaluation plan. The potential methods for robust evaluation may include patient and family satisfaction surveys, nurse self reports, exit interviews with frontline nurses and nurse managers involved in facilitation and implementation teams, and analysis of administrative data about various domains of the RE-AIM framework. Several measures for each type of evaluation have been outlined in Table 14 using the RE-AIM framework.

Designing Patient and Family Satisfaction Surveys

In the proposed implementation plan (see Chapter 5), patient and family satisfaction of compassionate nursing care is one of the key measures to evaluate implementation effectiveness. Therefore, context-specific patient and family satisfaction surveys should be developed before the implementation. Surveys should include the behavioural indicators of compassionate nursing

care identified in this dissertation study. Newly developed surveys should undergo rigorous validity and reliability testing to avoid measurement errors (Younas & Porr, 2018). It is also important to design self-report measures of compassionate care distributed to frontline nurses for completion. Comparisons can be drawn, then, between patient-rated compassionate care satisfaction scores and nurse self-reports.

Implications for Nursing Education

There are also several implications for nursing education. Nurse educators could incorporate the indicators of compassionate nursing care in their clinical teaching materials and design experiential strategies to foster these behaviours in their students during clinical courses. If nurse educators provide instruction and model for nursing students the distinct indicators of compassionate nursing care, students would be equipped to apply and accurately demonstrate these abstract behaviours during clinical rotations. Nurse educators could also utilize these compassionate care indicators within clinical performance and evaluation checklists to assess the extent to which students have acquired the requisite knowledge, skills, attitudes to compassionately care for complex patients. Nursing faculty may want to aspire and emulate a culture of compassion as a means to further promote compassion as a nursing value and compassionate care as a significant nursing ethic care. Curricular support and resources should be available to nurse educators wishing to restructure their teaching and learning environments and strategies to make them more conducive to achieving a culture of compassion and enhancing compassionate behaviours among faculty and the student body. Educational policies of the institution could incorporate compassionate nursing care as a core concept in both the school and clinical curricula which could be reinforced through collaborations and partnerships with clinical nursing staff, preceptors, unit managers, and health care administrators.

Heath Care Policy

Compassionate nursing care of complex patients is multifaceted, influenced by provider-, managerial-, and organizational-level factors. To change policy directing hospital care, firsthand accounts of the quality of care received is critical as was evident by the rich care experiences shared by participants during this MMR dissertation study. The barriers to the delivery of compassionate care, although, primarily, were the perspectives of participants who had been under the care of nurses as complex patients in hospital, and not directly from nurses, are consistent with barriers reported globally (Christiansen et al. 2015; Jones et al. 2016; Sinclair et al., 2016). Managers, health care administrators, policy and nursing leaders representing regional health authorities can act on the barriers shared by participants when results are disseminated. For example, peer-to-peer compassion modelling and greater involvement of patients and families in improving patient care experiences of compassion could be elements of patient care models, institutional policies, and best practice guidelines.

Participants with multimorbidities, and nurses, nurse managers, compassionate care experts, and policymakers advocated for discussion meetings and referral to counselors to provide emotional and psychological supports to nurses who strive to demonstrate compassionate care behaviours in their practice with complex patients. Health care system and organizational policies regarding stress and burnout resources should be revisited. Policymakers should also ensure organizations are equipped with adequate human and material resources to facilitate the use of clinical implementation teams. Relevant local and, later, national, and international policies should be drafted to establish nursing standards and practice guidelines outlining compassionate care indicators and strategies for uptake and adoption in clinical settings. Policymakers should consult and collaborate with nursing regulatory bodies to drive

change in nursing curricula and continuous education courses and include explicit content about compassionate care of complex patients.

Knowledge Translation and Implementation Science

Compassion is a complicated, abstract phenomenon and acting compassionately is difficult to define or measure, compared to other behaviours observed in nursing practice. Behaviours such as handwashing and screening for depression are commonly studied through KT and IS methods and frameworks. This dissertation study may be the first example for implementation scientists how to use IS theoretical models and frameworks to design strategies to enhance complex behaviours by drawing on qualitative data from MMR designs. Implementation scientists would benefit from Chapter 3, the methodological manuscript, entitled "The Pathway Building Technique in Implementation Research Using Mixed Methods Designs" when developing implementation strategies for complex and multifaced behaviours such as compassion.

Unified Use of Qualitative Methods and Implementation Science Frameworks

Integrating qualitative research approaches adds rigour to studies in the field of IS (Ramanadhan et al., 2021; Sklar et al., 2018). A recent review of 38 implementation studies using qualitative research approaches and data collection methods indicated that determinants frameworks (such as TDF) are often used in a rigid manner, overlooking many important contextual factors that may hinder the implementation process. The authors recommended the use of inductive analytic techniques to optimize the use of TDF (McGowan, Powell, & French, 2020). During this dissertation study, the unified use of two IS tools (i.e., the TDF and the COM-B model) with an inductive data analysis orientation (i.e., reflexive thematic analysis) in the pathway building approach (see Chapter 3) offers a unique way of combining qualitative

methods and IS theoretical models and frameworks to gain comprehensive, contextually-specific information. Moreover, use of TDF alone may not have provided a nuanced and specific understanding of the barriers to compassionate nursing care because unique barriers such as unrealistic patient demands and expectations, lack of compassion modelling, and routinization of care, may have been missed as they are not clearly represented in the 14 domains of the TDF.

Q Methodology in Implementation Research

There have been limited examples of the use of Q methodology to inform identification and ranking of relevant implementation strategies for diverse behaviour change (Alderson et al., 2018). Results from this dissertation study demonstrate the promising benefits of Q methodology and its methods such as Q-sort and factor analysis for choosing the highest and highly ranked implementation strategies. Implementation scientists can use Q methodology to guide ranking decisions regarding the most relevant implementation interventions or strategies, as well as refining already implemented strategies in diverse contexts. Policymakers, frontline nurses, nurse managers and health care administrators and compassion care experts from around the world responded to the Q-sort survey providing ample and varying perspectives from different stakeholder groups and jurisdictions about which strategies would be relevant to promoting compassionate nursing care of complex patients. Additional benefits of Q methodology are the low cost and efficiency to gather multiple viewpoints and shared perspectives from a range of stakeholders. Q methodology holds promise to speed up IS and KT efforts within health care. Additionally, Q methodology is useful for exploration of complex issues such as required in IS because Q-sort invites respondents to model their subjectivity after careful consideration of multiple issues and aspects of one problem (Churruca et al., 2021).

Concluding Remarks

As discovered in the qualitative phase of this MMR dissertation study, compassionate nursing behaviours are extremely important to complex patients who must manage multiple chronic conditions, often accompanied by mental health issues, drug and medication-related problems, and the adverse effects of sociocultural factors (i.e., poverty, homelessness). Participants who had been hospitalized as complex patients spoke of the mistreatment they received from nurses and family members of complex patients identified negative encounters with health professionals. Many who suffered from mental health problems recalled feeling marginalized and stigmatized when attempting to seek medical help. Epistemic injustice (Fricker, 2007) is a phenomenon that has resurfaced in the literature and refers to the negative encounters experienced by individuals, such as complex patients, in health care settings. When health professionals tell complex patients that they are unreliable when it comes to knowing their own condition or illness experiences, they are experiencing epistemic injustice. This unjustified discrediting was something that was shared, repeatedly, by participants.

Conversely, nurses who demonstrated compassion made complex patients feel valued as altruism was a core indicator of compassionate nursing behaviours. The compassionate nurse also projected a positive demeanour; for example, showing kindness and warmth while being respectful. Empathic understanding was another indicator shared by participants who appreciated the compassion demonstrated by the nurse who "treated them like human beings." A nonjudgmental approach, sensitivity, and awareness were the other core indicators enabling nurses, participants claimed, to understand patients' perspectives, circumstances, and suffering by making the effort to "walk in their shoes" and even "feel" the patient's pain.

However, participants also recognized the potential impact of interpersonal, personal, and contextual barriers on nurses' compassionate behaviours. They spoke of multiple barriers, most were associated with the environmental context and resources, knowledge, reinforcement, and emotion. Enhancing compassionate nursing care, they recommended, requires fostering compassionate behaviours through modelling and supports from managers and administrators. Similarly, Q-sort survey respondents ranked compassion modelling and ongoing expert consultations to address stress and burnout high for relevance to promoting compassionate care delivery. These strategies should be implemented for at least 3 to 6 months through collaboration between frontline nurses, managers and administrators within implementation teams. Patients and family members, too, should be invited to engage as implementation team members.

This doctoral research contributes to the limited practice understanding of compassionate care of complex patients in the nursing literature. Complex patients are often marginalized in health care settings in contrast to other patient populations. Complex patients deserve the same quality care as patients without complicated health and social care needs. This doctoral research could serve as the foundation for improving access to health care, addressing the differential attitudes of health professionals that lead to negative nurse-patient encounters, and, ultimately, making nurse sensitivity and altruism the norms in practice when caring for complex patients. Continued advocacy is required at provider, managerial and organizational levels of health care institutions to ensure the rights of complex patients to equal treatment, respect, and compassion, are upheld; thereby, improving the overall quality of care for this population.

References

Alderson, S., Foy, R., Bryant, L., Ahmed, S., & House, A. (2018). Using Q-methodology to guide the implementation of new healthcare policies. *BMJ Quality & Safety*, *27*(9), 737–742. https://doi.org/10.1136/bmjqs-2017-007380

Beran, D. (2015). Difficulties facing the provision of care for multimorbidity in low-income countries. *Comorbidity of Mental and Physical Disorders*, 179, 33-41. https://doi.org/10.1159/000365545

Christiansen, A., O'Brien, M. R., Kirton, J. A., Zubairu, K., & Bray, L. (2015). Delivering compassionate care: the enablers and barriers. *British Journal of Nursing, 24*(16), 833–837. https://doi.org/10.12968/bjon.2015.24.16.833

Christiansen, A., O'Brien, M. R., Kirton, J. A., Zubairu, K., & Bray, L. (2015). Delivering compassionate care: The enablers and barriers. *British Journal of Nursing, 24*(16), 833-837. https://doi.org/10.12968/bjon.2015.24.16.833

Churruca, K., Ludlow, K., Wu, W., Gibbons, K., Nguyen, H. M., Ellis, L. A., & Braithwaite, J. (2021). A scoping review of Q-methodology in healthcare research. *BMC Medical Research Methodology, 21*(1), 125. https://doi.org/10.1186/s12874-021-01309-7

Elwy, A. R., Wasan, A. D., Gillman, A. G., Johnston, K. L., Dodds, N., McFarland, C., & Greco, C. M. (2020). Using formative evaluation methods to improve clinical implementation efforts: Description and an example. *Psychiatry Research,* 283, 112532. https://doi.org/10.1016/j.psychres.2019.112532

Fricker, M. (2007). *Epistemic injustice: Power and the ethics of knowing*. Oxford University Press.

Handley, M. A., Gorukanti, A., & Cattamanchi, A. (2016). Strategies for implementing implementation science: A methodological overview. *Emergency Medicine Journal, 33*(9), 660-664. http://dx.doi.org/10.1136/emermed-2015-205461

Henderson, A., & Jones, J. (2017). Developing and maintaining compassionate care in nursing. *Nursing Standard, 32*(4), 60–69. https://doi.org/10.7748/ns.2017.e10895

Javed, A., Lee, C., Zakaria, H., Buenaventura, R. D., Cetkovich-Bakmas, M., Duailibi, K., Ng, B., Ramy, H., Saha, G., Arifeen, S., Elorza, P. M., Ratnasingham, P., & Azeem, M. W. (2021). Reducing the stigma of mental health disorders with a focus on low- and middle-income countries. *Asian Journal of Psychiatry*, 58, 102601. https://doi.org/10.1016/j.ajp.2021.102601

Jones, J., Winch, S., Strube, P., Mitchell, M., & Henderson, A. (2016). Delivering compassionate care in intensive care units: Nurses' perceptions of enablers and barriers. *Journal of Advanced Nursing, 72*(12), 3137–3146. https://doi.org/10.1111/jan.13064

Karam, M., Chouinard, M. C., Poitras, M. E., Couturier, Y., Vedel, I., Grgurevic, N., & Hudon, C. (2021). Nursing care coordination for patients with complex needs in primary healthcare: A scoping review. *International Journal of Integrated Care, 21*(1), 16. https://doi.org/10.5334/ijic.5518

Knaak, S., Mantler, E., & Szeto, A. (2017). Mental illness-related stigma in healthcare: Barriers to access and care and evidence-based solutions. *Healthcare Management Forum, 30*(2), 111-116.

Lloyd, M., & Carson, A. (2011). Making compassion count: Equal recognition and authentic involvement in mental health care. *International Journal of Consumer Studies, 35*(6), 616-621.

Loeb, D. F., Bayliss, E. A., Binswanger, I. A., Candrian, C., & Degruy, F. V. (2012). Primary care physician perceptions on caring for complex patients with medical and mental illness. *Journal of General Internal Medicine, 27*(8), 945-952. https://doi.org/10.1007/s11606-012-2005-9

Martello, C., Bessière, G., Bigras, M., Boulet, A., Brenner, K., Crist, E., & Pluye, P. (2014). *What do we mean when we say; "This patient is complex."* In NAPCRG Annual Conference. New York: North American Primary Care Research Group.

Pehlivan, T., & Güner, P. (2020). Compassionate care: Benefits, barriers and recommendations. *Journal of Psychiatric Nursing, 11*(2), 148-153.

Perez-Bret, E., Altisent, R., & Rocafort, J. (2016). Definition of compassion in healthcare: a systematic literature review. *International journal of Palliative Nursing, 22*(12), 599–606. https://doi.org/10.12968/ijpn.2016.22.12.599

Poitras, M. E., Hudon, C., Godbout, I., Bujold, M., Pluye, P., Vaillancourt, V. T., Débarges, B., Poirier, A., Prévost, K., Spence, C., & Légaré, F. (2020). Decisional needs assessment of patients with complex care needs in primary care. *Journal of Evaluation in Clinical Practice, 26*(2), 489–502. https://doi.org/10.1111/jep.13325

Reader, T.W., Gillespie, A. (2013). Patient neglect in healthcare institutions: A systematic review and conceptual model. *BMC Health Services Research, 13*(1), 156. doi:10.1186/1472-6963-13-156

Ridde, V., Pérez, D., & Robert, E. (2020). Using implementation science theories and frameworks in global health. *BMJ Global Health, 5*(4), e002269. https://doi.org/10.1136/bmjgh-2019-002269

Sinclair, S., Norris, J. M., McConnell, S. J., Chochinov, H. M., Hack, T. F., Hagen, N. A., ... & Bouchal, S. R. (2016). Compassion: A scoping review of the healthcare literature. *BMC Palliative Care, 15*(1), 6. https://doi.org/10.1186/s12904-016-0080-0

Webster, F., Rice, K., Bhattacharyya, O., Katz, J., Oosenbrug, E., & Upshur, R. (2019). The mismeasurement of complexity: provider narratives of patients with complex needs in primary care settings. *International journal for Equity in Health, 18*(1), 107.

Younas, A., & Maddigan, J. (2019). Proposing a policy framework for nursing education for fostering compassion in nursing students: A critical review. *Journal of Advanced Nursing, 75*(8), 1621–1636. https://doi.org/10.1111/jan.13946

Appendix A

Literature Summary Table

Authors/Country	Purpose	Design	Methods	Critical Appraisal
Original Research				
Akugizibwe et al. (2021) Sweden	To examine the association between different multimorbidity patterns and unplanned hospitalizations over 5 years	Prospective cohort	**Sample:** 2,250 community-dwelling individuals **Setting:** General care **Sampling:** Random **Data collection:** Existing data from Swedish National Study on Aging and Care in Kungsholmen **Data Analysis:** Descriptive and inferential statistics	**Strengths:** Large sample, robust data analysis, multiple settings, and random sample, variables, and outcomes clearly defined **Limitations:** Multimorbidity only measured at baseline **Quality rating:** Strong
Del Canale et al. (2012) Italy	To assess the relationship of physician empathy with clinical outcomes for patients with diabetes mellitus.	Retrospective correlational study	**Sample:** 20,961 patients with type 1 or type 2 diabetes mellitus & 242 primary care physicians **Setting:** General care **Sampling:** Random **Data collection:** Jefferson Scale of Empathy **Data Analysis:** Descriptive and inferential statistics	**Strengths:** Large sample, robust data analysis, multiple settings, and random sample, valid and reliable scale **Limitations:** Possible confounding variables (physicians' and patients' gender and age, type of practice, geographical location) **Quality rating:** Strong

Heins et al. (2020) The Netherlands	To find predictors of high care needs in general practice electronic medical records of patients with multimorbidity and assess their predictive value	Prospective cohort	**Sample:** 245,065 patients **Setting:** Primary care **Sampling:** Random **Data collection:** Nivel Primary Care database **Data Analysis:** Descriptive and inferential statistics	**Strengths:** Large sample, robust data analysis, multiple settings, and random sample, variables, and outcomes clearly defined **Limitations:** Follow up bias **Quality rating:** Strong
Hojat et al. (2011) USA	To assess the relationship of physicians' empathy positive clinical outcomes for diabetic patients.	Correlational survey	**Sample:** 1,154 patients and 29 physicians **Setting:** Primary care **Sampling:** Random **Data collection:** Review of patients' billing record and health outcomes & Jefferson's Empathy Scale **Data Analysis:** Descriptive and inferential statistics	**Strengths:** Large sample, robust data analysis, multiple settings, and random sample, valid and reliable scale **Limitations:** Possible confounding variables **Quality rating:** Strong
Webster et al. (2019) Canada	To explore primary care health professionals perspectives about meaning, encounter, and	Institutional ethnography	**Sample:** 51 **Setting:** Primary care **Sampling:** Purposive & snowball	**Strengths:** Large sample, rich description of methods and study findings, trained interviewers, method triangulation, reflexivity, and audit trail **Limitations:** No member checking

	management of complex patients		**Data collection:** Participant observations & semi-structured interviews **Data Analysis:** Thematic analysis	**Quality rating:** Strong
Loeb et al. (2016) US	To describe physicians experiences of caring for complex patients, including their experiences of health system barriers and facilitators and their strategies to enhance the provision of effective care	Descriptive qualitative	**Sample:** Internal medicine primary care physicians **Setting:** Primary care and community clinics **Sampling:** Purposive **Data collection:** Semi-structured interviews & secondary data from open-ended questions **Data Analysis:** Inductive content analysis	**Strengths:** Reasonable sample, multiple recruitment strategies, rich description of methods and findings, methods triangulation **Limitations:** Single setting, potential biases during data analysis because five of the researchers were physicians **Quality rating:** Moderate
Loeb et al. (2012) US	To examine physician perceptions of patient, physician and system factors that affect the care of complex patients with mental and medical illness.	Descriptive qualitative	**Sample:** Internal medicine primary care physicians **Setting:** Primary care and community clinics **Sampling:** Purposive **Data collection:** Semi-structured interviews & secondary data from open-ended questions	**Strengths:** Reasonable sample, multiple recruitment strategies, rich description of methods and findings, methods triangulation **Limitations:** Single setting, potential biases during data analysis because five of the researchers were physicians **Quality rating:** Moderate

			Data Analysis: Inductive content analysis	
Luijks et al. (2012) The Netherlands	To explore GPs' considerations and main objectives in the management of multimorbidity and to explore factors influencing their management of multimorbidity.	Descriptive qualitative	**Sample:** 25 general physicians **Setting:** Primary care and community clinics **Sampling:** Purposive **Data collection:** Five Focus groups **Data Analysis:** Constant comparative analysis	**Strengths:** Reasonable sample, multiple recruitment strategies, rich description of methods, audit trail and findings, data saturation **Limitations:** No discussion about reflexivity and member checking **Quality rating:** Strong
Westley-Wise et al. (2020) Australia	To describe morbidity and multimorbidity patterns among adults readmitted to an Australian regional health service	Cohort	**Sample:** 38,156 individuals **Setting:** General care **Sampling:** Random **Data collection:** Existing data from hospital database **Data Analysis:** Descriptive and inferential statistics	**Strengths:** Large sample, robust data analysis, multiple settings, and random sample, variables, and outcomes clearly defined **Limitations:** Data from one district **Quality rating:** Strong
Kuluski et al. (2017) Canada	To explore health professionals views about key care components to support	Qualitative phase from a mixed-methods study	**Sample:** 24 care health professionals **Setting:** General acute care	**Strengths:** Reasonable sample, robust data analysis, rich description of methods and findings, data saturation, and audit trail

	complex patients and their families in the community		**Sampling:** Purposive **Data collection:** Patient vignettes were presented and focus group panel discussions were conducted **Data Analysis:** Content analysis	**Limitations:** No information about reflexivity & no member checking **Quality rating:** Strong
Kitching et al. (2020) Canada	To assess the association between experience of discrimination by healthcare health professionals and having unmet health needs within the Indigenous population	Cross-sectional survey	**Sample:** Data from 836 self-identified Indigenous adults with multiple conditions **Setting:** General acute care **Sampling:** Stratified **Data collection:** Surveys via one-on-one interviews **Data Analysis:** Descriptive and inferential	**Strengths:** Large sample, robust data analysis, multiple recruitment strategies **Limitations:** Limited recruitment strategies **Quality rating:** Strong
Griffith et al. (2019) Canada	To examine multimorbidity and associated health services use and costs patients with multiple chronic conditions diabetes, dementia, and stroke	Retrospective cohort	**Sample:** Data of 376,434 individuals with diabetes, 95,399 with dementia, and 29,671 with stroke **Setting:** General care **Sampling:** Random **Data collection:** Existing data **Data Analysis:** Descriptive and inferential statistics	**Strengths:** Large sample, robust data analysis, multiple settings, and random sample **Limitations:** Analysis of 14 comorbidities only **Quality rating:** Strong

Babaei & Taleghani (2019) Iran	To explore the challenges and barriers to compassionate care among nurses	Ethnography	**Sample:** 40 nurses, 16 patients, and 8 family members **Setting:** Medical-surgical units of two hospitals **Sampling:** Purposive **Data collection:** Participant observations and semi-structured interviews **Data Analysis:** Corbin and Strauss's constant comparative method	**Strengths:** Large and diverse sample, robust data analysis, reflexivity, audit trail data saturation, and thick description of methods and study findings, and methods triangulation **Limitations:** Limited information about the study context **Quality rating:** Strong
Christiansen et al. (2015) UK	To explore health professionals and pre-qualifying healthcare students' understanding of compassionate care and the factors that hinder or enable them to practice compassionately	Convergent mixed methods	**Sample:** 197 health care students and 155 health professionals **Setting:** General acute care **Sampling:** Stratified purposive **Data collection:** Survey with open-ended questions **Data Analysis:** Descriptive statistics & thematic analysis	**Strengths:** Large sample, robust data analysis, reflexivity, and thick description of methods and study findings, weaving approach to data integration **Limitations:** Low response rate (42%), limited information about the psychometric properties of the data collection instrument **Quality rating:** Strong

Jones et al. (2016) Australia	To identify personal, professional and organizational factors to compassionate care of intensive care nurses	Descriptive qualitative	**Sample:** 171 Intensive care nurses **Setting:** Intensive care unit **Data collection:** Written reflections/compassion cafes **Data Analysis:** Thematic analysis	**Strengths:** Large sample, robust data analysis, member checking, reflexivity, audit trail, data saturation, and thick description of methods and study findings **Limitations:** No methodological triangulation **Quality rating:** Strong
Papadopoulos et al. (2020) Multi-country	To explore nursing and midwifery managers' views regarding obstacles to compassion-giving across country cultures	Survey	**Sample:** 1217 nurse managers across 17 countries **Setting:** General acute care **Sampling:** Convenience and snowball **Data collection:** Survey with open and closed-ended questions **Data Analysis:** Descriptive statistics and thematic analysis	**Strengths:** Large sample, multiple settings, robust data analysis, **Limitations:** Limited information about psychometric testing of the survey and convenience and snowball sample **Quality rating:** Moderate
Valizadeh et al. (2018) Iran	To explore workplace and organizational barriers to compassionate care from the nurses' perspective	Exploratory qualitative	**Sample:** 15 nurses **Setting:** General acute care **Sampling:** Purposive **Data collection:** Semi-structured interviews	**Strengths:** Rich description of findings, reasonable sample size, member checking, robust data analysis, and audit trail **Limitations:** No information about data saturation and reflexivity **Quality rating:** Moderate

			Data Analysis: Content analysis	
Dev et al., (2019) New Zealand	To explore the difference in barriers to compassionate care among nurses, physicians, and medical students	Cross-sectional survey	**Sample:** 801 nurses, 516 physicians, and 383 medical students **Setting:** General acute care **Sampling: Convenience** **Data collection:** Copenhagen Burnout Inventory and the Barriers to Physician Compassion questionnaire **Data Analysis:** Descriptive and inferential statistics	**Strengths:** Large sample, multiple settings, valid and reliable data collection instruments, and trained data collectors **Limitations:** convenience sampling **Quality rating:** Strong
Basham & Karim, (2019) Canada	To compare multimorbidity prevalence in Canada between the territories and provinces	Cross-sectional survey	**Sample:** 110924 patients **Setting:** General acute care **Sampling:** Multistage stratified cluster random sampling **Data collection:** Canadian Community Health Survey data for 2013/14 **Data Analysis:** Descriptive and inferential statistics	**Strengths:** Large sample, multiple settings, random sample, robust statistical analysis, longitudinal analysis **Limitations:** Possibility of selection bias **Quality rating:** Strong
Bezerra de Souza et al. (2021) Multi-country	To estimate the prevalence of multimorbidity and associated	Cross-sectional survey	**Sample:** 63,844 patient **Setting:** General acute care **Sampling:** Random	**Strengths:** Large sample, multiple settings, random sample, robust statistical analysis, longitudinal

	variables among European community-dwelling adults		**Data collection:** Existing data from Survey of Health, Ageing and Retirement in Europe **Data Analysis:** Descriptive and inferential statistics	analysis, and clear description of variables **Limitations:** No inclusion of data from older adults above 80, possible selection bias **Quality rating:** Strong
Burgos et al. (2020) Spain	To assess the prevalence of disease-related malnutrition in a cohort of chronic patients with complex needs	Cross-sectional	**Sample: 101 Patients** **Setting:** General acute care **Sampling:** **Data collection:** Mini-Nutritional Assessment Tool and Nutritional Risk Screening **Data Analysis:** Descriptive and inferential statistics	**Strengths:** Random sample, multiple settings, valid and reliable data collection instruments, and trained data collectors **Limitations:** Small sample **Quality rating:** Strong
Chan et al. (2019) US	To identify what team members perceive as the principal needs and barriers to addressing the needs of complex patients	Qualitative descriptive	**Sample:** 9 ambulatory intensive care team members and 6 “usual care” members **Setting:** General acute care **Sampling:** Purposive **Data collection:** Semi-structured interviews **Data Analysis:** Inductive thematic analysis	**Strengths:** Reasonable sample size, robust data analysis, rich description of methods and findings, data saturation, audit trail, memo writing, **Limitations:** No member checking, no triangulation **Quality rating:** Strong

Chireh & D'Arcy (2020) Canada	To estimate trends in chronic disease prevalence and multimorbidity and its contributing factors in Canadians	Cross-sectional survey	**Sample:** 113, 944 patients **Setting:** General acute care **Sampling:** Multistage random **Data collection:** Data from three Canadian national health surveys **Data Analysis:** Descriptive and inferential statistics	**Strengths:** Large sample, multiple settings, random sample, robust statistical analysis, longitudinal analysis, and clear description of variables **Limitations:** Self-reported patient data **Quality rating:** Strong
Frampton et al. (2013)	To identify the elements of compassionate care that most influence the outcomes patients and families desire and the cost of care overall	Secondary analysis	**Sample:** Not stated **(stated that data collected from 100s of patients and families)** **Setting:** General acute care **Sampling:** Purposive **Data collection:** Focus groups with patients and evaluation data from the hospital **Data Analysis:** Descriptive and thematic analysis	**Strengths:** Robust analysis and rich description of findings **Limitations:** Sample size not known only stated **Quality rating:** Moderate
Keats et al. (2017) Canada	To examine the relationship between physical activity levels and multimorbidity in adults after adjusting demographic,	Prospective cohort	**Sample:** 18,709 individuals **Setting:** General acute care **Sampling: Random sample** **Data collection:** International Physical Activity Questionnaire	**Strengths:** Large sample, multiple settings, valid and reliable data collection instruments, and robust data analysis **Limitations:** Self-reported data **Quality rating:** Strong

	geographical, and lifestyle factors.		**Data Analysis:** Descriptive and inferential statistics	
Kingston et al. (2018) UK	To examine how key long-term conditions and multimorbidity will evolve between 2015 and 2035	A dynamic microsimulation model	**Sample:** 303,589 individuals **Setting:** General acute care **Sampling:** NA **Data collection:** Secondary data from two studies **Data Analysis:** Descriptive and inferential statistics	**Strengths:** Large sample, multiple settings, robust analysis **Limitations:** Simulated model **Quality rating:** Moderate
Nicholson et al. (2019) Canada	To determine the prevalence, characteristics, and patterns of patients living with multimorbidity	Retrospective cohort	**Sample:** 195 838 patients **Setting:** General acute care **Sampling: Random** **Data collection:** Existing data from Canadian Primary Care Sentinel Surveillance Network electronic medical record database. **Data Analysis:** Descriptive and inferential statistics	**Strengths:** Large and random sample, robust data analysis, clear definition of variables and outcomes, longitudinal analysis **Limitations:** Possibility of misclassification of patient multimorbidity because of the use of electronic medical record data **Quality rating:** Strong
Nicholson et al. (2021) Canada	To understand characteristics and health outcomes of multimorbidity, distinguishing between	Cross-sectional survey	**Sample:** 11,161 older adults **Setting:** General acute care **Sampling:** Random	**Strengths:** Large and random sample, robust data analysis, clear definition of variables and outcomes, longitudinal analysis **Limitations:** Possibility of misclassification of patient

	multimorbidity onset in earlier and later phases of life among community-dwelling older adults		**Data collection:** Existing data from Canadian Longitudinal Study on Aging **Data Analysis:** Descriptive and inferential statistics	multimorbidity because of the use of electronic medical record data **Quality rating:** Strong
Lown et al. (2011) US	To explore the importance of compassionate care from patients and health professionals perspective	Survey	**Sample:** 800 recently hospitalized patients and 510 physicians **Setting:** General acute care **Sampling:** Convenience **Data collection:** Compassion scale **Data Analysis:** Descriptive statistics	**Strengths:** Large sample, multiple settings, valid and reliable data collection instruments, and oust analysis **Limitations:** Convenience sampling and self-reported data **Quality rating:** Strong
Lloyd & Alex Carson (2011) UK	To discuss the visibility of compassionate care and explore outcomes that consumers and practitioners could measure in practice	Ethnomethodology	**Sample:** 30 patients/service users **Setting:** General acute care **Sampling:** Theoretical **Data collection:** Focus groups **Data Analysis:** Thematic analysis	**Strengths:** Large sample, data saturation, robust data analysis, audit trail, reflexivity, and rich description of findings **Limitations:** No triangulation, no member checking **Quality rating:** Strong
Poitras et al. (2020)	To assess the decision-making needs of patients	Descriptive qualitative	**Sample:** 16 patients, 38 clinicians, six case managers, and 14 decision-makers	**Strengths:** Large sample, data saturation, robust data analysis,

Canada	with complex care needs (PCCN) who frequently use health care services		**Setting:** General acute care **Sampling:** Convenience **Data collection:** Interviews **Data Analysis:** Content analysis	audit trail, reflexivity, and rich description of findings **Limitations:** Limited information about the process of data analysis, no triangulation, no member checking **Quality rating:** Strong
Sakib et al. (2019) Canada	To examine the prevalence of multimorbidity among middle-aged Canadians and examine the association between lifestyle factors and multimorbidity.	Retrospective cohort	**Sample:** 29,841 participants **Setting:** General acute care **Sampling:** Random **Data collection:** Existing data from Canadian Longitudinal Study on Aging **Data Analysis:** Descriptive and inferential statistics	**Strengths:** Large sample, multiple settings, valid and reliable data collection instruments, and robust data analysis **Limitations:** Self-reported data **Quality rating:** Strong
Sinclair et al. (2016a) Canada	To explore advanced cancer patients' perspectives on the importance, feasibility, teaching methods, and issues associated with training health professionals in	Straussian grounded theory	**Sample:** 53 patients **Setting:** Oncology **Sampling:** Theoretical **Data collection:** Semi-structured interviews **Data Analysis:** Constant comparative analysis	**Strengths:** Large sample, data saturation, theoretical sampling, robust data analysis, audit trail, reflexivity, and rich description of findings **Limitations:** no triangulation, no member checking **Quality rating:** Strong

	compassionate care			
Sinclair et al. (2017) Canada	To explore to advanced cancer patients' understandings, experiences, and preferences of "sympathy," "empathy," and "compassion"	Straussian grounded theory	**Sample:** 53 patients **Setting:** Oncology **Sampling:** Theoretical **Data collection:** Semi-structured interviews **Data Analysis:** Constant comparative analysis	**Strengths:** Large sample, data saturation, theoretical sampling, robust data analysis, audit trail, reflexivity, and rich description of findings **Limitations:** no triangulation, no member checking **Quality rating:** Strong
Straughair & Machin (2021) UK	To explore health care students and care professionals concerning compassionate care	Constructivist grounded theory	**Sample:** 12 nursing students eight nurse academics **Setting:** **Sampling:** Theoretical **Data collection:** Interviews **Data Analysis:** Consistent comparative analysis	**Strengths:** Large sample, data saturation, theoretical sampling, robust data analysis, audit trail, reflexivity, and rich description of findings **Limitations:** no triangulation, no member checking **Quality rating:** Strong
Straughair et al. (2019) UK	To explore compassion from the perceptions of individuals with personal experience of nursing care.	Constructivist grounded theory	**Sample:** 36 Individuals **Setting:** General acute care **Sampling:** Theoretical **Data collection:** Interviews **Data Analysis:** Consistent comparative analysis	**Strengths:** Large sample, data saturation, theoretical sampling, robust data analysis, audit trail, reflexivity, and rich description of findings **Limitations:** no triangulation, no member checking **Quality rating:** Strong

Van der Cingel, (2011) The Netherlands	To understand the benefit of compassion for nursing practice within the context of long-term care.	Grounded theory	**Sample:** 31 patients and 30 nurses **Setting:** General acute care **Sampling:** Theoretical **Data collection:** Interviews and focus groups **Data Analysis:** Constant comparative analysis	**Strengths:** Large sample, data saturation, theoretical sampling, robust data analysis, audit trail, reflexivity, and rich description of findings methods triangulation **Limitations:** no member checking **Quality rating:** Strong
Wister, A. (2021) Canada	To examine associations between lifestyle behavioural factors and appraisals of "healthy aging" among older adults experiencing multimorbidity	Cross-sectional survey	**Sample:** 12,272 **Setting:** General acute care **Sampling:** Multistage **Data collection:** Data from Canadian Longitudinal Study on Aging **Data Analysis:** Descriptive and inferential statistics	**Strengths:** Large sample, multiple settings, robust data analysis, clear description of variables and associated outcomes **Limitations:** Self-reported data **Quality rating:** Strong
Reviews				
van Boekel et al. (2013) The Netherlands	To assess health professionals' attitudes towards patients with multiple chronic conditions and substance use problems	Systematic review	**Databases searched:** Pubmed, Psycinfo, and Embase **Number of studies:** 28 **Critical appraisal performed:** Yes	**Strengths:** Robust search strategy, critical appraisal of studies completed, interrater reliability during data analysis and synthesis **Limitations:** Limited databased searched **Quality rating: Strong**

			Method of Data synthesis: Thematic synthesis	
Javed et al. (2021) Pakistan	To explore various aspects of stigma towards individuals with multiple mental health with a focus on low and middle income countries and assesses measures to increase help-seeking and access to and uptake of mental health services	Integrative/Narrative review	**Databases searched:** Not mentioned **Number of studies:** Not mentioned **Critical appraisal performed:** Yes **Method of Data synthesis:** Thematic synthesis	**Strengths:** Robust synthesis of literature and critical appraisal **Limitations:** Limited information about search strategies and databases **Quality rating:** Moderate
Knaak et al. (2013) Canada	To provide an overview of the main barriers to access and quality care of patients with multiple physical and mental health issues created by stigmatization in health care	Integrative/Narrative review	**Databases searched:** Not mentioned **Number of studies:** Not mentioned **Critical appraisal performed:** Yes **Method of Data synthesis:** Thematic synthesis	**Strengths:** Robust synthesis of literature and critical appraisal **Limitations:** Limited information about search strategies and databases **Quality rating:** Moderate

Manning & Gagnon (2017) Canada	To synthesize literature about complex patients for concept clarification	Concept analysis	**Databases searched:** Medline **Number of studies:** 40 **Critical appraisal performed:** No **Method of Data synthesis:** Thematic synthesis	**Strengths:** Robust synthesis of the literature, comprehensive search strategy **Limitations:** Limited number of databases **Quality rating:** Moderate
Reader & Gillespie (2013) UK	To synthesize literature on the nature, frequency, and causes of patient neglect	Systematic review	**Databases searched:** Pubmed, Science Direct, and Medline **Number of studies:** 42 **Critical appraisal performed:** Yes **Method of Data synthesis:** Thematic synthesis	**Strengths:** Robust synthesis of the literature, critical appraisal, comprehensive literature search, independent reviewers **Limitations:** Limited number of databases **Quality rating:** Strong
Rich et al. (2012) US	To develop a policy report for coordinating care for complex patients	Policy review/ Critical Review	**Databases searched:** Not mentioned **Number of studies:** Not mentioned **Critical appraisal performed:** Yes **Method of Data synthesis:** Thematic synthesis	**Strengths:** Robust synthesis of literature critical appraisal **Limitations:** Limited number of databases, no search strategy **Quality rating:** Moderate
Rudin et al. (2017) US	To summarize evidence to inform the development and	Systematic review	**Databases searched:** PubMed, Web of Science, and SCOPUS **Number of studies: 35**	**Strengths:** Robust synthesis of literature critical appraisal

	dissemination of more-effective analytics and care models to meet the needs of complex patients.		**Critical appraisal performed:** Yes **Method of Data synthesis:** Narrative synthesis	**Limitations:** Limited number of databases **Quality rating:** Strong
Karam et al. (2021) Canada	To map literature about care coordination interventions as operationalized by nurses for complex patient populations in primary healthcare.	Scoping review	**Databases searched:** CINAHL, MEDLINE, Scopus, and ProQuest **Number of studies:** 34 **Critical appraisal performed:** Not applicable **Method of Data synthesis:** Thematic synthesis/ Charting	**Strengths:** Robust synthesis of literature, comprehensive literature search, consultations with primary health professionals about review findings, independent reviewers **Limitations:** Limited number of databases, no search strategy **Quality rating:** Strong
Hajat & Stein (2018) US	To provide a comprehensive overview of the resulting epidemiological, economic and patient burden of multiple chronic conditions	Narrative review	**Databases searched:** MEDLINE, PubMed **Number of studies:** Not stated **Critical appraisal performed:** No **Method of Data synthesis:** Narrative synthesis	**Strengths:** Robust synthesis of the literature, independent reviewers **Limitations:** Limited number of databases, no critical appraisal **Quality rating:** Moderate
Marengoni et al. (2011) Sweden	To synthesize literature about occurrence, causes, and	Systematic review	**Databases searched:** Medline and PubMed **Number of studies:** 41	**Strengths:** Robust synthesis of the literature, comprehensive search strategy, critical appraisal of literature, independent reviewers

	consequences of multimorbidity (the coexistence of multiple chronic diseases) in the elderly as well as models and quality of care of persons with multimorbidity		**Critical appraisal performed:** Yes **Method of Data synthesis:** Narrative synthesis	**Limitations:** Limited number of databases **Quality rating:** Strong
Pehlivan & Güner (2020) Turkey	To describe the benefits of compassionate care reported in the literature and example cases.	Narrative/Integrative review	**Databases searched:** NO **Number of studies:** Not mentioned **Critical appraisal performed:** Yes **Method of Data synthesis:** Narrative synthesis	**Strengths:** Presentation of sources based on the strength of evidence **Limitations:** No information about databases searched and sources included **Quality rating:** Moderate
Goetz et al. (2010) US	To to present a functional analysis of compassion	Evolutionary concept analysis	**Databases searched:** Not mentioned **Number of studies:** Not mentioned **Critical appraisal performed:** Yes	**Strengths:** Robust synthesis of the literature, and presentation of sources based on the strength of evidence **Limitations:** No information about databases searched and sources included

			Method of Data synthesis: Thematic synthesis	**Quality rating:** Moderate
Perez-Bret et al. (2016) Spain	To define compassion and analyze its encompassing concepts	Systematic review	**Databases searched:** 30 **Number of studies:** 15 **Critical appraisal performed:** Yes **Method of Data synthesis:** Narrative synthesis	**Strengths:** Robust synthesis of the literature, a large number of databases searched comprehensive search strategy **Quality rating:** Strong
Schantz (2007) US	To define compassion in health care	Concept analysis	**Databases searched:** Academic Search Elite, CINAHL, Pre-CINAHL **Number of studies:** 426 sources **Critical appraisal performed:** No **Method of Data synthesis:** Concept analysis method	**Strengths:** Robust synthesis of the literature from various disciplines, a large number of articles **Limitations:** Limited number of databases and no critical appraisal of articles **Quality rating:** Moderate
Singh et al. (2018) Canada	To identify and describe the perspectives, experiences, importance, and impact of compassionate care among ethnically diverse	Systematic review	**Databases searched:** MEDLINE, CINAHL, EMBASE, and PsycInfo **Number of studies:** 23 **Critical appraisal performed:** Yes	**Strengths:** Robust synthesis of the literature, comprehensive search strategy, large number of databases searched **Quality rating:** Strong

	population groups.		**Method of Data synthesis:** Thematic synthesis	
Nguyen et al. (2019) UK	To summarise and meta-analyse the prevalence of multimorbidity in high, low- and middle-income countries	Systematic review and meta-analysis	**Databases searched:** Medline, Embase, PsycINFO, Global Health, Web of Science, and Cochrane Library **Number of studies:70** **Critical appraisal performed:** Yes **Method of Data synthesis:** Meta-analysis	**Strengths:** Robust synthesis of the literature, comprehensive search strategy, large number of databases searched **Quality rating:** Moderate
Sinclair et al. (2016) Canada	To map what is known about compassion in clinical care.	Scoping Review	**Databases searched:** MEDLINE (OVID), PubMed, CINAHL, EMBASE, PsycInfo, EBM Reviews, Scopus, and Academic Search Complete **Number of studies:** 44 **Critical appraisal performed:** Not applicable **Method of Data synthesis:** Narrative synthesis and charting	**Strengths:** Robust synthesis of the literature, comprehensive search strategy, large number of databases searched **Quality rating: Strong**
Younas & Maddigan (2019) Canada	To propose a policy framework for nursing education to	Critical Review	**Databases searched:** CINAHL, PubMed, Science Direct and Google Scholar	**Strengths:** Robust synthesis of the literature, comprehensive search strategy

	foster compassion in nursing students.		**Number of studies:** 29 **Critical appraisal performed:** Not applicable **Method of Data synthesis:** Thematic synthesis and conceptual analysis	**Limitations:** Limited number of databases & no critical appraisal **Quality rating:** Strong
Theoretical Sources				
Hartrick Doane & Varcoe (2015) Canada	To propose a relational inquiry practice approach for nursing practice	Book	Used case studies and clinical cases to discuss the concepts of the relational inquiry approach	**NA**
Cole-King & Gilbert (2011) UK	To outline a new approach to practice compassion in clinical care	Discussion	Used multiple sources of literature such as research, theories, and personal experiences to develop a theory	**Strengths:** Detailed overview of the concepts of the developed theory and use of multiple sources **Limitations:** No critical appraisal of included sources **Quality rating**: Moderate
Latour et al. (2007) Norway	To describe a systematic approach (the INTERMED [IM] method) to identify complex patients who are	Discussion	Used an organizational case study to discuss the implementation of the INTERMED approach	**Strengths:** Detailed description of the setting, the INTERMED method, presentation of evidence supporting the approach **Limitations:** Single setting, single case study

	in need of integrated care and its applicability to the nursing process			**Quality rating:** Moderate
Von-Dietze & Orb (2000) Canada	To discuss compassion and its meaning for nursing practice	Discussion	Used multiple sources of literature such as research, theories, and personal experiences to discuss the moral dimension of compassion	**Strengths:** Use of multiple sources **Limitations:** No critical appraisal of included sources **Quality rating**: Moderate
Younas (2020) Canada	To illustrate how health care professionals can develop a deeper awareness of patients' suffering	Discussion	Used two clinical case studies illustrating the application of relational inquiry approach for improving patient care	**Strengths:** Detailed description and clear integration of the theory and critical appraisal of the published case studies used as examples **Limitations:** Use of only two case studies **Quality rating:** Moderate

Appendix B

Q-Sort Survey

Strategies to Enhance Compassionate Care of Complex Patients

The survey is made up of three sections:

·Demographic Information Questionnaire

·The Q-Sorting Task

·Detailed information about the development of implementation strategies

Please complete the sections **in numerical order**. The instructions are described in the relevant sections. Please follow them as carefully as possible. We hope that the process will be relatively straightforward. If, however, you have any problems or questions, please contact Ahtisham Younas by email: **ay6133@mun.ca** or by phone: #+17099865033.

Section 1: Demographic Information

This section is designed to collect relevant demographic information

Age Range: _____ Prefer Not to Say

Gender: _____ Prefer Not to Say

Profession: _____ Prefer Not to Say

Country of Residence: _____ Prefer Not to Say

If you reside in Canada or have had experience of working in Canadian heath care settings, please indicate in which part of Canada have worked _____.

Prefer Not to Say

Have you worked in the clinical/community setting with people with complex heath care needs? Please response YES or NO. If you respond “yes”, please indicate the number of years of experience working with this patient population.

Prefer Not to Say

In what capacity have you worked for complex patients in clinical/community settings? Please choose one or more of the following options:

a) Frontline Care Provider/Nurse
b) Nurse Manager
c) Case Manager
d) Hospital/Unit Administrator
e) Policymaker
f) Prefer Not to Say

Have you conducted or participated in any research projects about compassion and compassionate care? Please respond yes or no. If you respond "yes", please indicate the number of publications on the topic of compassion and compassionate care**.**

Prefer Not to Say

Section 2: The Q-Sorting Task

For this section, the following are provided:

- The research purpose
- The implementation strategies (i.e., 21 statements) proposed to enhance nurses' abilities to provide compassionate care to individuals with complex health care needs (i.e., complex patients)
- The sorting distribution with ranking values

Research Purpose

To identify the most relevant strategies to enhance nurses' abilities to provide compassionate care to complex patients in acute care from the perspectives of frontline nurses, nurse mangers, hospital and health administrators, and compassion research experts, and policymakers. Complex patients are defined as "patients with multiple chronic conditions (multimorbidity), mental health issues, medication-related problems, drug-related issues, and social vulnerabilities."

Step By Step Instructions

1. The Q-sorting task requires you rank *every one* of the 21 strategies/items in the sorting distribution provided, based on the strength of your *agreement/disagreement*. The more you agree with an item, the higher the ranking you are likely to award it. The more you disagree, the lower the ranking. However, please note, that the final pattern of item rankings you produce **MUST BE THE SAME AS** the shape of the sorting distribution provided.
2. If you look at the sorting distribution, you'll see that only ONE item can be given a ranking of +3, THREE can be given a ranking of +2, FOUR can be given a ranking of +1, and so on. Please stick to these rules. There are good reasons for the distribution, which we'll happily explain. This system is being used because it is the most effective means of capturing your perspectives for purposes of this study.
3. Please review the list of 21 items. You now need to read each item in turn, one at a time, and divide them into three provisional ranking categories. This should be done in relation to the research purpose, so it may be as well to remind yourself of this as you go along. Category 1 should include those items with which you definitely AGREE. Put these items in a single pile. Category 2 should include those items with which you definitely DISAGREE. Put these items in a separate pile. Category 3 should include those items about

which you feel INDIFFERENT, UNSURE, or which otherwise leave you with MIXED FEELINGS. These items should be placed in a separate pile directly in front of you. There are no limits to the number of items that can be placed in any of these three categories. Just be faithful to your own feelings and viewpoint.

4. You should now have three distinct categories or piles of items. For the moment, put the items you DISAGREE with and those about which you feel INDIFFERENT to one side. Make sure you know which of these piles is which. Take the pile of items you definitely AGREE with and spread them out so that you can see them all at once. Your job is now to allocate each of these items in a ranking position at the right-hand (or agree) end of the distribution provided. Clearly, the highest rankings should be given to the items with which you agree most strongly. So, in line with the limits imposed by the distribution provided (see Step 3 above), the ONE item you find most agreeable should be awarded a ranking of +3. The next THREE most agreeable items should then be given a ranking of +2, the next FOUR would be given a ranking of +1, and so on. Keep going until ALL the AGREE items have been allocated an appropriate ranking.

Important Notes:

- Don't worry if your AGREE items cross over into the negative rankings. It is not assumed that this means you disagree with the item. The ranking system is relative. When you allocate a −2 ranking, this indicates only that you probably agree with that item slightly less than the items you ranked at −1, and slightly more than those you're about to rank at −3.
- The order in which items appear in a particular column or under a particular ranking value is irrelevant. Therefore, please don't try and order your columns!

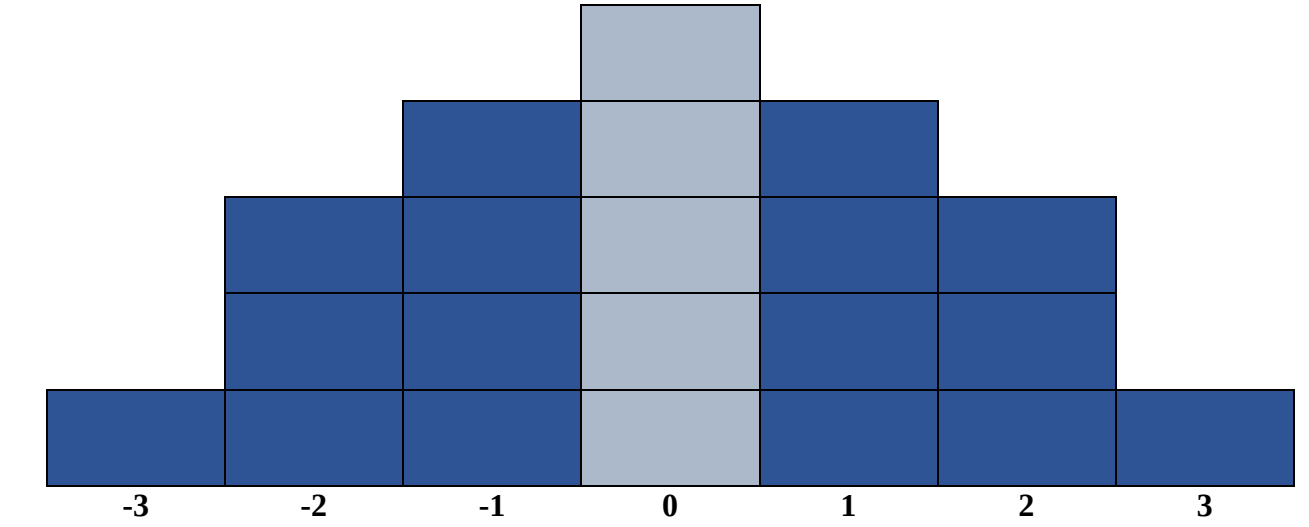
5. To continue sorting, you now need to follow the same procedure, but this time focusing on the pile of items you definitely DISAGREE with. Spread them out so you can see them all at once. These items will clearly be allocated ranking positions at the left-hand (or DISAGREE) end of the distribution provided. The lowest rankings should be given to the items that you disagree most strongly with. So, start at the left-hand pole of the distribution and award the ONE item you find most disagreeable a −3 ranking. The next THREE most disagreeable items would then be ranked at −2, and so on. Keep going until **ALL** the items you disagree with have been allocated an appropriate ranking.
6. All that remains is to complete the Q-sort using the pile of items about which you feel INDIFFERENT. This is often the most difficult pile of items to sort since, by definition, you probably won't hold any strong opinions about them in either direction. In contrast, larger numbers of items can be allocated to these mid-range ranking values meaning there are comparatively few decisions to make. Again, spread the items out so you can see all of them at once and simply allocate the highest available rankings to the items with which you feel most agreement, and the lowest to those with which you feel most disagreement. Keep going until ALL your indifferent items have been allocated an appropriate ranking.
7. Once you have completed the sorting and you have a complete Q-sort. At this stage, please have one final look at the whole thing and feel free to make any final adjustments you want to make. Check that all 21 items appear in your Q-sort and that the correct number of items has been allocated to each ranking value.
8. Finally, please provide any detailed additional comments that you may have about the 21 items/implementation strategies. You can reflect on the strengths and limitations of these strategies, and propose any content that may be added to further refine these strategies. You

can also review the next section on the development of these strategies to provide any additional insights.

Concourse/Q-Sort Statements
1. Promote network weaving through building upon the existing high-quality relationships within and outside the organization to promote collaborative problem-solving for fostering compassionate care of complex patients.
2. Conduct local consensus discussions to address the importance of compassionate care for complex patients and whether the action plan to improve compassion is appropriate.
3. Use facilitation to establish a process of interactive problem solving and support to discuss nurses' challenges and negative encounters with complex patients and their families.
4. Provide ongoing consultation with stress experts or counselors to address nurse burnout and promote self care.
5. Model the intended change by demonstrating compassionate behaviours toward peers.
6. Shadow other experts (i.e., nurses practicing compassion towards complex patients) and reflect and apply observed compassionate behaviours.
7. Recruit, designate, and train for leaders who advocate compassionate behaviours.
8. Identify and prepare champions (i.e., frontline nurses) who dedicate themselves to supporting and driving through implementation of compassionate behaviours.
9. Conduct educational meetings with nurses and administration to teach about patients' expectations of compassionate care.
10. Identify early adopters at the local sites to learn from their experiences of compassionate care towards complex patients.
11. Distribute educational materials (e.g., guidelines, toolkits, and manuals) about compassionate care of complex patients.
12. Organizations and nursing management could develop academic partnerships with local colleges for revisiting curricula and developing shared trainings on compassionate care.
13. Mandate change by having leadership declare the priority of compassionate care and develop policies to bring in change.
14. Involve patients/consumers and family members in efforts to promote compassionate care for complex patients.
15. Organizations should purposely re-examine the implementation of compassionate behaviours by surveying multiple stakeholders.
16. Offer incentives for the adoption of compassionate behaviours in the care of complex patients.
17. Access new or revisit existing funding to facilitate the implementation of strategies to enhance the provision of compassionate care.
18. Create a learning collaborative through formation of groups or groups of provider organizations to improve the implementation of strategies to increase compassionate care.
19. Organize clinician implementation team meetings to support providers and provide them opportunities to reflect on implementing strategies for compassionate care towards complex patients.

20. Stage implementation scale-up by piloting small demonstrations of strategies to enhance compassionate care of complex patients.
21. Educate managers to provide clinical supervision to those implementing strategies for promoting compassionate care of complex patients.

Sorting Distribution with Ranking Values



1. **Please provide additional comments that you may have about the implementation strategies listed in the Q-Sort Survey.**
2. **Please share any challenges that you may have encountered during the completion of this survey.**

Section 3: Development of the Implementation Strategies

The list of 21 implementation strategies were developed from interviews with 23 individuals (and their family members) who had acute care experiences as complex patients. Based on qualitative data analysis, the barriers to the provision of compassionate care were identified:

- Limited Knowledge About Patient Needs
- Limited Experience
- Lack of Educational Preparation
- Underpaid
- Lack of Appreciation
- Limited Motivation
- Greater Focus on Getting Things Done
- Workload
- Negative Patient Behaviours
- Unrealistic Patient Demands and Expectations
- Lack of Compassion Modelling
- Lack of Organizational Supports
- Interprofessional Conflicts
- Nurse-Patient Conflicts
- Nurses' Fears Related to Personal Safety
- Stress and Burnout
- Self-Care Neglect
- Negative Personal and Familial Experiences
- Routinization of Care

The identified barriers were mapped against the Theoretical Domains Framework (TDF) and the Capability, Opportunity, Motivation, Behaviour (COM-B) theoretical model to identify relevant domains and integration functions. Finally, broad and specific implementation strategies were selected using the ERIC guidelines (See Box 1 and Box 2). The list of 21 strategies provided for your ranking are addressing the above listed barriers and the domains and integration functions displayed in Box 1 and Box 2. This information is provided for your consideration so that you can better evaluate the relevance of the listed implementation strategies. Please let me know if you would like to have more information about the listed implementation strategies before you complete the Q-Sort Survey.

Box 1

TDF Domains	COM-B Domain	Barriers/Facilitators	Integration Functions
Knowledge	Capability	Limited knowledge about patient needs	Education
Intentions	Motivation	Limited motivation Greater focus on getting things done	
Skills	Capability	Limited experience Lack of educational preparation	Training
Social influences	Motivation	Lack of compassion modelling Lack of organizational supports	Enablement and Modelling
Behavioural Regulation	Capability	Routinization of care	
Social influences	Opportunity	Interprofessional conflicts Nurse-patient conflicts	Enablement
Reinforcement	Motivation	Underpaid Lack of appreciation	Incentivization and Modelling
Emotion	Motivation	Nurses' fears related to personal safety Stress and burnout Self-care neglect Negative personal and familial experiences	Enablement and Modelling

Environmental Context and Resources	Opportunity	Workload Lack of organizational supports	Environmental Restructuring
Environmental Context and Resources	Opportunity	Negative patient behaviours Unrealistic patient demands and expectations	Training

Box 2	
Integration Functions	**ERIC Implementation Strategies**
Education and Training	**Conduct educational meetings:** Hold meetings targeted toward different stakeholder groups (e.g., providers, administrators, other organizational stakeholders, and community, patient/consumer, and family stakeholders) to teach them about the clinical innovation **Develop academic partnerships:** Partner with a university or academic unit for the purposes of shared training and bringing research skills to an implementation project **Distribute educational materials:** Distribute educational materials (including guidelines, manuals, and toolkits) in person, by mail, and/or electronically **Shadow other experts:** Provide ways for key individuals to directly observe experienced people engage with or use the targeted practice change/innovation **Provide clinical supervision:** Provide clinicians with ongoing supervision focusing on the innovation. Provide training for clinical supervisors who will supervise clinicians who provide the innovation
Environmental Restructuring	**Involve executive boards:** Involve existing governing structures (e.g., boards of directors, medical staff boards of governance) in the implementation effort, including the review of data on implementation processes **Recruit, designate, and train for leadership:** Recruit, designate, and train leaders for the change effort **Identify and prepare champions**: Identify and prepare individuals who dedicate themselves to supporting, marketing, and driving through an implementation, overcoming indifference or resistance that the intervention may provoke in an organization **Create a learning collaborative:** Facilitate the formation of groups of providers or provider organizations and foster a collaborative learning environment to improve implementation of the clinical innovation

	Develop academic partnerships: Partner with a university or academic unit for the purposes of shared training and bringing research skills to an implementation project **Mandate change:** Have leadership declare the priority of the innovation and their determination to have it implemented **Purposely reexamine the implementation:** Monitor progress and adjust clinical practices and implementation strategies to continuously improve the quality of care **Alter incentive:** Work to incentivize the adoption and implementation of the clinical innovation **Access new or revisit existing funding:** Access new or existing money to facilitate the implementation **Stage implementations scale up:** Phase implementation efforts by starting with small pilots or demonstration projects and gradually move to a system wide rollout
Enablement and Modelling	**Promote network weaving:** Identify and build on existing high-quality working relationships and networks within and outside the organization, organizational units, teams, etc. to promote information sharing, collaborative problem-solving, and a shared vision/goal related to implementing the innovation **Facilitation:** A process of interactive problem solving and support that occurs in a context of a recognized need for improvement and a supportive interpersonal relationship **Recruit, designate, and train for leadership:** Recruit, designate, and train leaders for the change effort **Conduct local consensus discussions:** Include local providers and other stakeholders in discussions that address whether the chosen problem is important and whether the clinical innovation to address it is appropriate **Provide ongoing consultation:** Provide ongoing consultation with one or more experts in the strategies used to support implementing the innovation **Model the intended change:** Model or simulate the change that will be implemented prior to implementation **Identify early adopters at the local sites:** Identify early adopters at the local site to learn from their experiences with the practice innovation

	Involve patients/consumers and family members: Engage or include patients/consumers and families in the implementation effort **Organize clinician implementation team meetings:** Develop and support teams of clinicians who are implementing the innovation and give them protected time to reflect on the implementation effort, share lessons learned, and support one another's learning

Thank you for completing this survey. Your responses are greatly appreciated.

Appendix C

Ethics Approval Letter

Research Ethics Office
Suite 200, Eastern Trust Building
95 Bonaventure Avenue
St. John's, NL
A1B 2X5

November 16, 2020

174 Patrick Street

Dear Mr. Younas:

Researcher Portal File # 20210822
Reference # 2020.255

RE: Developing and Testing Implementation Strategies to Enhance Compassionate Care of Complex Patients: An Exploratory Sequential Mixed Methods Design

Your application was reviewed by the Co-Chair under the direction of the HREB and the following decision was rendered:

X	Approval
	Approval subject to changes
	Rejection

Ethics approval is granted for one year effective November 16, 2020. This ethics approval will be reported to the board at the next scheduled HREB meeting.

This is to confirm that the HREB reviewed and approved or acknowledged the following documents (as indicated):

- Patients/Family Member Consent 2020/11/10 approved
- Script for social media sites approved
- Recruitment Poster approved
- Nurses consent approved
- Focus group-Interview guide for patients and families approved
- Focus group Interview guide Nurses-Nurse Managers approved
- Patient Reported Measure of Compassion approved
- Budget acknowledged
- Proposal approved

Please note the following:

- This ethics approval will lapse on November 16, 2021. It is your responsibility to ensure that the Ethics Renewal form is submitted prior to the renewal date.
- This is your ethics approval only. Organizational approval may also be required. It is your responsibility to seek the necessary organizational approvals.
- Modifications of the study are not permitted without prior approval from the HREB. Request for modification to the study must be outlined on the relevant Event Form available on the Researcher Portal website.
- Though this research has received HREB approval, you are responsible for the ethical conduct of this research.
- If you have any questions please contact info@hrea.ca or 709 777 6974.

The HREB operates according to the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS2), ICH Guidance E6: Good Clinical Practice Guidelines (GCP), the Health Research Ethics Authority Act (HREA Act) and applicable laws and regulations.

We wish you every success with your study.

Sincerely,

Dr. Fern Brunger, Chairperson
Health Research Ethics Board

You Have Received Ethics Approval, Now What?: HREB Reporting Requirements

Once a study has received ethics approval from the Health Research Ethics Board (HREB), there are still associated reporting requirements. In the conduct of approved research researchers are required to report to the HREB, in a timely manner, proposed changes from approved research that affect participants at any stage of the process. This includes, but is not limited to, changes to the consent form, changes to the tasks or interventions involved in the research, or changes to measures to protect privacy and confidentiality.

Any substantive change to the research should not be implemented prior to documented approval by the HREB, except when necessary to eliminate an immediate risk(s) to the participants. Below are examples of post approval documentation that must be submitted to the HREB:

Amendments

Any proposed change in the conduct of a study must be submitted to the HREB, and approved, before the change may be implemented. Such changes might include modification of recruitment procedures, inclusion or exclusion criteria, revised sample size, addition or deletion of study sites, changes to an intervention, consent forms, questionnaires or scripts, etc. If there are changes in project team members or changes to funding source(s)/sponsor(s), there are specific forms to complete to report this to the HREB.

Adverse Events

Serious and unanticipated adverse events that occur within Newfoundland and Labrador are required to be reported to the HREB. Such events may occur in both clinical trials and in other types of research, e.g. collapse during a rehabilitation program, emotional breakdown requiring follow up care during an interview, or breach of privacy during correspondence. Serious adverse events that are fatal or life-threatening are required to be reported to the HREB as soon as the research team is aware of the event.

Protocol Deviations

Deviations from an approved study protocol must be reported to the HREB. Changes that eliminate immediate hazards to participants do not require prior approval, but must be reported soon as reasonably possible.

Safety Reports

Safety reports providing information on all serious adverse events (SAEs) occurring in a clinical trial must be provided by the sponsor to the HREB, normally on a three or six monthly basis (i.e. in accordance with the specified reporting timelines that were outlined in the approved ethics application).

Investigator Brochure (IB) and Product Monograph (PM)

Throughout the course of a clinical trial, changes may be implemented to study documents. All revisions to approved study documents must be submitted to the HREB to ensure the record is up to date. If the revisions include new risk or safety information there may be a requirement to notify research participants.

Ethics Renewal/Study Closure

Ethics approval lasts for one year. Ethics renewal is required annually, on the anniversary of the date of the HREB notification of approval. Once data collection is no longer ongoing, a study closure form is required to be submitted to the HREB for the study to remain active or to be closed in good standing.

Appendix D

Recruitment Poster

Appendix E

Recruitment Email

SUBJECT: ***Invitation to Participate in a Q-Sort Survey about Compassionate Care for Complex Patients***

My name is Ahtisham Younas. I am a doctoral candidate in the PhD program at the Faculty of Nursing, Memorial University of Newfoundland. I am conducting a dissertation study entitled "**Developing Implementation Strategies to Enhance Compassionate Care of Complex Patients"** under the supervision of Dr. Caroline Porr and Dr. Joy Maddigan.

I invite you to participate in this study that aims to identify the most relevant strategies to enhance nurses' abilities to provide compassionate care to complex patients in acute care. I am obtaining perspectives from frontline nurses, nurse managers, hospital and health administrators, compassion care research experts, and policy makers.

I am inviting you to complete a Q-sort survey (https://app.qmethodsoftware.com/study/9045) that asks you to sort the MOST and LEAST AGREEABLE implementation strategies that you think will enhance compassionate behaviours of nurses. The implementation strategies were developed based on interviews with 23 patients with complex health care needs and their families.

The survey will take approximately 30-40 minutes of your time. If you have questions regarding your rights as a research participant, please contact the Health Research Ethics Authority at (709) 777-6974 or info@hrea.ca

Thank you in advance for considering taking part in this research study. Please forward this invitation to anyone you think may be interested in participating.

For more information about this research, please contact:

Ahtisham Younas (PhD Candidate, Faculty of Nursing, Memorial University of Newfoundland)

Email: ay6133@mun.ca

Phone Number: 709-986-5033

Appendix F

Consent Form for Phase 1

Consent to Take Part in Research

For Individuals/Family Members with Experiences as Complex Patients

TITLE: *Developing Implementation Strategies to Enhance Compassionate Care of Complex Patients*

RESEARCHER(S): Ahtisham Younas, Faculty of Nursing
Memorial University of Newfoundland
Email: ay6133@mun.ca: Phone: #709-986-5033

SUPERVISOR(S): Dr. Caroline Porr, Associate Professor, Faculty of Nursing
Memorial University of Newfoundland.
Email: cporr@mun.ca

You have been invited to take part in a research study. Taking part in this study is voluntary. You may choose to take part, or you may choose not to take part in this study. You also may change your mind at any time. If you decide to stop taking part in this study, it will not affect your care.

This consent form has important information to help you make your choice. It may use words that you do not understand. Please ask Mr. Ahtisham Younas to explain anything that you do not understand. It is important that you have as much information as you need and that all your questions are answered. Please take as much time as you need to think about your decision to participate or not, and ask questions about anything that is not clear.

1. Why am I being asked to join this study?

The purpose of this study is to understand how nurses provide compassionate care to patients who have many health conditions. These patients are called complex patients. We want to know what these patients and their family members think about the nursing care in the General Hospital (Health Sciences Centre) and in St. Clare's Mercy Hospital.

2. How many people will take part in this study?

There are two parts to this study. During the first part, we want to interview 15-20 nurses, nurse managers, administrators, and, patients and their family members. In the second part of the study, after we develop a method to make compassionate care better, we want to give patients a patient satisfaction survey to find out if compassionate nursing care is improved.

3. How long will I be in the study?

You will be expected to take part in one telephone interview that will last no more than 1 hour.

4. What will happen if I take part in this study?

If you agree to take part in this study, the following will take place:

- Telephone Interview: You will be asked to answer questions over the telephone for 1 hour on a day that is convenient for you. You can arrange for this telephone interview in December 2020, or in January or February 2021.
- Face to Face Socially distanced interview: If you are unable to participate in a telephonic or zoom interview due to no access to the internet, zoom, or telephone, and are comfortable in participating in a face to face socially distanced interview. We can make arrangements for such interviews.
- Audio Recording: Your conversation over the telephone will be recorded. The audio recording will be written out and analyzed by the research team. Your name or any other information that says who you are will not be included. The audio recording will be destroyed after it has been written out and checked to make sure it is correctly written down.

5. Are there risks to taking part in this study?

We will do everything possible to protect your information but there is a risk that information is released without us knowing. The research team will make every attempt to protect your privacy. During the interview you may become uncomfortable or have some anxiety or other emotions because of the questions about compassionate care. You can skip questions, take a break, or stop answering at any time. If you need help, please contact the following telephone numbers:

- CHANNAL Warm Line for Non-Emergency Referral and Support: 1-855-753-1138
- Mental Health and Addictions Systems Navigator: The mental health and addictions patient navigator has knowledge of all mental health and addictions services provided by the health authorities and the community. The Navigator provide services to individuals, families, and professionals of any age within Newfoundland and Labrador.
  How to access this service:
  Telephone: 709-752-3916 or toll-free at 1-877-999-7589; video relay service (VRS) calls are welcome.
  Email: barry.hewitt@easternhealth.ca
  Hours of Operation
  Monday to Friday, from 8:30 a.m. to 4:30 p.m.
  If immediate concern, phone the 24/7 Mental Health Crisis Line: 1-888-737-4668

6. <u>What are the possible benefits of participating in this study?</u>

There may not be direct benefits from taking part in this study. We hope that the information learned from this study can be used in the future to benefit other complex patients who will receive care from nurses in the hospital.

7. If I decide to take part in this study, can I stop later?

It is your choice to take part in this study, participation is voluntary. You can change your mind at any time during the research study. The study team may ask why you are withdrawing for reporting purposes, but you do not need to give a reason to withdraw from the study if you do not want to. Your participation in this research is completely voluntary and you have the right to withdraw at any time. Deciding to not to take part in the study will not have any effect on the care you (or your family member) receive. If you wish to withdraw from the study at any time during data collection, your recording will be removed. However, once the collected data is analyzed withdrawal from the study will not be possible.

8. What about new information?

It is possible that during the study we will get new information that may affect your willingness to remain in the study. If this happens, you will be notified about the new information in a timely manner. You will be asked whether you want to continue taking part in this study and you may be invited to sign a new consent form, if you decide to continue in the research study.

9. What are my rights when participating in a research study?

You have the right to receive all information that could help you make a decision about participating in this study, in a timely manner. You also have the right to ask questions about this study at any time and to have them answered to your satisfaction.

Your rights to privacy are legally protected by federal and provincial laws that require safeguards to ensure that your privacy is respected.

Signing this form gives us your consent to be in this study. It tells us that you understand the information about the research study.

You have the right to be informed of the results of this study once the entire study is complete. You can contact the member of the researcher team, whose phone number is provided, above.

You will be given a copy of this signed and dated consent form prior to participating in this study.

10. What about my privacy and confidentiality?

Protecting your privacy is an important part of this study. If you decide to participate in this study, the researcher will collect information for you. The researcher will only collect and use the information needed for this study, including:

- Gender
- Age range

Study information collected during the study will kept and stored in a secure, locked place that only the research team will be able to access. After the study closes, study information will be kept as long as required by law, which could be 5 years. This information will be stored in encrypted computer folders and secured in the office of Dr. Caroline Porr at the Faculty of Nursing. Both Mr. Younas and Dr. Porr are responsible for keeping it secure.

When the results of this study are published or presented at scientific meetings, your name and other personal information will not be used in the publication.

All information that identifies you will be kept confidential, and to the extent permitted by applicable laws, will not be disclosed or made publicly available, except as described in this consent document. Every effort to protect your privacy will be made. Even though the risk of identifying you from the study data is very small, it can never be completely eliminated. If there is a breach of your privacy resulting from your participation in this study, you will be notified.

11. Who will see my personal information?

Your data will not be provided to any third party. The research team and the Faculty of Nursing, Memorial University of Newfoundland will be the custodians of the data.

Your access to records

You have the right to see the information that has been collected about you for this study. If you wish to do so, please contact the research team.

12. Declaration of financial interest, if applicable

There are no conflicts of interest to declare related to this study.

13. What about questions or problems?

If you have any questions about taking part in this study, you can meet with the principal investigator who is in charge of the study. That person is:

Ahtisham Younas; Phone: #709-986-5033
Or you can speak to the Supervisor: Dr. Caroline Porr; Phone: #895-7500

OR YOU CAN TALK TO SOMEONE WHO IS NOT INVOLVED WITH THE STUDY AT ALL, BUT CAN ADVISE YOU ON YOUR RIGHTS AS A PARTICIPANT IN A RESEARCH STUDY. THIS PERSON CAN BE REACHED THROUGH:

ETHICS OFFICE AT #709-777-6974
EMAIL AT INFO@HREA.CA

Signature Page

My signature on this consent form means:

- I have had enough time to think about the information provided and ask for advice if needed.
- All of my questions have been answered and I understand the information within this consent form.
- I understand that my participation in this study is voluntary.
- I understand that my telephone interview will be audio recorded.
- I understand that I am completely free at any time to refuse to participate or to withdraw from this study at any time, without having to give a reason, and that this will not change the quality of the care I receive.
- I understand that it is my choice to be in the study and there is no guarantee that this study will provide any benefits to me.
- I am aware of the risks of participating in this study.
- I do not give up any of my legal rights by signing this consent form.
- I understand that all of the information collected will be kept confidential and that the results will only be used for the purposes described in this consent form.
- I agree to take part in this study

Signature of participant	Printed name	Day Month Year
Signature of person conducting the consent discussion	Name printed	Day Month Year

To be signed by the investigator:

I have explained this study to the best of my ability. I invited questions and gave answers. I believe that the participant/substitute decision maker fully understands what is involved in being in the study, any potential risks of the study and that he or she has freely chosen to be in the study.

Signature of Researcher	Name Printed	Day Month Year

Appendix G

Consent Form for Phase 3

Consent to Take Part in Research

For Nurses//Managers/Policymakers/Compassionate Care Experts

(Q-Sort Survey)

TITLE: *Developing Implementation Strategies to Enhance Compassionate Care of Complex Patients*

RESEARCHER(S): Ahtisham Younas, Faculty of Nursing

Memorial University of Newfoundland

Email: ay6133@mun.ca: Phone: #709-986-5033

SUPERVISOR(S): Dr. Caroline Porr, Associate Professor, Faculty of Nursing

Memorial University of Newfoundland.

Email: cporr@mun.ca

You have been invited to take part in a research study. Taking part in this study is voluntary. You may choose to take part, or you may choose not to take part in this study. You also may change your mind at any time. By completing the online survey, as a participant you will be providing your informed consent participation in the study.

This consent form has important information to assist you make your choice. It is important that you have as much information as you need and that all your questions are answered. Please take as much time as you need to think about your decision to participate or not, and ask questions about anything that is not clear. The researcher will tell you about the study timelines for making your decision.

1. Why am I being asked to join this study?

The purpose of this study is to identify the most relevant implementation strategies to enhance nurses' ability to provide compassionate care to complex patients in acute care from the perspective of frontline nurses, nurse mangers, hospital and health administrators, and compassion research experts, and policy makers. Complex patients are those patients who have multiple chronic conditions and/or mental health issues and visit the health care settings on a

regular basis due to their chronic health issues. This research was conducted in two phases. In the first phase, I conducted interviews with 23 patients and their families. These interviews helped me understand the nature of compassionate nursing care, its indicators, and barriers from the perspective of complex patients. Based on this understanding, I have developed a Q-sort survey entailing a list of potential implementation strategies that could be used to address nurses' barriers to the provision of compassionate care to complex patients.

2. How many people will take part in this study?
During this study, I expect to enroll 30-40 frontline nurses, nurse mangers, hospital and health administrators, and compassion research experts, and policy makers.

3. How long will I be in the study?
You will be expected to complete an online survey that will take no more than 30-40 minutes to complete.

4. What will happen if I take part in this study?
If you agree to take part in this study, the following will take place:

> You will complete an online survey and sort 21 implementation strategies under least and most agreeable strategies to address nurses' barriers to compassionate care.

5. Are there risks to taking part in this study?
There are no known risks to taking part in this study.

6. <u>What are the possible benefits of participating in this study?</u>

There are no direct benefits to you for participating in this survey, but your responses will be useful in developing most relevant strategies for improving the quality of compassionate care for complex patients in acute care settings.

7. If I decide to take part in this study, can I stop later?
It is your choice to take part in this study, participation is voluntary. You can change your mind at any time during the research study. While completing the online survey, if you decide withdrawing, your responses will not be stored in the online survey, and you can stop the survey without any penalties. The researchers will remove all the incomplete surveys from the analysis.

8. What are my rights when participating in a research study?
You have the right to receive all information that could help you make a decision about participating in this study, in a timely manner. You also have the right to ask questions about this study at any time and to have them answered to your satisfaction.

Your rights to privacy are legally protected by federal and provincial laws that require safeguards to ensure that your privacy is respected.
You have the right to be informed of the results of this study once the entire study is complete. You can contact the member of the researcher team, whose phone number will be provided to you.

9. What about my privacy and confidentiality?
Protecting your privacy is an important part of this study. During this online survey, the researcher will not collect any identifying information such as your email addresses, name, and office location. If there is a breach of your privacy resulting from your participation in this study, you will be notified. If you decide to participate in this study, the researcher will only collect and use the information needed for this study, including:

- Age range
- Gender
- Profession
- Country of Residence
- Your Job
- Your working experience in Canada
- Your publication history- Number of publications only
- Your clinical/management/policymaking role

The identity of the participants will be confidential during the online data collection for the Q-survey because the software will assign codes to your completed survey. The researchers will not be aware of those participants who completed the questionnaire after the initial contact made via email. Once the required number of participants have completed the online survey, the data will be exported from the online software and kept for five years as per the policy of Memorial University in the encrypted computer of researcher Ahtisham Younas (174 Patrick Street, A1C 5C4) and Joy Maddigan (Education Building, Room: ED-5004E). However, the data will immediately be deleted from the online Q-method software. Mr. Younas and Dr. Maddigan are responsible for keeping it secure.

When the results of this study are published or presented at scientific meetings, your name and other personal information will not be used in the publication.

During the online survey, we will have no access to information that identifies you. Therefore, your privacy will be protected. To further ensure that no breach of information occurs, your responses will be immediately deleted from the online software at the end of data collection, and after exporting the responses into the person computer of the researcher.

10. Who will see my personal information?
Representatives from the Health Research Ethics Board may review the study records under the supervision of the study staff to check that the information collected for the study is correct and to make sure the study followed the required laws and guidelines. The research team and the Faculty of Nursing, Memorial University of Newfoundland will be the custodians of the data.

Declaration of financial interest, if applicable.
There are no conflicts of interest to declare related to this study.

11. What about questions or problems?

If you have any questions about taking part in this study, you can meet with the principal investigator who is in charge of the study. That person is:

Ahtisham Younas; Phone: #709-986-5033
Or you can speak to the Supervisor: Dr. Caroline Porr; Phone: #895-7500

OR YOU CAN TALK TO SOMEONE WHO IS NOT INVOLVED WITH THE STUDY AT ALL, BUT CAN ADVISE YOU ON YOUR RIGHTS AS A PARTICIPANT IN A RESEARCH STUDY. THIS PERSON CAN BE REACHED THROUGH:

ETHICS OFFICE AT 709-777-6974
EMAIL AT INFO@HREA.CA

Please Review the Following Before Proceeding to the Q-Sort Survey.

- I have had enough time to think about the information provided and ask for advice if needed.
- All of my questions have been answered and I understand the information within this consent form.
- I understand that my participation in this study is voluntary.
- I understand that I am completely free at any time to refuse to participate or to withdraw from this study at any time, without having to give a reason,
- I understand that it is my choice to be in the study and there is no guarantee that this study will provide any benefits to me.
- I am aware of the risks of participating in this study.
- I do not give up any of my legal rights by signing this consent form.
- I understand that all of the information collected will be kept confidential and that the results will only be used for the purposes described in this consent form.
- I agree to take part in this study

Please Click "Yes" to proceed to the Survey, and NO, if you don't want to complete this survey. Thank you.

YES **NO**

Appendix H

(Full) Semi-Structured Interview Guide

1. Please describe how nurses practice compassion towards you or your family members during your visits to the hospital.
2. What factors can influence the ability of nurses to provide compassionate nursing care?
3. Please share what feel are the major barriers to the provision of compassionate nursing care.

*Probing questions***:** What could be their personal barriers to compassionate care? What are the organizational-level barriers to compassionate care? What are the system-level barriers?

4. What enablers could help nurses to be more compassionate towards their patients?
5. Please share your views about the role of your health care organization in developing a culture of compassionate care for patients and their families.
6. What does your organization do to facilitate the provision of compassionate care?
7. Do you think patients and their families could influence the ability of nurses to provide compassionate care? If yes, can you please describe what patient and family related factors hinder or facilitate the provision of compassionate care?
8. Could you please tell me how to identify that a nurse or a health care provider is compassionate?
9. In your view what are the benefits of compassionate care for patients and their families?
10. What are the benefits of providing compassionate care for nurses?
11. In your opinion, what different strategies could enhance the compassionate behaviours of nurses and health care providers in hospital settings?
12. What suggestions would you give nurses to enhance compassionate nursing care?

Appendix I

Legitimation Criteria for Rigour in Mixed Methods Research

Legitimation Criteria	Definition	Application
Paradigmatic/ philosophical legitimation	The extent to which researchers clearly articulate their ontological and epistemological viewpoints and how well methodological and implementation aspects of the MMR study are guided by these views (Onwuegbuzie et al., 2011).	• Dialectical pluralism served as the philosophical basis for the dissertation study, allowing for flexibility and an openness to multiple paradigmatic perspectives.
Weakness minimization legitimation	The extent to which the weakness of qualitative approaches is addressed by the strengths of quantitative approaches and vice versa (Onwuegbuzie et al., 2011).	• Review of the literature indicated limited information about the indicators of compassionate nursing care within the context of complex patient care. Therefore, it was legitimate to design a qualitative phase first before attempting to design implementation strategies to promote compassionate nursing care. • The qualitative phase enabled exploration of behavioural indicators, understanding the barriers, and designing a Q-sort survey of potential implementation strategies. This would not have been possible with only a quantitative phase. • Multiple stakeholders (frontline nurses, nurse managers, health care administrators, policymakers, compassionate care experts) were recruited to share their views about what they deemed are the most relevant implementation strategies to enhance compassion nursing care, thereby adding to the perspectives of complex patients.

		• Robust factor analysis was used to identify the highest ranked implementation strategies.
Integration legitimation	The extent to which the researcher achieves the integration of qualitative and quantitative data (Onwuegbuzie et al., 2011).	• The pathway building technique was used to develop a Q-sort survey and operationalize the highest ranked implementation strategies. • The merging technique was used to compare the qualitative and quantitative results to generate mixed methods interpretations. • Joint display and the pathway building technique was used to illustrate the integration of data at the analysis and reporting levels. • A contiguous approach (i.e., separate presentation of qualitative and quantitative results) and integrated analysis (Fetters et al., 2013) was used to present the integration of qualitative and quantitative findings.
Sequential legitimation	The extent to which the ordering of qualitative and quantitative phases can affect the rigour of the MMR design and the meta-inferences drawn from the integrated inferences. The underlying aim is to adequately build and connect both qualitative and quantitative strands to achieve the overall research purpose (Johnson & Christensen, 2017).	• Clear justification was provided for an exploratory sequential mixed methods research design. The qualitative phase informed development of the quantitative instrument (i.e., Q-sort survey) and analysis of results from the subsequent quantitative phase.