

Electronic Thesis and Dissertation Repository

3-20-2014 12:00 AM

Community Physiotherapy and Chronic Disease Self-Management for Rural Community-Dwelling Older Adults

Laura J. Graham
The University of Western Ontario

Supervisor
Dr. Denise Connelly
The University of Western Ontario

Graduate Program in Health and Rehabilitation Sciences
A thesis submitted in partial fulfillment of the requirements for the degree in Doctor of Philosophy
© Laura J. Graham 2014

Follow this and additional works at: <https://ir.lib.uwo.ca/etd>



Part of the [Physical Therapy Commons](#)

Recommended Citation

Graham, Laura J., "Community Physiotherapy and Chronic Disease Self-Management for Rural Community-Dwelling Older Adults" (2014). *Electronic Thesis and Dissertation Repository*. 2025.
<https://ir.lib.uwo.ca/etd/2025>

This Dissertation/Thesis is brought to you for free and open access by Scholarship@Western. It has been accepted for inclusion in Electronic Thesis and Dissertation Repository by an authorized administrator of Scholarship@Western. For more information, please contact wlsadmin@uwo.ca.

COMMUNITY PHYSIOTHERAPY AND CHRONIC DISEASE SELF-MANAGEMENT
FOR RURAL COMMUNITY-DWELLING OLDER ADULTS

(Thesis format: Integrated Article)

by

Laura J Graham

Graduate Program in Health and Rehabilitation Sciences

A thesis submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy

The School of Graduate and Postdoctoral Studies
The University of Western Ontario
London, Ontario, Canada

© Laura J Graham 2014

Abstract

Research problem: The majority of older Canadians live with at least one chronic disease. Exercise has been shown to be an effective means to reducing symptoms, and to improving physical dysfunction in chronically ill populations; and self-management is a nationally advocated approach to dealing with the growing health care issue of chronic disease. Physiotherapists are experts in prescribing therapeutic exercise and promoting chronic disease self-management.

Methods: This two-study dissertation explored older adults' perceptions of exercise as a self-care activity within a chronic disease self-management strategy using focused ethnography; and physiotherapists' experiences in promoting exercise as a means to chronic disease self-management using hermeneutic phenomenology.

Findings: Older adults defined exercise generally, as movement, but did not demonstrate an understanding of the relevance or importance of exercise intensity or specificity to gain health benefits specific to their chronic disease(s). Older adults preferred to participate in exercise they enjoyed doing and was familiar to them. Older adults may not value exercise as a self-care activity in the same way that physiotherapists do. The client's values with respect to exercise and the structure of the service model significantly impacted the physiotherapists' ability to promote chronic disease self-management. Physiotherapists described facilitating chronic disease self-management as an important practice role, but physiotherapists were not referred to promote chronic disease self-management. This meant physiotherapists felt constrained by time, as they attempted to both promote chronic disease self-management and address the primary reason for referral. Physiotherapists took on a consultative role described as making connections with the client to build rapport, to help the client understand their chronic disease, and to connect the client with additional community programs, and/or health care practitioners to meet their goals or care needs.

Conclusions: Physiotherapists could improve efficiency of their practice by gaining skills to help them understand client's perceptions about exercise as a means to self-care, and or tailoring interventions to include opportunities to participate in enjoyable and familiar activities. Changes to service model with respect to acknowledging the role of

physiotherapists in promoting chronic disease self-management could also facilitate physiotherapists' efforts to enact this role in community settings.

Keywords

ethnography, aged, exercise, self care, phenomenology, physiotherapy, self management, chronic disease

Co-Authorship Statement

Dr. Denise Connelly, who co-authored the publication from chapter four, guided the construction and writing of this dissertation. Dr. Connelly will also be a co-author on the publication that will arise from chapter five. Each member of the Thesis Advisory Committee provided important feedback and mentorship during development of the dissertation that guided the development of study design, analysis, and writing.

Acknowledgments

Many thanks to my crew who helped me stay on course, as I navigated many deadheads and shoals over the past years. Thank you for your support and for reminding me that I cannot change the winds, I can only adjust my sails.

Crew Members:

- My loving and supportive family, colleagues, and friends who consistently reminded me to keep my eye on the prize.
- The HRS and SPT faculty and staff who supported my progress throughout each year of the combined MPT/PhD program.
- My Thesis Supervisor and Ironman athlete or ‘Ironmom’, Dr. Denise Connelly who reminded me about the importance of life and responsibility beyond academia.
- Dr. Chris Shields, who has supported my research career since he first encouraged me to participate in research during my undergraduate degree.
- Dr. Robin Stadnyk and Dr. Debbie Rudman, who made me question whether I should have instead become an occupational therapist, and for your great efforts in helping me understand and develop my skills in qualitative research methodologies.

This dissertation is dedicated to my parents, whose wisdom and support gave me confidence to pursue this goal; and to my grandparents and great aunts who inspired this research topic.

Table of Contents

Abstract.....	ii
Co-Authorship Statement.....	iv
Acknowledgments.....	v
Table of Contents.....	vi
List of Tables.....	xi
List of Figures.....	xii
List of Appendices.....	xiii
Chapter 1.....	1
1 Introduction.....	1
1.1 Background and Significance.....	3
1.2 Statement of Thesis Problem.....	5
1.3 Statement of Thesis Purpose.....	6
1.4 Overview of Chapters.....	7
1.5 References.....	7
Chapter 2.....	12
2 Literature Review.....	12
2.1 Search Strategies and Definitions.....	12
2.2 Older Adults, Exercise, and Chronic Disease Self-management.....	15
2.2.1 Exercise values and beliefs.....	15
2.2.2 Exercise behaviours and barriers.....	17
2.3 Physiotherapists, Exercise, and Chronic Disease Self-management.....	19
2.3.1 Physiotherapy and chronic disease self-management using exercise.....	20
2.3.2 Physiotherapists experiences in promoting self-management.....	22
2.3.3 Summary.....	23

2.4	References.....	24
Chapter 3	31
3	Methodology and Methods	31
3.1	Context of the Dissertation	31
3.2	Reflexivity and Statement of Self.....	32
3.3	Research Paradigm.....	37
3.4	Study 1	39
3.4.1	Statement of problem.....	39
3.4.2	Statement of purpose.....	39
3.4.3	Study design and procedure	39
3.4.4	Ethical approval	44
3.5	Study 2	44
3.5.1	Statement of problem.....	44
3.5.2	Statement of purpose.....	45
3.5.3	Study design and procedure	45
3.5.4	Ethical approval	51
3.6	Methodological Rigour	52
3.6.1	Social validity	53
3.6.2	Subjectivity and reflexivity.....	53
3.6.3	Adequacy of data	54
3.6.4	Adequacy of interpretation	56
3.7	Dissemination plan.....	56
3.8	References.....	57
Chapter 4	62
4	“Any movement at all is exercise”: a focused ethnography of exercise as self-management.	62

4.1	Exercise Values and Beliefs.....	64
4.2	Exercise Behaviours and Barriers.....	66
4.3	Physiotherapy and Exercise as Self-care	68
4.4	Purpose Statement.....	69
4.5	Methodology and Methods	70
4.5.1	Procedure	70
4.5.2	Reflexivity.....	72
4.6	Findings	74
4.6.1	Setting	74
4.6.2	Participant demographics.....	74
4.6.3	Participants’ shared values, beliefs and behaviours.....	75
4.6.4	Main themes.....	81
4.7	Discussion.....	90
4.7.1	Connecting exercise and self-care	90
4.7.2	Connecting exercise and self-care to context and characteristics.....	92
4.7.3	Connecting therapeutic exercise with what is enjoyable and familiar.....	97
4.8	Limitations	99
4.9	Conclusion	99
4.10	References.....	100
Chapter 5	109
5	<i>Making connections</i> : Engaging rural-residing older adults in chronic disease self-management	109
5.1	Physiotherapy Practice Roles.....	109
5.2	Physiotherapy and Chronic Disease Self-management Using Exercise.....	111
5.3	Physiotherapists’ Experiences in Promoting Exercise.....	114
5.4	Purpose Statement.....	115

5.5	Methodology and Methods	116
5.5.1	Reflexivity.....	117
5.5.2	Procedure	118
5.5.3	Participant recruitment and sampling	118
5.5.4	Interviewing and analysis	120
5.5.5	Dissemination of findings.....	122
5.5.6	Methodological rigor	122
5.5.7	Ethical approval	123
5.6	Findings	123
5.6.1	Defining chronic disease self-management	124
5.6.2	Promoting chronic disease self-management: Making connections.....	126
5.6.3	Modifiers to promoting self-management	134
5.7	Discussion.....	144
5.7.1	Practice constrained by time	145
5.7.2	Enacting physiotherapy practice roles and behaviours to understand client values	147
5.8	Limitations	150
5.9	Conclusions.....	150
5.10	References.....	150
Chapter 6	157
6	Discussion	157
6.1	Summary of Findings.....	157
6.2	Study Limitations.....	158
6.3	Summary of Key Insights	159
6.3.1	First key insight: Making connections.....	162
6.3.2	Second key insight: Understanding the influence of clients' values, beliefs and behaviours on exercise and self-care.....	165

6.3.3	Third key insight: Influence of the service model	166
6.4	Implications of Key Insights	168
6.4.1	Implications for practice	168
6.4.2	Implications for community care policy	170
6.4.3	Implications for education of physiotherapists	172
6.5	Future Research	174
6.6	Conclusion	175
6.7	References	175
	Appendices	181
	Curriculum Vitae	206

List of Tables

Table 1. Morrow's Transcendent Criteria for Trustworthiness.....	53
Table 2. Participant Demographics.....	75

List of Figures

Figure 1. Interaction of main and sub-themes with participations' shared values, beliefs, and behaviours.....	81
Figure 2. Promoting chronic disease self-management by making connections.....	128

List of Appendices

Appendix A Study 1 Informal Discussion and Recruitment Guide for Gatekeepers	181
Appendix B Study 1 Initial Interview Guide	182
Appendix C Study 1 Follow Up Interview Guide	183
Appendix D Study 1 Western University Research Ethics Board Approval Letter	184
Appendix E Study 1 Letter of Information and Consent Form	185
Appendix F Study 2 Interview Guide	188
Appendix G Study 2 Western University Research Ethics Board Approval Letter	189
Appendix H Study 2 VHA Research Ethics Board Approval Letter	190
Appendix I Study 2 Letter of Information and Consent Form.....	191
Appendix J Study 1 Theme Development for Exercise.....	194
Appendix L Study 2 Sample Transcript with Preliminary Coding of Text Segments (Participant 2).....	196
Appendix M Study 2 Sample Case Construction for Preliminary Themes (Participant 2) .	197
Appendix N Study 2 Sample Theme Development with Definition and Participant Citations (select pages only).....	202

Chapter 1

1 Introduction

Over 70% of Canadians 60 years or older were reported to have at least one chronic health condition.¹ Chronic disease is a slowly progressing condition of long duration, resulting in pathological symptoms, not due to physical injury.² For the majority of Canadians over sixty years of age, chronic disease is a complex health issue.¹ Rural residency adds another layer of complexity for older adults given generally poorer health status and reduced health service access in rural areas.^{3,4} Rural and/or small towns as described by Statistics Canada, is defined as populations living outside of city centres with a population of equal to or more than 10,000.⁵ Improving health care for rural-residing Canadians is a long-standing priority at both the provincial and federal levels of government⁴ where self-management is advocated as the prevailing approach to care for chronic disease.⁶ Further, policy change is driving health care delivery shifting location of care from hospital to the community. This nationwide shift has led to home care being described as the next essential health care service.⁴

Facilitating self-management by enabling older adults to care for themselves within their own home is an important aspect of physiotherapy. Given health funding policy changes and priority health management strategies, community or home care physiotherapy is a growing sector of the profession. The professional association, the Canadian Physiotherapy Association has actively advocated to the federal government for support of community physiotherapy in rural and remote areas, and in the role of chronic disease self-management.^{7,8} Physiotherapists provide client-centered services in collaboration with clients, family members, community programs and other health care practitioners.⁹ The practice role of physiotherapists in health promotion and chronic disease is to facilitate self-management through, for example, education, consultation, and therapeutic exercise.⁹

Therapeutic exercise is the clinical term used to describe planned, structured physical activity intended to improve impairments, or enhance physical function, health, and well-

being, while reducing health-related risk factors.¹⁰ The term exercise is used in this dissertation to describe planned, structured physical activity beyond instrumental activities of daily living—such as cleaning, food preparation, community transportation (not including walking or bicycling) and shopping.¹¹ Strong evidence exists to support the benefits of physical activity to improve functional mobility in chronically ill populations, to reduce the risk of heart disease, cancer, osteoporosis, and diabetes to mention a few.^{12, 13} To reap such health benefits, the Canadian Physical Activity Guidelines recommend adults get 150 minutes of moderate to vigorous physical activity each week. Examples of moderate to vigorous activity include walking more than 3.2km/h, vacuuming, washing a car, or bicycling for pleasure, to jogging or competitive team sport participation.¹³ Findings from a recent Canada-wide study that directly measured physical activity behaviour demonstrated that only 15% of adults are active enough to meet Canada's physical activity recommendations.¹³ Findings from additional studies support the notion that Canadians grow more and more inactive with age.¹⁴ Similar trends have been found in the United States, New Zealand, and in the United Kingdom.¹⁵⁻¹⁷ Ulbrich has described exercise behaviour as influenced by multiple factors.¹⁸ Namely, these factors include a person's age and health; characteristics of both sociocultural and physical environments;¹⁸ and personal or shared attitudes, values, and beliefs, such as self-efficacy.¹⁹ Investigating perceived motivations and barriers to physical activity or exercise participation is a route researchers have taken to understand why older adults are not sufficiently active to meet these recommendations. Beyond such understandings of perceived motivations and barriers, further insight may be garnered through exploration of older adults' beliefs or values concerning the worth, role and/or influence of exercise in their lives.

To understand why older adults are not sufficiently physically active, an investigation of how older adults perceive and enact exercise and self-care or exercise as a means to self-care is warranted. Such an investigation could help inform how community physiotherapists might therefore be supported in their efforts to promote exercise as a means to chronic disease self-management. Furthermore, an investigation of community physiotherapists' experiences in promoting exercise as a means to chronic disease self-

management may lead to insights on how to further tailor recommendations for physiotherapy practice and education, and health care/service policy.

1.1 Background and Significance

Self-management, within the context of chronic disease is described as active participation in one or more strategies to improve and/or maintain one's own health. Creer and colleagues explained self-management meant that the client is personally responsible for his or her own health and is therefore expected to be an active participant in the treatment approach.^{20, 21} As one of the first to describe the term self-management, Creer and colleagues described having drawn on Bandura's work in behaviour modification (i.e., Social Cognitive Theory) to explain the concept of self-management in the context of chronic disease.^{21, 22} In nursing literature, self-management tasks are referred to as self-care behaviours, where self-care is defined as "the practice of activities that individuals initiate and perform on their own behalf in maintaining life, health and well-being."^{23(p.43)} Exercise as self-care refers to purposeful physical activity of a certain type, intensity and duration to reach a sufficient level of exertion to improve health or, for example, to prevent chronic disease exacerbation.¹⁸ For older adults with chronic disease, self-care activities or self-management tasks could be categorized into medical or behavioural management, role management, and/or emotional management.²⁴ For example, medical or behavioural management would include taking medications as prescribed or adhering to a therapeutic exercise program; role management could require an individual to change the way they participate in an activity, such as switching from jogging to walking or preparing a simpler meal to conserve energy. Finally, an example of emotional management could entail the use of relaxation techniques to manage anxiety or worry stemming from perceptions about the disease prognosis. Together these examples of self-management tasks imply a holistic definition of health, reflective of physical or biomedical, psychological, social, and/or emotional facets of health.

The World Health Organization defines health as "a complete state of physical, mental, and social well-being, and not merely the absence of disease or infirmity."^{25(p.1)}

However, a more recent definition of health recognizes the impact of culture and personal responsibility: "a dynamic state of well-being characterized by a physical and mental

potential, which satisfies the demands of life commensurate with age, culture, and personal responsibility.”^{20(p.335)} This definition resonates with the idea that community or sociocultural influences inform one’s perception of health throughout their life course. In other words, living longer, exposure to health service resources, knowledge, disease manifestation, and other variables that come into play during our life course alter our perception of health, and therefore may drive our perceived need for self-management. This thought is supported by findings from a study investigating how community-dwelling older adults described being healthy. Functional independence, self-care, illness management, positive outlook, and personal growth and social contribution were all described by these older adults as important to being healthy within the context of their chronic illness or disability, and within their social and/or physical environment.²⁶

Few have investigated the interplay between perceptions of self-management or self-care behaviours and exercise, even though both are central to physiotherapy practice. A review of studies published within the last ten years revealed most studies concerning chronic disease self-management programs for adults over 65 years were described as having been run by nursing staff in long-term care or community care settings.²⁷⁻³⁰ Two meta-analyses of research addressing chronic disease self-management revealed that not all programs included exercise as a means to self-care. Furthermore, findings from these two meta-analyses suggested that chronic disease self-management programs have not consistently demonstrated statistically significant improvement in physical function, pain,³¹ and reduction in hospitalizations and visits.³² Findings from one study demonstrated that older adults who received age- and health-appropriate exercise counselling from a specialized exercise counsellor sustained increased participation in physical activity at the end of the study compared to those who received counselling from primary care providers who did not specialize in exercise and health counselling. In summary these findings suggested exercise experts should facilitate exercise promotion for older adults with chronic illnesses.³³ Expertise in therapeutic exercise prescription is one of the essential competencies of physiotherapists in Canada, described within the profile document entitled, the Essential Competency Profile of Physiotherapists in Canada.⁹ Physiotherapists’ role in exercise promotion is thought to be largely unrecognized³⁴ and supports the reasoning for a lack of research concerning

physiotherapists promoting exercise as a means to chronic disease self-management. The lack of research in this area limits our ability to determine the effectiveness of physiotherapists in changing client outcomes through exercise promotion for self-management.

The Essential Competencies Profile of Physiotherapists in Canada was a collaborative project created by national physiotherapy academic and professional accreditation committees and the Canadian Physiotherapy Association. The profile describes seven practice roles and competencies within those roles that physiotherapists are expected to enact in all clinical settings and with all client populations, including community physiotherapy and rural-residing older adults with chronic disease. However, there are two roles that fit best with this discussion of physiotherapists in promoting chronic disease self-management: expert and collaborator. The role of collaborator requires physiotherapists to work with clients, families and other health disciplines to achieve clients' goals and to integrate clinical expertise, current research, and client values into the clinical decision-making process. Whereas the role of expert requires physiotherapists implement interventions for condition-specific health promotion and self-management through education, consultation, therapeutic exercise and more.⁹ However, community physiotherapists motivated to promote exercise as a means to chronic disease self-management among their elderly clients may not feel supported in their efforts given the current lack of evidence involving community physiotherapists in promoting exercise for chronic disease self-management. No conclusions can be drawn concerning whether physiotherapists are indeed enacting these roles. An investigation of physiotherapists' experiences in promoting exercise as chronic disease self-management could contribute to a more informed understanding of whether or not these practice roles are being enacted and what are the perceived contributing and impeding factors.

1.2 Statement of Thesis Problem

Most Canadians over 60 years of age live with chronic disease.¹ This is an even greater issue in rural and remote areas, where health status is generally lower, and health service access is more restricted.^{3,4} Understanding rural community-dwelling older adult personal characteristics and sociocultural contexts as they relate to perceptions of

exercise and self-care or exercise as self-care would lead to insights that could facilitate collaboration between physiotherapists and their clients and the construction of exercise and other chronic disease self-management interventions in which older clients are more likely to participate.

Community physiotherapists develop expert knowledge and skills to promote chronic disease self-management. If a physiotherapist does not adopt a holistic approach to improving or enabling a client to improve his or her health, the physiotherapist risks minimizing his or her understanding of the client's experience of living with the chronic disease. Some research shows that health professionals and older adults living with chronic disease may conceptualize self-management differently.³⁵ Physiotherapists must work to understand the client perspective given that they are expected to enact client-centered practices. A client-centered approach requires physiotherapists to collaborate with clients, families and additional health care providers to ensure that the intervention meets the client's needs. Exploring physiotherapist's experiences could highlight the ways in which physiotherapists develop an understanding of the client's perspective and its influence on their practice approach to promoting chronic disease self-management. To the best of our knowledge, no research exists concerning community physiotherapists' experiences in promoting chronic disease self-management among older adults in rural communities.

1.3 Statement of Thesis Purpose

The aim of this two-study constructivist, qualitative investigation was to enhance understandings of exercise as a self-care activity. Respectively, studies one and two addressed what older adults perceive and enact as exercise self-care and what community physiotherapists' experiences have been when promoting exercise as a means to chronic disease self-management. Findings generated insights that may inform community physiotherapy practice, as well as community health promotion initiatives for older adults residing in rural Canadian communities, with respect to the use of exercise as a means to promoting chronic disease self-management.

1.4 Overview of Chapters

This dissertation is presented in an integrated manuscript format, as approved by Western University's School Graduate and Postdoctoral Studies. Chapter two is a literature review of the recurrent themes that were explored to guide interpretations of findings from both studies one and two. Namely, this included the connections between exercise and chronic disease self-management in relation to older adults and to physiotherapists or physiotherapy. Chapter three presents the methodology and methods that framed studies one and two. Chapter four is the manuscript for Study 1: a focused ethnography exploring rural-residing older adults' values, beliefs, and behaviours concerning exercise and exercise as self-care. Chapter five is the manuscript for Study 2: a constructivist phenomenology that explored community physiotherapists' experiences in promoting exercise as chronic disease self-management among rural-residing older adults. Chapter six describes the key insights from studies one and two, and the implications for policy, education, practice, and future research.

1.5 References

1. Broemeling AM, Watson D, Prebtani F. Population patterns of chronic health conditions, comorbidity and healthcare use in Canada: Implications for policy and practice. *Healthc Q*. 2008;11(3):70-6.
2. World Health Organization. Chronic diseases [Internet]. Geneva, Switzerland: World Health Organization 2013 cited [cited 2013 Dec 13]; [1]. Available from: http://www.who.int/topics/chronic_diseases/en/ English.
3. Keating N, Swindle J, Fletcher S. Aging in rural Canada: A retrospective and review. *Can J Aging* [Internet]. 2011 [cited 13 March 2013];30(3):323-38.
4. Romanow RJ. Building on values: The future of health care in Canada. [Internet]Saskatoon, SK: The National Library of Canada; 2002. Report No.: ISBN: 0-662-33043-9 Available from: http://www.hc-sc.gc.ca/english/pdf/romanow/pdfs/HCC_Final_Report.pdf
5. du Plessis V, Beshiri R, Bollman R, Clemenson H. Definitions of rural. *Rural and Small Town Canada Analysis Bulletin*. 2001;3(3):Catalogue no. 21-006-XIE.

6. Ontario Ministry of Health and Long Term Care. Preventing and managing chronic disease: Ontario's framework. 2007 Available from:
<http://www.health.gov.on.ca/english/providers/program/cdpm/index.html#1>
7. Canadian Physiotherapy Association. CPA encourages government to extend federal budget incentives to get more physiotherapists working in rural areas. Ottawa, Ontario: Canadian Physiotherapy Association; 2011.
8. Canadian Physiotherapy Association. The Value of Physiotherapy: Chronic Disease. 2012 Available from: http://www.physiotherapy.ca/getmedia/072b8d87-098e-41ac-a2ff-baedba49cc09/CPA_TheValueOfPhysio2012_ChronicDisease-v1.pdf.aspx
9. National Physiotherapy Advisory Group. Essential competency profile for physiotherapists in Canada. 2009 Available from:
<http://www.physiotherapyeducation.ca/Resources/Essential%20Comp%20PT%20Profile%202009.pdf>
10. Kisner C, Colby LA. Therapeutic exercise: Foundational concepts In: Therapeutic Exercise. 5th ed. Philadelphia: E.A. Davis Company; 2002; p. 1-2.
11. Townsend E, Polotajko H, editors. Enabling occupation II: Advancing an occupational vision for health, well-being and justice through occupation. Ottawa, Ontario: CAOT Publications ACE; 2007 (.
12. Rejeski WJ, Brawley LR. Functional health: Innovations in research on physical activity with older adults. *Med Sci Sports Exerc.* 2006;38(1):93-9.
13. Colley RC, Garriguet D, Janssen I, Craig CL, Clarke J, Tremblay MS. Physical activity of Canadian adults: Accelerometer results from 2007 to 2009 Canadian Health Measures Survey. Ottawa: Statistics Canada; 2011. 1 p. Report No.: Catalogue no. 82-003-XPE
14. Statistics Canada. Physical activity during leisure time, 2010. Canadian Community Health Survey [cited 2013 Jan] Available at <http://www.statcan.gc.ca.proxy1.lib.uwo.ca/pub/82-625-x/2011001/article/11467-eng.htm>. .
15. Ministry of Health. A portrait of health – Key results of the 2006/07 New Zealand Health Survey. Wellington: Ministry of Health; 2008

16. Belza B, Walwick J, Shiu-Thornton S, Schwartz S, Taylor M, LoGerfo J. Older adult perspectives on physical activity and exercise: Voices from multiple cultures. *Prev Chronic Dis* [Internet]. 2004 [cited 20 March 2013];1(4) Available from: http://www.cdc.gov/pcd/issues/2004/oct/04_0028.htm.
17. British Heart Foundation National Centre (BHFNC) for Physical Activity and Health. Fact sheet: current levels of physical activity in older adults [Internet]. Loughborough University: BHFNC 2012 cited 24 Oct 2012]. Available from: <http://www.bhfactive.org.uk>
18. Ulbrich SL. Nursing practice theory of exercise as self-care. *J Nurs Scholarship* [Internet]. 1999 [cited 13 March 2013];31(1):65-70.
19. Bandura A. Self-efficacy: Toward a unifying theory of behavioral change. *Psychol Rev* [Internet]. 1977 [cited 13 March 2013];84(2):191-215.
20. Bircher J. Towards a dynamic definition of health and disease. *Med Health Care Philos*. 2005;8:41.
21. Creer T, CW. *Chronically Ill and Handicapped Children*. Champaign, IL: Research Press; 1976.
22. Lorig KR HH. Self-management education: History, definition, outcomes, and mechanisms. *Ann Behav Med*. 2003;26(1):1-7.
23. Orem DE. *Nursing concepts of practice*. 6th ed. ed. St. Louis, MO: Mosby; 2001.
24. Corbin J, SA. *Unending work and care: Managing chronic illness at home*. San Francisco: Jossey-Bass; 1988.
25. World Health Organization. Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference. In: ; 1948 19-22 June 1946; New York, NY. World Health Organization; 1948
26. Miller AM, Iris M. Health promotion attitudes and strategies in older adults. *Health Educ Behav* [Internet]. 2002 [cited 26 March 2013];29(2):249-67.

27. Brodie DA, Inoue A, Shaw DG. Motivational interviewing to change quality of life for people with chronic heart failure: A randomized controlled trial. *Int J Nurs Stud* [Internet]. 2008 Apr;45(4):489-500.
28. Van Hecke A, Grypdonck M, Beele H, Vanderwee K, Defloor T. Adherence to leg ulcer lifestyle advice: Qualitative and quantitative outcomes associated with a nurse-led intervention. *J Clin Nurs* [Internet]. 2011 02;20(3):429-43. Available from: <http://search.ebscohost.com/login.aspx?direct=true&db=cin20&AN=2010904389&site=ehost-live>
29. Ersek M, Turner JA, Cain KC, Kemp CA. Results of a randomized controlled trial to examine the efficacy of a chronic pain self-management group for older adults. *Pain* [Internet]. 2008 Aug 15;138(1):29-40.
30. Kangchai W, Srisuphun W, Kompayak J, Charoenyooth C, Jitapunkul S. Efficacy of self-management promotion program for elderly women with urinary incontinence. *Thai J Nurs Res* [Internet]. 2002 2002;6(3):101-14. Available from: <http://search.ebscohost.com/login.aspx?direct=true&db=cin20&AN=2004075980&site=ehost-live>
31. Chodosh J, Morton SC, Mojica W, Maglione M, Suttrop MJ, Hilton L, Rhodes S, Shekelle P. Meta-analysis: Chronic disease self-management programs for older adults [with consumer summary]. *Ann Intern Med* [Internet]. 2005 Sep 20;143(6):427-38.
32. Jonker AA, Comijs HC, Knipscheer KC, Deeg DJ. Promotion of self-management in vulnerable older people: A narrative literature review of outcomes of the chronic disease self-management program (CDSMP). *Eur J Ageing* [Internet]. 2009 Dec;6(4):303-14.
33. Morey MC, Ekelund C, Pearson M, Crowley G, Peterson M, Sloane R, Pieper C, McConnell E, Bosworth H. Project LIFE: A partnership to increase physical activity in elders with multiple chronic illnesses. *J Aging Phys Act* [Internet]. 2006 Jul;14(3):324-43.
34. Verhagen E, Engbers L. The physical therapist's role in physical activity promotion. *Br J Sports Med* [Internet]. 2009 02;43(2):99-101. Available from: <http://search.ebscohost.com/login.aspx?direct=true&db=cin20&AN=2010188296&site=ehost-live>

35. Kralik D, Koch T, Price K, Howard N. Chronic illness self-management: Taking action to create order. *J Clin Nurs*. 2004;13(2):171-83.

Chapter 2

2 Literature Review

A literature review was conducted to guide study design and to develop the interpretation of the findings from studies one and two. This process highlighted the contrasting and verging perspectives between my pre-understandings of the dissertation topic and the findings from previously published works. The literature review was performed to construct an understanding from relevant studies concerning exercise, exercise as self-care, and chronic disease self-management from the perspectives of older adults and of physiotherapists. This review is sub-divided into two major sections: (1) older adults, exercise, and chronic disease self-management, and (2) physiotherapists, exercise, and chronic disease self-management. This chapter begins with a summary of the definitions and the search strategies that guided the review.

2.1 Search Strategies and Definitions

A comprehensive search of CINAHL, EMBASE, PubMed (i.e., Medline), and PEDro was conducted to retrieve appropriate journal articles, both qualitative and quantitative studies that discussed chronic disease self-management among older adults yielding 3395 results. Search terms included the following sequence of MeSH Terms and Keywords: ((MM "Chronic Disease") OR "Chronic disease" OR (MH "Pulmonary Disease, Chronic Obstructive+") OR (MH "Renal Insufficiency, Chronic") OR (MH "Mental Disorders, Chronic") OR (MH "Wounds, Chronic") OR (MH "Kidney Failure, Chronic") OR (MH "Inflammatory Bowel Diseases") OR (MH "Brain Diseases, Metabolic, Inborn+") OR (MH "Intracranial Arterial Diseases+") OR "Brain" OR (MH "Vision Disorders+") OR "Vision" OR (MM "Heart Diseases+") OR (MH "Coronary Disease") OR (MH "Pulmonary Heart Disease") OR "Heart disease" OR (MH "Rheumatic Heart Disease") OR (MH "Myocardial Ischemia") OR (MH "Vascular Hemostatic Disorders+") OR (MH "Peripheral Vascular Diseases+") OR (MH "Vascular Diseases+") OR (MH "Pulmonary Arterial Hypertension") OR (MH "Hypertension, Isolated Systolic") OR (MH "Hypertension, Pulmonary+") OR (MH "Hypertension, Portal") OR "Hypertension and

elderly" OR (MH "Pulmonary Arterial Hypertension") OR (MH "Pulmonary Disease, Chronic Obstructive+") OR "Pulmonary" OR (MH "Diabetes Mellitus, Type 1+") OR (MH "Diabetes Mellitus, Type 2") OR (MH "Diabetic Retinopathy") OR "Diabetes and elderly" OR (MH "Diabetic Patients") OR "Diabetes and old age" OR (MH "Diabetic Neuropathies+") OR (MH "Arthritis+") OR "Arthritis" OR (MH "Arthritis, Psoriatic") OR (MH "Arthritis, Rheumatoid+") OR (MH "Gout") OR (MH "Reiter Disease") OR (MH "Spondylarthritis") OR (MH "Osteoarthritis+") OR "Osteoarthritis" OR (MH "Osteoarthritis, Hip") OR (MH "Osteoarthritis, Cervical") OR (MH "Osteoarthritis, Spine") OR (MH "Osteoarthritis, Knee") OR (MH "Osteoarthritis, Wrist") OR (MH "Osteoporosis+") OR "Osteoporosis" OR (MH "Bone Diseases+") OR "bone disease" OR (MH "Neuromuscular Diseases+") OR "Neuromuscular diseases" OR (MH "Musculoskeletal Diseases+") OR "Musculoskeletal" OR (MH "Cardiovascular Diseases+") OR (MH "Metabolic Syndrome X") OR (MH "Nervous System Diseases") OR (MH "Peripheral Vascular Diseases") OR "Cardiovascular disease") AND (MH "Aged+"# OR #MH "Aged, 80 and Over"# OR "Elderly" OR #MH "Health Services for the Aged"# OR "Old age") AND ((MH "Self Care+") OR "Self management") AND (("Physiotherapy" OR (MH "Physical Therapy+") OR (MH "Physical Therapy Practice, Research-Based"))).

Then the search was edited to apply limiters for English language only, Research Articles, with Human subjects from the Aged (65+ years) Age Group. The search was then further refined to include physiotherapy as a search term. This limited the results to 117. Titles and abstracts of the 117 search results were reviewed for topic relevance. A total of 18 articles were removed because they did not include self-management, older adults (i.e., persons 65 years or older), or chronic disease. Self-management was defined as “learning and practicing the skills necessary to carry on an active and emotionally satisfying life in the face of a chronic condition.”^{1(p.11)} Self-management was considered synonymous with self-care for the purpose of this review. Chronic disease was defined as a slowly progressive condition of long duration, resulting in pathological symptoms not due to physical injury.² The remaining 99 articles were reviewed to confirm relevance to the topic of chronic disease self-management for older adults and then organized into groups to determine major themes, concepts and to identify possible gaps in the literature.

The first grouping category was based on pathology define within each article. The groupings included chronic pain, chronic obstructive pulmonary disease, arthritis, peripheral vascular disease, osteoporosis, and diabetes. Articles that contained patient populations with neurological injury, cancer, and acute renal dysfunction were excluded. Articles were excluded if they were duplicates of previous searches and/or participant populations were not restricted to an age group over 65 years. Articles that were excluded referred to practitioner administered pain interventions, such as lumbar plexus blocks, acupoint electrical stimulation, transcutaneous electrical stimulation, and millimeter wave therapy. Other articles that were excluded addressed the reliability of the Barthel Index following stroke and the reliability of other outcome measures for people with learning disabilities; non-pathological hip fracture or radial fracture management, hand function following spinal cord injury; and pediatric and young adult participant populations. Twenty articles remained for detailed review. Common themes among these articles included nurse-led interventions (six), and exercise was either discussed or implemented (seven). Of these 20 articles, only 3 included physiotherapist-led interventions. Physiotherapist-led interventions were defined as interventions constructed and carried out by physiotherapists or physical therapists, and/or physiotherapy or physical therapy assistants. If authors did not describe assessors and intervention leaders as physiotherapists or physical therapists anywhere within the methodology or methods, it was concluded to not be a physiotherapist-led intervention.

A similar process was employed to find articles relevant to furthering an understanding of physiotherapists' experiences in promoting exercise and chronic disease self-management. The same search term definitions and databases were used as were in the former search for older adults and self-management of chronic disease. The initial search yielded 1 result employing the following search terms: (MM "Physical Therapy Practice, Research-Based) OR "physical therapy" OR (MH "Physical Therapy Practice, Evidence-Based") OR "physiotherapy" AND (MM "Chronic Disease") OR "chronic disease prevention" AND)MH "Health Services for the Aged" _ OR "elderly people" AND (MM Self Care") OR "self care" OR "Self Management" AND (MH Phenomenology") OR "phenomenology". This paper was excluded from review because it focused on the experiences of the patients rather than the physiotherapist. The search was redone without

qualifiers for physiotherapy, which yielded two articles. Titles and abstracts were reviewed and one article concerning the experiences of physiotherapists engaging in health promotion with older adults was retained.

2.2 Older Adults, Exercise, and Chronic Disease Self-management

The first part of this review concerned the collated literature that added to my understanding of older adults' values, beliefs, and behaviours with respect to exercise participation and chronic disease self-management, and exercise as a means to self-management. This section is sub-divided into summaries of literature concerning older adults' *exercise values and beliefs*, and older adults' *exercise behaviours and barriers*.

2.2.1 Exercise values and beliefs

Culture may be defined as the shared values, beliefs, and behaviours that influence how a group makes sense of their world around them.³ Culture, shared values, peer-modeled behaviours, and past personal experiences all impact what individuals believe and value with respect to the concept of health⁴⁻⁶ and exercise participation.^{7,8} Behaviour change theories developed to explain human behaviour and motivators and/or mediators to change all touch on some or all of these elements. The Social Cognitive Theory (SCT) specifically describes the reciprocal influences of cultural values, beliefs, and experiences, and has been applied to scenarios concerning exercise and health. SCT describes the concept of self-efficacy, which is the belief one can perform a behaviour given situational demands, and the concept of outcome expectancy, which is the belief that a specific outcome will occur following participation in a given behaviour. An example of outcome expectancy would be the expectation to feel good after a walk or anticipation of improved health or lowered blood sugar through exercise participation. These concepts have been described as important predictors of human behaviour^{9,10} and are commonly cited in literature concerning older adults and exercise,¹¹⁻¹⁶ including a physiotherapy study on therapeutic exercise adherence.¹⁷ The focus on self-efficacy and outcome expectancy in the literature is thought to be because older adults have been shown to preferentially make emotionally meaningful goals,¹⁸ and research informed by

SCT hypothesizes that older adults are more likely motivated to be physically active if they “value physical activity as a meaningful behaviour.”^{19, 20(p.83)}

Physical activity and exercise may be valued as meaningful behaviour among older adults in rural Canada. Thomlinson and colleagues published what rural-residing older Canadians described as meaningful ways to maintain a healthy lifestyle: eating healthy foods, drinking lots of water, quitting smoking, and strongly emphasized the importance of doing things they enjoyed.⁵ Participants also described walking and biking as important to a healthy lifestyle. However, findings from another large scale Canadian survey concluded that older adults believed sleep, stress control, diet, weight control, and smoke-free environment were more important to health than physical activity.²¹ Many older Canadians may have grown up in sociocultural contexts that valued the physical activity they got from work, and left little time for physical activity during leisure time. This sentiment is supported by findings from previous studies that older adults did not prioritize leisure-time physical activity following retirement.^{10, 22-24} Simply, some people may have gotten their physical activity from work, and did not have the time or see the need for physical activity during leisure time. Therefore, once they retired, there was no perceived need for physical activity during leisure-time. For example, findings from one study explained that women whose whole lives were spent working inside the home (i.e., caring for the home, children, and husband before self) explained why these women did not experience or participate in regular exercise outside of their work activity.^{10, 25-27}

Misunderstandings concerning the relationship between exercise intensity and health-related benefits from exercise, have been discussed as possible reasons why older adults are not sufficiently active.^{23, 28} Resnick and colleagues interviewed older adults living in a long-term care facility, and found individuals more likely to exercise had positive beliefs about exercise and its benefits for their health.²⁸ However, several of these older adults believed they did not need to exercise beyond what they did for their daily activity (e.g., getting the mail or visiting friends).²⁸ Hutton and colleagues interviewed community-dwelling older adults and found some members of this group believed daily activity, such as cleaning and shopping, was sufficient exercise to improve their health, while others believed it was necessary to participate in exercise beyond their daily

activities. The participants who believed it was necessary to participate in exercise outside of daily activity described an understanding of needing to involve the whole body and to work at a higher intensity than what was needed for daily activity.²³ Findings from both studies demonstrate a possible disconnect in sampled older adults' understandings of exercise intensity and health benefits. While exercise values and beliefs adds to our understanding of why some older adults are not sufficiently active, there exist barriers that could also impede this groups ability and/or willingness to participate in exercise for self-management.¹⁰

2.2.2 Exercise behaviours and barriers

Understanding perceived barriers to exercise behaviour is another way in which researchers have attempted to explore why so many older adults' are not sufficiently active. Relevant literature from Canadian-based studies,^{29, 30} discussion papers,^{10, 31} focus group studies with ethnically diverse samples,^{32, 33} focus group studies comparing exercisers and non-exercisers,^{34, 35} and physiotherapy literature^{13, 36, 37} have been summarized and presented below to demonstrate commonly cited barriers across these aforementioned categories.

Bjornsdottir, Arnadottir, and Halldorsdottir conducted a study with older women living in a retirement community.³⁷ Their findings demonstrated some constructs could be considered both facilitators and barriers to exercise participation, depending on the situational demands of the context. These constructs included personal health status, physical environment design, and the local culture or social environment.³⁷ For example, apartment size, stairs, and hills all represent elements of the physical environment. For these women, familiar surroundings and a smaller apartment led to increased exercise participation, while hills and stairs were considered barriers and led to decreased exercise participation.³⁷ Physical and social environmental exercise barriers cited in Bjornsdottir and colleagues and similar studies included the lack of available or accessible sidewalks, parks, and fitness/recreation centers or programming.^{10, 32, 35, 37} Poor weather and no means of transportation have previously been cited as barriers for older adults.^{10, 13, 31, 32, 34, 35, 37} Bjornsdottir and colleagues³⁷ found that local culture or social environment created a barrier for exercise in places where exercise was not considered a common

practice among peers. This is an important finding given the role of support from others is an important motivator for exercise among older adults. For example, Hill and colleagues³⁶ studied older adults' adherence to physiotherapy-prescribed exercise programs following hospital discharge and found patients were more likely to engage in exercise following discharge, if they lived with a partner, as in a spouse or significant other, and if exercise was recommended by a physiotherapist.

Lack of regular exercise counselling from primary health care providers has been described as a barrier to exercise participation for older adults.¹⁰ Specifically, authors have described that lack of access to appropriate information may explain why some older adults do not know the importance of exercise in relation to chronic disease management.³¹ Clinical recommendations from this literature suggest creating an exercise program that is both specific to the client's chronic disease care needs, and highlights the link between disease progression and symptoms, and exercise participation. Smith, Carr, Wiseman, and colleagues²⁹ interviewed a sample of older adults who responded to the Canadian Communities Health Survey-Healthy Aging and did not indicate self-reported health status (i.e., presence of a health condition, illness or injury) as a physical activity participation barrier. However, having a chronic disease best predicted participants' lack of participation in physical activity, which suggests this group did not relate their underlying chronic disease(s) to their perception of their health status. Health and chronic illness are considered both motivators and barriers to participation in exercise for older adults.^{10, 13, 30, 31, 33-35, 37, 38} This means that exercise is thought to enable older adults to manage their conditions, but their chronic conditions sometimes also prevent them from participating in exercise due to disease-related sequelae, such as weakness and shortness of breath.¹³ Clinicians trained in exercise prescription for chronic disease can help clients navigate these barriers and to understand how to participate in exercise in a safe and meaningful way by helping the client understand their disease and the role of exercise in prevention and management of disease.

Unfortunately, there are many more barriers that a clinician must also be mindful of when attempting to engage clients. Additional exercise participation barriers described in relevant exercise participation studies include time constraints, such as conflicting

appointment times;^{30, 31, 34, 35, 38} inertia, which was the classification used by authors to describe what older adults' referred to as being busy, lazy, bored, lacking discipline or interest;^{13, 30, 31, 35} negative affect, as in depression or lack of motivation;^{13, 30, 34, 35} and personal safety, such as fear of falling.^{10, 13, 31, 34, 35, 38} While most findings were consistent from one study to the next, Hill and colleagues³⁶ reported perceived risk of injury from a fall motivated older adults to adhere to a physiotherapist-prescribed home exercise program. Self-efficacy or confidence in one's ability to complete a task given specific situational demands has been described as a reason why something might be a barrier to exercise for some and a motivator or facilitator to others.³⁹ For example, the experience of being in the hospital may motivate individuals to do what they believe is in their power to prevent that experience, from recurring.

Social Cognitive Theory, in which self-efficacy was first described, has been used to describe psychological barriers to exercise participation.³¹ Lee and colleagues published a discussion paper demonstrating how this theory might be used to ameliorate health promotion interventions designed to help older adults overcome these barriers. Lee and colleagues concluded that understanding confidence, perceived exercise enjoyment and satisfaction are essential to designing effective physical activity programs, where many of the barriers to engaging in physical activity for older adults are attitudinal. Support for Social Cognitive Theory and focusing on behaviour change strategies to promote exercise among older adults is described in the physiotherapy literature.³⁷ Such findings support the importance of physiotherapists understanding clients' exercise values, beliefs and social or physical barriers to exercise participation when promoting exercise and chronic disease self-management.

2.3 Physiotherapists, Exercise, and Chronic Disease Self-management

The second part of this review unpacks the relationship between physiotherapy, exercise, and chronic disease self-management; and reviews the literature that added to my understanding of physiotherapists' experiences in promoting exercise as a means to chronic disease self-management. This section is sub-divided into summaries of the literature reviewing the relationship between *physiotherapy and chronic disease self-*

management using exercise, and finally a review of literature that examined *physiotherapists' experiences in promoting exercise*.

2.3.1 Physiotherapy and chronic disease self-management using exercise

Physiotherapists are expected to be competent in prescribing therapeutic exercise and implement self-management interventions for clients, including older adults with chronic disease. As described within the Essential Competency Profile for Physiotherapists in Canada, physiotherapists must be competent collaborators providing client-centered health promotion and self-management support through education, consultations, and therapeutic exercise.⁴⁰ This implies that physiotherapists engage clients, families and other health care practitioners in the clinical decision-making process and co-construction of treatment goals and values.⁴⁰ To accomplish this holistic, client-centered approach, some recommend clinicians intently listen to clients' narrative of living with their chronic disease,^{41, 42} and strive to better understand the client's culture (values and beliefs).⁴² These recommendations are supported by earlier work that advocates for physiotherapists to strive to understand clients' beliefs and values in order to maximize or ensure patient compliance with physiotherapy-prescribed therapeutic exercise in both short and long-term interventions.⁴³ The thought is that the physiotherapist's depth of understanding of the client and of the client's life, obtained through narrative, will better inform practices aimed at enhancing the client's quality of life. This conclusion is supported by findings from a rural Canadian study on health values, beliefs, and behaviours that described participants strongly valued health professionals who listened and demonstrated respect for their health practice choices.⁵ Furthermore, Bjornsdottir and colleagues³⁷ concluded that physiotherapists need to be keenly aware of the impact of social and physical environment influences when enacting their professional role of promoting exercise as a means to chronic disease self-management.

The role of physiotherapists in promoting exercise and chronic disease self-management is thought to have gone largely unrecognized outside of the physiotherapy community.⁴⁴ This conclusion may be supported by the fact that the majority of chronic disease self-management studies involving exercise participation for individuals over 65 years old

within the last ten years were carried out by nursing staff in long-term care or community care settings.⁴⁵⁻⁴⁸ However, this review revealed three recent self-management intervention studies that included physiotherapists as chronic disease self-management facilitators for older adults.^{49, 50}

The first two studies did not go into great detail of the role of the physiotherapists. Devereux, Robertson, and Briffa⁴⁹ conducted a randomized controlled trial and demonstrated that a 10-week water-based exercise and self-management program significantly improved balance and quality of life in elderly women with osteoporosis or osteopenia. Norweg and colleagues reviewed clients' perspectives on the efficacy of a self-management program for chronic obstructive pulmonary disease led by physiotherapy and occupational therapy.⁵⁰ However, findings focused only on the role of occupational therapy. The impact of the physiotherapy component was not discussed in this qualitative article.

A third randomized controlled trial tested a combined physical and occupational therapy-led chronic disease self-management intervention⁵¹ with a sample of individuals over 44 years of age (43% over 65 years) over 15 months. Participants in the intervention group received physiotherapy and occupational therapy for physical dysfunction, and attended a group education workshop to learn about their chronic illness and role of exercise. The control group did not receive any of the above-mentioned therapies. Participants in the intervention group had statistically significant improved satisfaction of rehabilitation services, and significantly reduced number of planned hospital days. This correlated to a daily cost savings of \$490/per person or \$65,000 total over the course of the study.⁵¹ However, at the fifteen month follow up there was no significant between group difference in number of emergency room visits or health status measures (i.e., functional exercise capacity, walking speed, balance, fall history, grip strength, and home safety). Loss of between group differences over time may be the result of insufficient intervention duration⁵² and/or lack of adherence to program following end of initial intervention participation. For example, participants may not have adhered to the program following the six-week intervention period or perhaps six weeks was not sufficient to enable participants to successfully incorporate the proposed lifestyle changes to adopt the self-

management program. While the findings from these three studies do provide some insight into physiotherapists and promoting chronic disease self-management, our ability to determine their effectiveness in changing client outcomes is limited by lack of research involving physiotherapists in this role. A look to physiotherapists' experiences in promoting exercise as chronic disease self-management can contribute to an understanding of whether or not this practice role is being enacted and what are the perceived contributing and impeding factors.

2.3.2 Physiotherapists experiences in promoting self-management

One study was found that described the experiences of physiotherapists in promoting self-management. However, it was not specific to promoting exercise as a means to chronic disease self-management. The article was by Healey, Broers, Nelson, and Huber⁵³ who described the health promotion practices of physiotherapists working with individuals 65 and older living and working in urban areas of the mid-western United States of America. Health promotion was defined as combining education and environmental supports to benefit or improve health status.^{53, 54} Physiotherapists participated in focus group interviews. The majority of the sample comprised physiotherapists from outpatient and acute care settings. However, one physiotherapist worked in home care or community care. Transcripts from interviews were analyzed using a constant comparative technique, which fleshed out themes concerning physiotherapists' perceptions of health promotion, and approaches and barriers to health promotion.

The themes revealed that the interviewed physiotherapists believed health promotion was an important part of their practice. The term holistic was used to describe their practice approach because they employed a patient-centered focus to address patients' needs and, for example, connecting patients with additional health care practitioners who could meet patients' needs that were outside of the physiotherapists' scope of practice. Healey and colleagues demonstrated that the physiotherapist's clinical setting influenced what or how he or she enacted health promotion.⁵³ For example, those working in acute care focused on fall prevention, wound prevention, and factors contributing to hospitalization; while those working in outpatient clinical settings focused on healthy aging and making

referrals to outside/additional therapies. However, when compared to two previous studies that examined the frequency of health promotion activities among physiotherapists, Healey and colleagues noted the similar primary focus on exercise and chronic disease when enacting health promotion with older adults.^{53, 55, 56}

Healey and colleagues also described clinician and client-related barriers to providing health promotion among older adults. Client-related barriers, as described by the physiotherapists, included lack of social and financial support, transportation, and engagement/motivation to make changes to improve health. Clinician-related barriers included time constraints and lack of reimbursement for time or therapy sessions. Time constraint is a barrier described in home care nursing literature, where nurses have reported tensions between attending to client needs and attending to their own responsibilities as an employee of a health care service organization.⁵⁷ Similarly, an interdisciplinary study concerning health service delivery in urban versus rural settings suggested that lack of reimbursement for therapy sessions is a greater concern in rural community care settings, where older adults in rural communities have comparatively poorer health status and thus require longer visits.⁵⁸

The study by Healey and colleagues provided initial findings of the issues surrounding self-management promotion among chronically ill older adults where clinical setting influenced the how or what physiotherapists engaged clients in health promotion. However, these findings did not represent community physiotherapy in rural settings, where only one participant worked in home care, and all participants worked in urban settings. Therefore, further research is required to address the experience of community physiotherapists in promoting chronic disease self-management among older adults in rural settings.

2.3.3 Summary

An overview of findings from both parts of this review revealed the importance of understanding older adults' values, beliefs, and behaviours with respect to exercise participation and exercise for self-management. There exists a small body of literature describing physiotherapist-led chronic disease self-management interventions using

exercise or physiotherapists experiences in promoting chronic disease self-management. However, there is consensus within the physiotherapy community of the importance physiotherapists promoting exercise as a means to self-management; of the expectation that physiotherapists engage clients, family, and other health care practitioners in collaborative goal-setting and clinical decision making; and of the expectation that physiotherapists can effectively prescribe therapeutic exercise for individuals with chronic disease, and design self-management interventions.

2.4 References

1. Lorig KR HH. Self-management education: History, definition, outcomes, and mechanisms. *Ann Behav Med.* 2003;26(1):1-7.
2. World Health Organization. Chronic diseases [Internet]. Geneva, Switzerland: World Health Organization 2013 cited [cited 2013 Dec 13]]; [1]. Available from: http://www.who.int/topics/chronic_diseases/en/ English.
3. Hunt M. Taking culture seriously: Considerations for physiotherapists. *Physiotherapy* [Internet]. 2007 [cited 18 April 2014];93(3):229-32.
4. Sellers SC, Poduska MD, Propp LH, White SI. The health care meanings, values, and practices of anglo-american males in the rural midwest. *J Transcult Nurs* [Internet]. 1999 [cited 30 March 2013];10(4):320-30.
5. Thomlinson E, McDonagh MK, Crooks KB, Lees M. Health beliefs of rural Canadians: Implications for practice. *Aust J Rural Health* [Internet]. 2004 [cited 26 March 2013];12(6):258-63.
6. Rosenstock IM. Historical origins of the health belief model. *Health Educ Quart.* 1974;2(4):328-35.
7. Ulbrich SL. Nursing practice theory of exercise as self-care. *J Nurs Scholarship* [Internet]. 1999 [cited 13 March 2013];31(1):65-70.
8. Bandura A, Adams NE, Beyer J. Cognitive processes mediating behavioral change. *J Pers Soc Psychol.* 1977;35(3):125-39.

9. Gellert P, Ziegelmann JP, Schwarzer R. Affective and health-related outcome expectancies for physical activity in older adults. *Psychol Health* [Internet]. 2012 [cited 24 March 2013];27(7):816-28.
10. Schutzer KA, Graves BS. Barriers and motivations to exercise in older adults. *Prev Med* [Internet]. 2004 [cited 24 March 2013];39(5):1056-61.
11. Rotter, JB. *Social learning and clinical psychology*. Englewood Cliffs, NJ: Prentice Hall; 1954.
12. Williams DM, Anderson ES, Winett RA. A review of the outcome expectancy construct in physical activity research. *Ann Behav Med* [Internet]. 2005 [cited 26 March 2013];29(1):70-9.
13. Forkan R, Pumper B, Smyth N, Wirkkala H, Ciol MA, Shumway-Cook A. Exercise adherence following physical therapy intervention in older adults with impaired balance. *Phys Ther* [Internet]. 2006 [cited 24 March 2013];86(3):401-10.
14. Lawton R, Conner M, Parker D. Beyond cognition: Predicting health risk behaviors from instrumental and affective beliefs. *Health Psychol* [Internet]. 2007 [cited 26 March 2013];26(3):259-67.
15. Trafimow D, Sheeran P. Some tests of the distinction between cognitive and affective beliefs. *J Exp Soc Psychol* [Internet]. 1998 [cited 26 March 2013];34(4):378-97.
16. Van Der Pligt J, De Vries NK. Expectancy-value models of health behaviour: The role of salience and anticipated affect. *Psychol Health* [Internet]. 1998 [cited 30 March 2013];13(2):289-305.
17. Sirur R, Richardson J, Wishart L, Hanna S. The role of theory in increasing adherence to prescribed practice. *Physiother Can* [Internet]. 2009 [cited 13 March 2013];61(2):68-77.
18. Carstensen LL, Mikels JA. At the intersection of emotion and cognition: Aging and the positivity effect. *Curr Dir Psychol Sci* [Internet]. 2005 [cited 26 March 2013];14(3):117-21.
19. Bandura, A. *Self-efficacy: the exercise of control*. New York: Freeman and Co.; 1997.

20. O'Brien Cousins S. Grounding theory in self-referent thinking: Conceptualizing motivation for older adult physical activity. *Psychol Sport Exerc* [Internet]. 2003 [cited 30 March 2013];4(2):81-100.
21. Torrance G. Campbell Survey Results for Older Canadians. Canadian Fitness and Lifestyle Research Institute; 1999 Available from: <http://www.cflri.ca/node/485>
22. Witcher CSG, Holt NL, Spence JC, Cousins SO. A case study of physical activity among older adults in rural newfoundland, canada. *J Aging Phys Activ*. 2007;15(2):166-83.
23. Hutton L, Frame R, Maggo H, Shirakawa H, Mulligan H, Waters D, Hale L. The perceptions of physical activity in an elderly population at risk of falling: A focus group study. *N Z J Physiother*. 2009;37(2):85.
24. Phillips EM, Schneider JC, Mercer GR. Motivating elders to initiate and maintain exercise. *Arch Phys Med Rehabil* [Internet]. 2004 [cited 31 March 2013];85(SUPPL. 3):S52-7.
25. Chao D, Foy CG, Farmer D. Exercise adherence among older adults: Challenges and strategies. *Control Clin Trials* [Internet]. 2000 [cited 31 March 2013];21(5 SUPPL. 1):212S-7S.
26. Rhodes RE, Martin AD, Taunton JE, Rhodes EC, Donnelly M. Factors associated with exercise adherence among older adults. an individual perspective. *Sports Med*. 1999;28:397-411.
27. Branigan KP, Cousins SO. Older women and beliefs about exercise risk: What has motherhood got to do with it? *J Women Aging*. 1995;7:47-66.
28. Resnick B, Spellbring AM. Understanding what motivates older adults to exercise. *J Gerontol Nurs* [Internet]. 2000 [cited 26 March 2013];26(3):34-42.
29. Smith KL, Carr K, Wiseman A, Calhoun K, McNevin NH, Weir PL. Barriers are not the limiting factor to participation in physical activity in canadian seniors. *J Aging Res* [Internet]. 2012 [cited 24 March 2013];2012
30. Newsom JT, Kaplan MS, Huguet N, McFarland BH. Health behaviors in a representative sample of older canadians: Prevalences, reported change, motivation to change, and perceived barriers. *Gerontologist* [Internet]. 2004 [cited 24 March 2013];44(2):193-205.

31. Lee LL, Arthur A, Avis M. Using self-efficacy theory to develop interventions that help older people overcome psychological barriers to physical activity: A discussion paper. *Int J Nurs Stud* [Internet]. 2008 [cited 24 March 2013];45(11):1690-9.
32. Mathews AE, Laditka SB, Laditka JN, Wilcox S, Corwin SJ, Liu R, Friedman DB, Hunter R, Tseng W, Logsdon RG. Older adults' perceived physical activity enablers and barriers: A multicultural perspective. *J Aging Phys Act* [Internet]. 2010 [cited 26 March 2013];18(2):119-40.
33. Belza B, Walwick J, Shiu-Thornton S, Schwartz S, Taylor M, LoGerfo J. Older adult perspectives on physical activity and exercise: Voices from multiple cultures. *Prev Chronic Dis* [Internet]. 2004 [cited 20 March 2013];1(4) Available from: http://www.cdc.gov/pcd/issues/2004/oct/04_0028.htm.
34. Lees FD, Clark PG, Nigg CR, Newman P. Barriers to exercise behavior among older adults: A focus-group study. *J Aging Phys Act* [Internet]. 2005 [cited 24 March 2013];13(1):23-33.
35. Costello E, Kafchinski M, Vrazel J, Sullivan P. Motivators, barriers, and beliefs regarding physical activity in an older adult population. *J Geriatr Phys Ther* [Internet]. 2011 [cited 24 March 2013];34(3):138-47.
36. Hill AM, Hoffmann T, McPhail S, Beer C, Hill KD, Brauer SG, Haines TP. Factors associated with older patients' engagement in exercise after hospital discharge. *Arch Phys Med Rehabil* [Internet]. 2011 [cited 24 March 2013];92(9):1395-403.
37. Bjornsdottir G, Arnadottir SA, Halldorsdottir S. Facilitators of and barriers to physical activity in retirement communities: Experiences of older women in urban areas. *Phys Ther* [Internet]. 2012 [cited 24 March 2013];92(4):551-62.
38. Mathews AE, Laditka SB, Laditka JN, Wilcox S, Corwin SJ, Liu R, Friedman DB, Hunter R, Tseng W, Logsdon RG. Older adults' perceived physical activity enablers and barriers: A multicultural perspective. *J Aging Phys Act* [Internet]. 2010 [cited 24 March 2013];18(2):119-40.
39. Seeman TE, Unger JB, McAvay G, Mendes de Leon CF. Self-efficacy beliefs and perceived declines in functional ability: MacArthur studies of successful aging. *J Gerontol*. 1999;54B(4):214-22.

40. National Physiotherapy Advisory Group. Essential competency profile for physiotherapists in Canada. 2009 Available from:
<http://www.physiotherapyeducation.ca/Resources/Essential%20Comp%20PT%20Profile%202009.pdf>
41. Jensen GM, Gwyer J, Hack LM, Shepard KF. Chapter 9: Expert practice in physical therapy. In: Expertise in physical therapy practice. Boston, MA: Butterworth-Heinemann; 1999; p. 175-206.
42. Edwards I, Jones M, Carr J, Braunack-Mayer A, Jensen GM. Clinical reasoning strategies in physical therapy. *Phys Ther* [Internet]. 2004 [cited 16 August 2013];84(4):312-30.
43. Sluijs EM, Knibbe JJ. Patient compliance with exercise: Different theoretical approaches to short-term and long-term compliance. *Patient Educ Couns* [Internet]. 1991 [cited 30 March 2013];17(3):191-204.
44. Verhagen E, Engbers L. The physical therapist's role in physical activity promotion. *Br J Sports Med*. 2009;43:99-101.
45. Brodie DA, Inoue A, Shaw DG. Motivational interviewing to change quality of life for people with chronic heart failure: A randomized controlled trial. *Int J Nurs Stud* [Internet]. 2008 Apr;45(4):489-500.
46. Van Hecke A, Grypdonck M, Beele H, Vanderwee K, Defloor T. Adherence to leg ulcer lifestyle advice: Qualitative and quantitative outcomes associated with a nurse-led intervention. *J Clin Nurs* [Internet]. 2011 02;20(3):429-43. Available from:
<http://search.ebscohost.com/login.aspx?direct=true&db=cin20&AN=2010904389&site=ehost-live>
47. Ersek M, Turner JA, Cain KC, Kemp CA. Results of a randomized controlled trial to examine the efficacy of a chronic pain self-management group for older adults. *Pain* [Internet]. 2008 Aug 15;138(1):29-40.
48. Kangchai W, Srisuphun W, Kompayak J, Charoenyooth C, Jitapunkul S. Efficacy of self-management promotion program for elderly women with urinary incontinence. *Thai J Nurs Res* [Internet]. 2002 2002;6(3):101-14. Available from:

<http://search.ebscohost.com/login.aspx?direct=true&db=cin20&AN=2004075980&site=ehost-live>

49. Devereux K, Robertson D, Briffa NK. Effects of a water-based program on women 65 years and over: A randomised controlled trial. *AUST J PHYSIOTHER* [Internet]. 2005 06;51(2):102-8. Available from:

<http://search.ebscohost.com/login.aspx?direct=true&db=cin20&AN=2005118005&site=ehost-live>

50. Norweg A, Bose P, Snow G, Berkowitz ME. A pilot study of a pulmonary rehabilitation programme evaluated by four adults with chronic obstructive pulmonary disease. *Occup Ther Int* [Internet]. 2008 06;15(2):114-32. Available from:

<http://search.ebscohost.com/login.aspx?direct=true&db=cin20&AN=2009945767&site=ehost-live>

51. Richardson J, Letts L, Chan D, Stratford P, Hand C, Price D, Hilts L, Coman L, Edwards M, Baptiste S, Law M. Rehabilitation in a primary care setting for persons with chronic illness: A randomized controlled trial. *Prim Health Care Res Dev* [Internet]. 2010 Oct;11(4):382-95.

52. Pincus T. Limitations of randomized clinical trials to recognize possible advantages of combination therapies in rheumatic diseases. *Semin Arthritis Rheum* [Internet]. 1993 [cited 30 July 2013];23(2 SUPPL. 2):2-10.

53. Healey WE, Broers BK, Nelson J, Huber G. Physical therapists' health promotion activities for older adults. *J Geriatr Phys Ther* [Internet]. 2012 2012;35(1):35-48. Available from:

<http://search.ebscohost.com/login.aspx?direct=true&db=cin20&AN=2011459886&site=ehost-live>

54. Green, L, Kreuter, M. *Health Promotion Planning: An Educational and Environmental Approach*. 2nd ed. Mountain View, CA: Mayfield Publishing Co.; 1991.

55. Rea B, Marshak H, Neish C, Davis N. The role of health promotion in physical therapy in california, new york, and tennessee. *Phys Ther*. 2004;84:510-523.

56. Grahimer J, Domholdt E. Amount of patient education in physical therapy and perceived effects. *Phys Ther*. 1996;76:1089-1096.

57. Schoot T, Proot I, Legius M, ter Meulen R, de Witte L. Client-centered home care: Balancing between competing responsibilities. *Clin Nurs Res* [Internet]. 2006 11;15(4):231-57. Available from:

<http://search.ebscohost.com/login.aspx?direct=true&db=cin20&AN=2009315232&site=ehost-live>

58. Adams CE, Michel Y, DeFrates D, Corbett CF. Effect of locale on health status and direct care time of rural versus urban home health patients. *J Nurs Adm* [Internet]. 2001 05;31(5):244-51. Available from:

<http://search.ebscohost.com/login.aspx?direct=true&db=cin20&AN=2001110260&site=ehost-live>

Chapter 3

3 Methodology and Methods

The aim of this two-study constructivist, qualitative investigation was to enhance understandings of exercise as a self-care activity for older adults living in rural communities. Respectively, studies one and two addressed what older adults perceive and enact as exercise self-care and what community physiotherapists' experiences have been when promoting exercise as a means to a chronic disease self-management strategy. Such knowledge may inform community physiotherapy practice, as well as community health promotion initiatives for older adults residing in rural Canadian communities, with respect to the use of exercise as a means for chronic disease self-management. The methodologies and methods employed for studies one and two are presented separately, following an overview of the context of the dissertation, reflexivity and statement of self, research paradigm, and methodological rigour.

3.1 Context of the Dissertation

Study 1 employed focused ethnography within a rural Nova Scotian community to construct a contextual example of older adults' values, beliefs and behaviours about their use of exercise in collaboration with or in contrast to their self-care practices. The aim of Study 1 was to describe how rural-residing older adults understand the use and role of exercise as a self-care activity. Physiotherapists are experts in exercise prescription for special populations and it is their professional role to promote exercise and self-management strategies in collaboration with their clients. Gaining a deeper understanding of client's values, beliefs, and behaviours with respect to exercise lends itself to improving patient and therapist collaborations (e.g., clinical decision-making, and goal setting). While Study 1 provided the opportunity to co-construct a contextual example of older adults' understandings of exercise as a self-care activity, Study 2 provided the opportunity to understand the experience of promoting exercise as a means to self-management as interpreted by community physiotherapists.

Study 2 employed hermeneutic phenomenology to explore the experience of community physiotherapists promoting exercise as a chronic disease self-management strategy for older adults living in rural areas of southern Ontario. Although rural older adults interact with physiotherapists in multiple clinical care settings, home care has been identified as an important and growing sector of Canadian health care, which may better serve those living in rural areas. Ontario has a further developed community-based physiotherapy care program than Nova Scotia. Community physiotherapy in Nova Scotia is available in only three of the nine provincial District Health Authorities, for an average of two visits per patient, generally on the basis that they cannot access outpatient services.¹ However, in Ontario, community physiotherapy is accessible in every region of the province for individuals who cannot access outpatient services or have recently received a joint arthroplasty. These clients are generally seen for an average of four to six visits each.² Therefore Study 2 was conducted with community physiotherapists practicing in rural Ontario to construct an understanding of community physiotherapists' experiences in promoting exercise as chronic disease self-management for rural-residing older adults. Given two different methodologies were employed with two separate participant populations in different geographical contexts, I have sought to demonstrate consistencies and disparities within and between Studies 1 and 2, and in comparison to existing literature in other Canadian contexts, while staying true to my research paradigm in making appropriate knowledge claims. Furthermore, I have provided a discussion that reflects on my own experiences (statement of self) to explain how I came to this project.

3.2 Reflexivity and Statement of Self

There are many purposes for researcher reflexivity in qualitative investigation. For example, the purpose of reflexivity may be to develop an analysis of the undercurrents of inter-subjectivity between the researcher and the researched, or to develop an introspective analysis of the researcher's personal experience and meaning. These analyses are meant to be both thoughtful and self-aware.³ The purpose of this section is introspection to bring to light my sociocultural background, assumptions, positioning and behaviour as they might have impacted this research purpose, co-construction (inter-

subjectivity) of the themes and dissemination of findings. The aim of this section is to help enhance the readers' understanding of the investigated research topic.

I am a physiotherapist with graduate training in qualitative methods of interviewing and analysis. I live in a mid-sized urban Southwestern Ontario city and work in the city's only rehabilitation hospital. It was here, in Southwestern Ontario where I completed my graduate-level research training and physiotherapy entry-to-practice program. However, I was born and grew up in southern Nova Scotia. I have lived and worked in the respective investigated settings of both studies for a combined five and a half years. Throughout both studies I engaged in researcher reflexivity⁴ by maintaining a journal of my field experiences: participant observations,⁵ informal discussions with local gatekeepers and stakeholders, and where possible, participants' postures or gestures, and tone of voice during interviews. I shared the journal with my supervisor, to acknowledge and discuss my influences on the interpretation of the findings.

My keen interest in understanding exercise behaviour within the context of older adults and chronic disease stemmed from a personal struggle to try and understand two elderly family members' motives to care for themselves in comparison to my own values, beliefs, and behaviours. The first was a maternal great aunt in her nineties, a mother who did not work outside of the home. As an adult and in her later years, she lived alone in a large urban Southern Ontario city away from her extended family. She walked her block twice a day and regularly did strengthening exercises for her arms and legs. She was legally blind and eventually died of final stage skin cancer in her late nineties. The second was my paternal grandfather in his early eighties, a retired crane operator and road construction worker who lived with his wife. He lived on the same property as one of his sons and his family, and in the same county as the majority of his close and extended family in a rural Nova Scotian setting. A small cut and infection led to the amputation of his diabetic foot. He remained sedentary and acquired wounds that did not heal. The unhealed wounds led to subsequent amputations until he had bilateral above knee amputations. A fall discouraged him from wanting to use his prosthetic limbs and he eventually died in a nursing home due to organ failure. In my naïve perspective, as an active twenty-year-old and then kinesiology student who valued exercise as an important

means to maintaining and improving my own health, I placed blame on his health service providers as well as my grandfather for not having done more for him. I wanted to know why he did not *choose* to do more. This perspective of my grandfather's situation assumed that people should engage in activities to care for themselves and that exercise is an important and easily implemented means to caring for one's self. This perspective did not acknowledge the influence of sociocultural factors associated with exercise and self-care participation that I later learned in my undergraduate and graduate studies.

My undergraduate studies in kinesiology allowed me the opportunity to learn psychology and behaviour change theories in relation to health promotion (i.e., educational and environmental support to facilitate modification of harmful health behaviours).⁶ It was then that I began to understand the reciprocal influence of environment, behaviour, and personal factors, such as cognition, emotion, and disease onset, as defined within the Social Cognitive Theory or SCT.⁷ Additionally, as a research assistant in the university's undergraduate kinesiology department I had the opportunity to interview older adults residing in a Nova Scotia nursing home about their exercise beliefs. These experiences helped me to understand why someone with a similar sociocultural background to my grandfather might not value or participate in exercise for self-care in the same ways that I did, as an athlete, a kinesiology student, and as a personal trainer. Through the Canadian Society for Exercise Physiologists, my personal training education taught me how to take what I learned in class about SCT and the Trans-theoretical model or TTM⁸ and apply it to my personal training clients. I learned the importance of asking my personal training clients how important it was for them to change their behaviour to meet their training goals, and how confident they were in their ability to make that change. I also learned to identify what stage of change they were at using the TTM,⁸ and how to facilitate behaviour change by integrating what are called *processes of change*.⁸ Although my education as a personal trainer enabled me to engage in theoretical-based exercise promotion, my career as a personal trainer was short-lived, as I soon moved halfway across the country to pursue my graduate studies.

As a student of Western University's combined degree program (Master of Physical Therapy entry-to-practice program and Doctorate of Philosophy in Health and

Rehabilitation Sciences), I had the unique opportunity to achieve the goal of advancing research in my clinical field while gaining the skills to become an effective clinician. The unique design of this combined program has driven me to become a more efficient independent learner through my research training and a more supportive team member through my inter-professional clinical learning experiences. To achieve the combined degree, students' enrolment as a Doctoral or Master student changes from year to year until requirements for both degrees are complete. I was first enrolled in the Doctoral program in 2008 where I was exposed to many research methodologies and worldviews that provided me with the skills to prepare and conduct Study 1. During that first year I also studied the similarities and differences between major behaviour change theories in the physical activity literature to understand the importance of theory in: (a) designing and (b) evaluating interventions in the realm of physical activity promotion and disease prevention. Furthermore, I studied the strengths and shortcomings of the use of theory in health promotion to better understand health and physical activity promotion research findings from my own work and within the literature. This independent study of behaviour change theories was for partial completion of my comprehensive examination (a milestone requirement within the doctoral degree program).

From September 2009 to August 2011, I completed the Master of Physical Therapy entry-to-practice program and felt that through academic and clinical opportunities I grew better able to identify knowledge gaps in clinical practice that could be informed by future research. In school we touched on the International Classification of Functioning, Disability and Health or ICF model, but it was not until I got into practice settings that I understood the influences of social and physical environments on a client's recovery.⁹ My clinical instructors taught me to 'look at the bigger picture.' This became most obvious during my six-week student clinical placement in home care. For example, a low score on the Berg Balance Scale does not solely put a client at risk of falling without the use of a gait aid. Poor balance impacts his ability to move about his home, to go to the washroom, to prepare food, to go to the store or run errands, to interact with his wife, and to engage in his favourite past times. I began to understand how to integrate these elements into goal-setting to enhance patients' engagement in physiotherapy. However, a deeper layer of understanding was attained once I began independent practice providing

service for clients with brain injury and/or spinal cord injury. Within the same hospital outpatient rehab department, I work for three separate programs within the same treatment space. Although I provide service to the same patient populations (brain and spinal cord injury), two of the programs are provincially funded, while the third is funded privately (self-pay) or through third-party (motor vehicle accident insurance or workplace injury insurance). Across the three programs I began to see a dissonance in expected length of stay, impact of availability of funding on therapy intensity and even a clinician's ability to enable a client to maximize their independence through acquisition of orthoses and gait aids. This further highlighted the influence of funding on access and treatment intensity and therefore the importance of not only promoting self-management, but also doing it efficiently and effectively. Throughout my experiences as a kinesiology student, a personal trainer, researcher and now physiotherapist, what remained constant was the struggle to promote participation in exercise to improve or maintain health among clients who did not engage in exercise in the same ways that I did, or perhaps did not value or believe it to be important or as important as other self-care behaviours (e.g., taking medications and eating well). Each experience solidified my perception that exercise participation is a valuable means to improving or maintaining health and preventing disease exacerbation. Furthermore, my experiences have shaped my perception that people can and should want to be active participants in their own health care. I acknowledge that exercise and self-management are not the only approaches to health care and these approaches may not be appropriate for everyone, as there exists literature problematizing exercise promotion and self-management promotion.¹⁰ However, promoting self-management through education, consultation, and therapeutic exercise is described within the essential competency practice roles for Canadian physiotherapists.¹¹ In other words, exercise is an important modality to physiotherapy practice, and enabling individuals to care for themselves is an important part of physiotherapy practice philosophy. Together, with my experiences as a personal trainer and as a kinesiology student, and now physiotherapist, these experiences have guided my clinical practice, and highlighted the importance of working more diligently with my clients within their social and physical environments to cooperatively co-create an understanding of our goals and expectations for the intervention through investigation of

each other's shared (and unshared) values, beliefs and behaviours as they relate to the client's health and therapeutic exercise.

3.3 Research Paradigm

Constructivism is a philosophical approach to research in which it is assumed that how a concept is understood, valued and enacted varies according to an individual's sociocultural location and experiences; and that members of a particular cultural group may develop shared understandings through social interactions over time.¹² This acknowledges that some individuals believe or value concepts differently due to various reasons including personal experience and culture. Epistemologically, a constructivist position requires a transactional relationship between the researcher and the researched.¹² Therefore, the researcher (myself) and the participants acted as co-constructors to cooperatively create an understanding of the concept under inquiry. Specifically, I collaborated with older adults in rural Nova Scotia to cooperatively create an understanding of the concept of exercise, self-care and of exercise as self-care (Study 1), and with community physiotherapists working with rural-residing older adults in Southwestern Ontario to interpret physiotherapists' meaning(s), motives and emotions about their experiences with facilitating self-management support in the context of peoples' homes (Study 2).

Unlike positivist or post-positivist approaches, which traditionally underpin randomized control trials, constructivism denies the notion of the existence of a single truth or reality. This means that knowledge claims made from constructivist research are not purported to be permanent or universal realities.¹³ Ontologically, knowledge claims are aligned with relativism, given that a constructivist approach recognizes realities are constructed¹⁴ and thus have the capacity to evolve over time. Constructivism is considered similar to interpretivism or as 'constructivist-interpretive' by Denzin and Lincoln¹⁵ while Schwandt¹⁶ argued that constructivism and interpretivism are distinctly different. It is my position that interpretivism and constructivism are similar, but I believe the term constructivism is more transparent with respect to the idea of partnering the researcher and the researched to co-construct meaning.

Constructivism was adopted as the research paradigm underpinning Studies 1 and 2 and informed my approach to engaging in researcher reflexivity.⁴ The transactional researcher-researched relationship demanded by constructivism requires that I recognize my own personal and professional experiences will influence the final representation of the findings. However, stating that my experiences as a physiotherapist and as a displaced Nova Scotian will influence my collaboration with research participants is not enough to transparently demonstrate how a concept or finding was theorized. The constructivist paradigm allows me to embrace (rather than bracket or separate) my personal influences on the findings, using journaling and collaboration with participants and my thesis supervisor as vehicles to explore, highlight, and understand these influences through researcher reflexivity.⁴

The collaborative nature of a constructivist approach aligns with my personal approach to clinical reasoning in physiotherapy practice and the model of Expertise in Physical Therapy Practice.¹⁷ In a grounded theory of physical therapists,¹⁷ expert clinicians and patients and/or their families engaged in a collaborative decision-making and clinical reasoning process. The patient was seen as a person first and as a valued knowledge source at the centre of the physiotherapy clinical assessment. Therefore, a constructivist approach resonates with both published and personal physiotherapy practice approaches.

The constructivist paradigm was employed for both Study 1 (focused ethnography) and Study 2 (hermeneutic phenomenology). I chose to follow the works of Gadamer¹⁸ in my approach to phenomenology, as described in the next section. Given my alignment with constructivism, Gadamer's writing strongly resonated with me, and appeared the natural choice to inform my hermeneutic phenomenology. Gadamerian hermeneutic phenomenology seeks to construct an understanding rather than to create a theoretical framework.¹⁹ Therefore, Gadamer's approach to phenomenology has been characterised as inherently constructivist.²⁰ Annells¹⁹ argued that hermeneutic phenomenology is ontologically, epistemologically and methodologically situated within the constructivist paradigm, as explained by Guba²¹ and Guba and Lincoln.²² Also, the relativist ontology accompanying a constructivist approach aligns with the use of ethnography as a means to understand local knowledge about shared values, beliefs, and behaviours of older adults

in a rural Nova Scotian community. These threads are woven more tightly in the next two sub-sections.

3.4 Study 1

Study 1 was entitled “Any movement at all: A focused ethnography of rural community-dwelling older adults’ perceptions and experiences of exercise as self-care.”

3.4.1 Statement of problem

The majority of Canadians 60 years or older live with at least one chronic health condition.²³ The impact of chronic disease is greater for older adults living in rural areas compared to urban centres,²⁴ given poorer health status and health service access in rural areas.²⁵ Strong evidence exists to support the benefits of exercise to improve functional mobility in chronically ill populations.²⁶ Provincial governments have proposed self-management as the preferred approach to dealing with this growing issue.^{27, 28}

Developing an understanding of personal characteristics and sociocultural contexts of rural community-dwelling older adults could facilitate collaboration between physiotherapists and their clients and the construction of exercise interventions in which clients are more likely to participate.

3.4.2 Statement of purpose

To construct a contextual example of community-dwelling older adult participants’ shared values, beliefs, and behaviours related to exercise as self-care.

3.4.3 Study design and procedure

Ethnography provides a means to gain an understanding of how members of a group make sense of their world by exploring their shared values, beliefs, and behaviours.²⁹ Here, the shared values, beliefs, and behaviours of a group represent their culture, where culture is considered a dynamic construct influenced by age, gender, physical and social context.³⁰ When compared to traditional ethnographies, focused ethnography draws more heavily on interviewing than participant observation to explore a single concept in a comparatively shorter time frame.³¹ Constructivist focused ethnography was used here to understand the concept of exercise as it was understood and enacted by community-

dwelling older adults within the sociocultural context of a Canadian Maritime rural community. This rural community is a coastal summer tourist destination where more than a third of residents are older than 65 years. A strength of ethnography is to provide ‘thick descriptions’ or explanations of the implicit and tacit aspects of culture and social processes and of the context and circumstances in which they occur.^{32, 33} Dissimilarly, the statement of a fact or a ‘thin description,’³² such as approximately 38% to 47% of Canadian older adults are sufficiently physically active to meet guidelines for health benefits,³⁴ provides a cue to action for the health service industry. But, without coming to understand older adults’ motives, beliefs, or what is meant by ‘physically active,’ the possibility of enacting an appropriate strategy would be halted. In contrast to anthropological ethnographies, health science focused ethnographies pose a greater risk of excluding information relevant to developing a thick description. Focused ethnographies are problem-focused and conducted over a short time period, which presents boundaries that could result in exclusion of important links or comparisons of participant perspectives and observations.³¹ This limitation was attended to through accessing multiple sources for data, such as participation interviews and observations, conversations with gatekeepers, which is further described within the sub-sections on sample and recruitment, interviewing and analysis, and methodological rigour. Additionally, ethnography is not limited to a specific epistemology or theory. Therefore, ethnography has been described as versatile, which is considered both a strength and a weakness. For example, there are no standard data collection techniques. Therefore, in order for readers to judge the credibility of a study’s findings, it is imperative that ethnographers be explicitly transparent about the research process and their role in the process. Transparency requires detailed descriptions of sampling and recruitment, participant observation, interviewing, transcription and memoing, analysis, as well as the sociocultural background, and epistemological and ontological influences of the researcher in relation to the study context. The previous subsections of this chapter on Reflexivity and Research Paradigm summarized possible personal/sociocultural and epistemological/ontological influences on the interpretation and presentation of findings. Below is a description of the research process from entering to exiting the field, and the related theoretical influences.

I drew on the writings of O'Reilly³⁵ to frame the data collection process from entering to exiting the field: (i) gather contextual information to enhance familiarity of and gain access to the setting and the people within it; (ii) collaborate with participants to co-construct an understanding of exercise and self-care; and (iii) physically leave the setting. Similar phases are described by others,^{29,35} including Goffman who described these phases rather as problems of “getting into place,” “exploiting place,” and “getting out [of place].”^{36(p.126)} The next section explores how the study progressed with respect to entering the field, collecting and analyzing findings, and exiting the field.

3.4.3.1 Entering the field

An important first step was to gather information on local demographics and politics, and identifying gatekeepers or liaisons within the community who could facilitate gaining entry or access to the people and places necessary to fulfill the outlined research objectives.^{29,35} Furthermore, identifying and articulating my proposed role in the setting was seen to have influenced my ability to gain access to potential participants and local information about the setting.^{29,35} Having grown up in the Maritimes, and lived and worked in the investigated setting for two summers prior to initiation of the study, I was already well aware of the local demographics and politics. I self-identified as a *participant-observer* given my role within the community, and that I was known to local residents.²⁹ I believe my role and familiarity with the community facilitated gaining access to the setting and therefore recruitment of potential participants. However, I sought further information from local leaders and Statistics Canada to enhance my understanding of the setting. I engaged in participant observation of local older adults' daily activities in public spaces whenever I was in public spaces, or participating in special events and festivals, starting with the first summer living in the community. These public spaces included the waterfront, walking trails, local gym, church, pharmacy, grocery store, café, and the community center, which also housed the office for my seasonal employment. Additionally, I engaged in informal discussions with local leaders from the community center, churches and other local businesses including the café and pharmacy (see Appendix A for informal discussion and recruitment guide for gatekeepers). These initial steps, recorded in my field experiences journal, were

conducted to understand possible contextual influences on residents' exercise perceptions, and locally available health and exercise services prior to recruiting and interviewing participants.

3.4.3.2 Participant recruitment and sampling

Purposive sampling techniques were used to facilitate recruitment of community residents with divergent and convergent experiences, health statuses, and activity levels. Recruitment of participants was facilitated with assistance from the local leaders, and was supplemented using snowball sampling and posted advertisements at the community centre, churches, pharmacy, and postal office. A sample of 15-20 participants was estimated to be sufficient to achieve the depth of understanding required based on a review of health-related focused ethnographies.³⁷⁻³⁹ Community residents over 65 years old, who lived on their own or with family, but not in an assisted-living or nursing home, were considered eligible to participate. Individuals living in nursing homes were excluded, as these individuals were more likely to follow a regular schedule for self-care and exercise dictated by the employees rather than their own choice. I continued to recruit and interview new participants until a point of saturation was achieved where no new information was found. The sample represented men and women living with and without chronic disease, and included men and women who did and did not participate in exercise.

3.4.3.3 Interviewing and analysis

Each participant engaged in two audiotaped interviews with me at a location of their choosing, individually or with their spouse, if both had consented to participating. Interviews were guided by questions focused on understanding the participant's engagement in and perceptions of exercise and self-care. For example, "what do you do to take care of yourself?" and "what does it mean to you to exercise?" (See Appendix B for initial interview guide). Interviews progressed in a conversational style for approximately 60-90 minutes in length, using questions and probes from the interview guide to provoke further discussion and develop thick descriptions of participants' perceptions of exercise and self-care or exercise as self-care.

Audio recordings were transcribed and analysed using inductive coding methods.⁴⁰ Specifically, each transcript was reviewed line-by-line to identify statements and phrases representative of the research purpose. In other words statements and phrases that described the participant's values, beliefs, behaviours concerning exercise and self-care and/or exercise as self-care were highlighted and labelled as such. NVivo 7 software (QSR International, Doncaster, Victoria, AUS) was used to sort statements into similar groupings or themes looking for patterns in thought (i.e., values and beliefs) and behaviours. I compared findings from the initial interviews and participant observation field notes to flesh out confirming and disconfirming evidence of the adequacy of interpretation of preliminary themes; and to ensure preliminary themes resonated with both the investigators and the participants. Given the constructivist underpinnings of this study, this step recognizes that I may have understood participants differently than they had intended and thus seeking understanding through additional means (i.e., participant observation) enabled me to further flesh out the constructions of participants' perceptions and experiences. Second, interview summaries and preliminary themes were then shared with participants during second (follow-up) interviews to ensure themes resonated with participants and to provide an opportunity for discussion and clarification (see Appendix C for follow-up interview guide). Finally, transcripts were discussed with my thesis supervisor to refine themes and to select participant quotations that illustrated or validated each of the key themes.

3.4.3.4 Exiting the field

The exit from the community was conducted by providing thank you notes and acknowledgements to gatekeepers. Attempts were made to negotiate and arrange a more public departure by offering a public presentation of the study findings. However, time constraints and scheduling conflicts prevented such an event from occurring prior to my physical departure from the community. Instead, an audio-recorded PowerPoint presentation of the findings was given to the leader of the community centre's special project for seniors, as a means to disseminate the findings to participants and community residents.

3.4.4 Ethical approval

This study was approved by the University of Western Ontario Health Sciences Research Ethics Board (see Appendix D for copy of ethical approval letter). There was found to be no formal research ethics board within the community to be studied, but I engaged in informal discussions with local leaders from the community centre, marina, and other local businesses, such as the café, pharmacy and churches whom I identified as community gatekeepers to identify barriers to participant recruitment. The gatekeepers assisted with participant recruitment and through dialogue provided a better understanding of contextual influences on local older adults' perceptions of exercise, and available health and exercise promotion services. Participants were informed that their participation was completely voluntary and anonymous, and that they could choose to withdraw at any time. With each participant, I summarized the Letter of Information and Consent (see Appendix E for copy of letter of information and consent), clarified that the interview would be audio-recorded, but their identity would not be connected to the data, files, or publications. I then confirmed their understanding of the letter's contents, answered any and all questions they had about the study and their potential participation, and obtained written informed consent for the initial interview, and permission to be contacted for the follow-up interview, and possible future interviews for future studies (within the five-year period that their contact information would be retained). Confidentiality was maintained using alphanumeric coding of participants and de-identifying the name of the research setting. Audio recordings and transcripts were kept on a password protected computer and in a locked file box in a locked room when in the field, and in a locked filing cabinet in a locked office when at the university campus.

3.5 Study 2

Study 2 was entitled, "Making connections: Engaging rural-residing older adults in chronic disease self-management."

3.5.1 Statement of problem

Community physiotherapists working with older adults in their own homes possess the expert knowledge and skills to promote chronic disease self-management among this

population. A holistic approach to promoting chronic disease self-management would move beyond a biomedical focus in order to include the client's experience of living with the chronic illness and an understanding of the client's personal meaning of functional loss to everyday living.^{17, 41} The plethora of literature concerning older adults' perceptions of exercise for chronic disease self-management described within the literature review supports the findings from one study that found older adults and clinicians conceptualize self-management differently.⁴² This disparity could represent a potential barrier to promoting chronic disease self-management among older adults. Unfortunately, research addressing how community physiotherapists support chronic disease self-management within life at home for older adults was not found.

3.5.2 Statement of purpose

The purpose of this study was to understand the phenomenon of promoting chronic disease self-management, as experienced by community physiotherapists working with older adults in rural communities; and to understand how working with older adults living with chronic illness has informed or changed the practice of community physiotherapists.

3.5.3 Study design and procedure

Phenomenology is a research methodology that enables researchers to engage in open-ended interactions with participants to discover the contextualized meanings of their experiences with a particular phenomenon.⁴³ In this case, it was interactions with community physiotherapists to discover the contextualized meanings of their experiences of working with older adults with chronic disease. There are many types of phenomenology. Hermeneutic phenomenology characterizes the work of Heidegger, which was later built upon by Hans-Georg Gadamer.^{18, 44} Gadamer's approach to hermeneutics has been characterized as inherently constructivist²⁰ and assumes that the meaning of experience is understood through a study of language.^{18, 44, 45} Two important concepts, central to Gadamerian philosophy of phenomenology, are prejudice and universality. Specifically, this means that Gadamer recognized the importance of our personal and social history as an unavoidable influence on our understanding of the world around and a part of us. Referred to as our 'horizon of understanding', our prejudices

represent our understandings of the world given our previous experiences. An inability to separate our selves from these pre-understandings and experiences, Gadamerian hermeneutics has been interpreted as requiring researchers to embrace and highlight their prejudices as they come together with research participants to construct a historical reflection, a constructed interpretation or a 'fusion of horizons'. Universality implies that readers who understand the research product or 'fusion of horizons' are connected to the researcher and the researched by a common human consciousness. This means that the research product or expression represents something culturally common between the reader, the researched and the researcher and it is that connection that makes understanding possible.⁴⁴ Although he has published his philosophy on hermeneutics, and the constructs of prejudice and universality, Gadamer, like Heidegger before him, did not develop specific research methods based on his philosophies. This task has been taken up by researchers in the Nursing field⁴⁵ whose methods have since been applied to studies conducted in the physiotherapy field.⁴⁶ Fleming, Gaidys, and Robb⁴⁵ describes a five-step method: (1) deciding on a research question, (2) identification of pre-understandings, (3) gaining understanding through dialogue with participants, (4) gaining understanding through dialogue with text, and (5) establishing trustworthiness. A description of these methods and an explanation as to how they were taken up is offered below.

3.5.3.1 Deciding on a research question

When *deciding on a research* question, as explained by Fleming, Gaidys, and Robb,⁴⁵ the question must reflect the researcher's methodological assumptions and be consistent with Gadamer's aim to develop a deeper understanding or a broader 'horizon of understanding.'¹⁸ I queried the meaning of the experience of promoting chronic disease self-management to rural-residing older adults, as I wanted to understand how community physiotherapists might be better supported in a health promotion role and furthermore, how rural-residing older adults' self-care activities might be supported by community physiotherapists. This question holds political and social value given the growing incidence of chronic disease among older adults, the ongoing advocacy for self-

management by government, and shorter hospital stays propelling the movement of health service provision from the hospital to community settings.

3.5.3.2 Identifying pre-understandings

The next step was to *identify my pre-understandings* or prejudices, which were partially described under Statement of Self and Reflexivity, and are further fleshed out here. I interpreted Gadamer¹⁸ as suggesting researchers identify and continually reflect on their pre-understandings in order to inform the research process and interpretation of findings. Realizing or identifying pre-understandings occurs in light of conflict with opposing beliefs or opinions of peer researchers or participants. Therefore, one strategy to identifying pre-understandings would be through conversation with a colleague and or research participant(s).⁴⁵ Where pre-understandings can change with experience, it is reasonable to implement ongoing strategies for identifying pre-understandings as they evolve throughout the research process. As Fleming and colleagues described, this pursuit allows researchers to remain oriented to the phenomenon from within the hermeneutical circle.⁴⁵

My assumptions or pre-understandings about the experience of promoting chronic disease self-management among rural-residing older adults stem from my personal experiences as a student physiotherapist in a community clinical setting, my engagement in Study 1, and then as a registered physiotherapist in an outpatient clinical setting; and my understanding of physiotherapy practice philosophy and essential competencies for physiotherapists in Canada. My assumption is that community physiotherapists regularly promote chronic disease self-management with older clients using a holistic approach that incorporates client and family values in the process. I also assume that community physiotherapists primarily approach chronic disease self-management through promoting exercise participation to, for example, improve cardiopulmonary function, reduce stiffness/improve mobility, and improve weight/blood sugar levels. Now, as a physiotherapist in an outpatient setting, I often liaise with community physiotherapists who have helped clients to bridge the gap from hospital discharge to accessing outpatient services. Through this partnership I continue to develop an understanding of how community physiotherapists work with their clients to facilitate or maintain independence

and/or functional mobility in preparation for discharge or transfer to outpatient physiotherapy services. This collaborative practice approach recognizes the values of clients' perspectives and is aligned with published work on physiotherapy practice philosophy.

Physiotherapy experts believe practice is meant to be patient-centered and to be informed by various dimensions of practice.¹⁷ In her model for expert physiotherapy practice Jensen and colleagues explained the interplay of physiotherapy experts' beliefs about patient goals, beliefs about physiotherapists' clinical roles, and the meaning of physiotherapy practice within the larger health care context.

...[Physiotherapy experts] all emphasized that practice begins and ends with patients. This translated into listening intently to a patient's stories, understanding the context of the patient's life in designing and implementing treatment, and collaborating and teaching patients and families to regain function and enhance quality of life.^{17(p.181)}

Applying this model to practice with geriatric populations, Davis⁴⁷ describes the proposed role of physiotherapists as 'healers'—helping older adults regain function to become whole again, by taking a holistic approach to physiotherapy practice. Davis' critique recognizes physiotherapy's biomedical origins and highlights that we must move beyond this philosophy: "Obviously, we are most skilled at working with physical needs, but to ignore intellectual, emotional, and spiritual needs and functions is to provide inadequate care;"^{47(p.253)} "Older adults need physical therapists devoted to healing, not to fixing."^{47(p.259)}

The Essential Competencies Profile for Physiotherapists in Canada¹¹ moves beyond theoretical expert practice models and echoes Davis' call for a holistic approach to physiotherapy practice. Specifically, the Essential Competencies document requires physiotherapists adopt a role as a *collaborator* to work with clients, families and other health disciplines to work towards clients' goals and integrate clinical expertise, current research, and client values into the clinical decision-making process. The Essential Competency Profile also requires physiotherapists be *experts* in implementing

interventions for condition-specific health promotion and self-management through education, consultation, therapeutic exercise and more.¹¹ The expectation of enacting a collaborative and patient-centred care approach aligns with my pre-understanding that community physiotherapists use a holistic approach to facilitate chronic disease self-management using exercise, and incorporating client and family values in the process.

3.5.3.3 Gaining an understanding through dialogue with participants

Gaining an understanding through dialogue with participants represents the processes of sampling, recruitment, and interviewing. Interviewing participants who directly experienced the phenomenon allowed me to become immersed in the topic, moving towards a fusion of understanding. Gadamer notes that the researcher can never fully understand the participant, as this would require abandoning all pre-understandings. Therefore the purpose of hermeneutic phenomenology is not to replicate the participant's experience, but to reach a shared (new) understanding. Furthermore, one can never fully understand the other where understanding is contextual and constantly evolving.^{18, 48} Therefore there could be no criteria to clearly define when the understanding of another is fully captured or when data saturation has been reached. It is for these reasons that I decided to interview each participant once. I could only create a fusion of understanding with participants that was reflective of our shared understanding at the time of the interview. Instead of a pursuit of saturation, I implemented strategies during the interviews to clarify and ensure that my interpretation of their experience resonated with each participant, as described below following the description of sampling and recruitment strategies.

This study was conducted in Southwestern Ontario where formalized in-home care by one of Ontario's Community Care Access Centres (CCACs) and established chronic disease community groups exist. Collaborative relationships with co-investigator and thesis supervisor, Dr. Connelly and her home care sector contacts were engaged to seek permission for potential participants. Participants were physiotherapists who, at the time of the study, were registered with the College of Physiotherapists of Ontario and

practicing in the home care sector with at least 50% of their caseload consisting of rural community-dwelling clients over age 65.

First contact with potential study participants (community-based practicing physiotherapists) was via Service Provider Organizations, contracted by the Southwest CCAC, who provide physical therapy services in the community. These Service Provider Organizations were asked to forward the request for participant volunteers to the physiotherapists in their agency at their discretion. From the physiotherapists who volunteered, the researcher purposively selected participants to achieve maximal variation of practice duration in the community setting. This facilitated exploration of differing experiences, achieving insights not unique to any one type of chronic disease, extent of experience with chronic disease, or practice pattern.

I engaged in semi-structured, audiotaped interviews by phone with six consenting participants. The aim was to interview between 6 and 10 individuals, based on a hermeneutic phenomenology informed by Gadamerian hermeneutics.⁴⁹ The interviews lasted approximately 60-90 minutes. The interviews were focused on the participants' experiences and perceived issues in facilitating chronic disease self-management support to rural community-dwelling older adults. Participants were encouraged to describe past and present experiences in relation to emotional, physical and social interactions with family members, peer health professionals and community partners involved with older adults living with chronic disease (see Appendix F for Study 2 interview guide). Analytic memos⁵⁰ made during interviews captured non-verbal nuances and subtleties as well as initial queries and case constructions highlighting the main factors of participants' experiences. At the time of the interview, participants were asked questions directly related to the descriptions they provided in order to reach a deeper level of understanding, and to allow time to reflect and inform my understanding of what was said.

3.5.3.4 Gaining an understanding through dialogue with the text

Gadamer's approach to hermeneutics assumes that the meaning of experience is understood through a study of language.^{18, 44, 45} To construct a 'fusion of horizons' is not to replicate the participants' experience, but to create a new, shared interpretation of their

experience through dialogue. My approach to analysis therefore included immersion in interview transcripts and analytical memos of non-verbal information and ongoing reflections of evolving pre-understandings.

Based on the 5-step procedure described by Fleming and colleagues,⁴⁵ interview transcripts were read and re-read to become familiar with the text. Transcripts were then coded by identifying segments of the text representative of the experience of promoting chronic disease self-management. These codes were made into case constructions for each participant and then shared with my supervisor to ensure codes and case constructions well represented the participants' experiences, and to highlight any change or further influences of my pre-understandings within the constructions. This process was done to promote transparency and reflexivity. Case constructions from all participants were synthesized by drawing connections between the cases to construct a main analytical framework, representing the structure of the phenomenon. Transcripts were reread to compare the framework with the interview texts and to identify main, overarching themes. Findings were written up following further discussion with my supervisor to refine themes based on verification from follow-up interviews. Those participants who requested a copy of the interview transcript were provided a copy once the findings were written up.

3.5.4 Ethical approval

This study was approved by the University of Western Ontario Health Sciences Research Ethics Board (see Appendix G for copy of ethical approval letter). This study was also approved by the research ethics boards VHA Home Health Care, a service provider organization that provides community physiotherapy services in the Ottawa Region, the Greater Toronto Area, and London (see Appendix H for copy of ethical approval letter). Participants were informed that their participation was completely voluntary and anonymous, and that they could choose to withdraw at any time. With each participant, I summarized the letter of information (see Appendix I copy of letter of information and consent), clarified that the interview would be audio-recorded, but their identity would not be connected to the data, files, or publications. I then confirmed their understanding of the Letter's contents, answered any and all questions they had about the study and their

potential participation, and obtained written informed consent for the initial interview, and permission to be contacted for a follow-up interview, and possible future interviews (for future studies within the five-year period that their contact information would be retained). Confidentiality was maintained using alphanumeric coding of participants and de-identifying the name of the research setting. Audio recordings were stored on a password-protected computer and interviews transcripts were stored in a locked filing cabinet in a locked office at the university campus.

3.6 Methodological Rigour

To enhance methodological rigour for Studies 1 and 2, consistent attention was paid to transcendent criteria for trustworthiness as described by Morrow⁵¹ and summarized in Table 1. This section describes and explains the choice of Morrow's criteria and the application for both Studies one and two. I chose Morrow's transcendent criteria based on my belief that it best resonates with my research objectives and that it may allow me to demonstrate quality of this research to an audience who does not share a constructivist research paradigm.

Morrow's criteria for *adequacy of data and of interpretation* require the researcher to seek confirming and disconfirming evidence, describing how the data or voices of the researcher and participants was integrated with a balance of researcher's interpretations and participants' quotations. Furthermore, Morrow's criteria for *subjectivity and reflexivity* demand that researcher be transparent about their influence and positioning as co-constructors of meaning. Investigating a research problem that is of social, political and/or practical significance (i.e., *social validity*), and doing so in a comprehensive manner with various sources of information, and a well-defined analytic framework builds confidence in the reader that the findings are valuable, credible, useful or simply trustworthy. Table 2 provides a description of each criterion, and further discussion of exactly what was done in each study to attend to Morrow's criteria, are offered in the sub-sections for Study 1 and Study 2.

Table 1. Morrow's Transcendent Criteria for Trustworthiness

Criteria	Description
Social Validity ^a	Social significance of research goals; appropriateness of data collection/analysis procedures; importance of study result effects.
Subjectivity and Reflexivity	Constructivist paradigm requires researchers to embrace their positioning as co-constructors of meaning; engage in reflexivity by keeping an ongoing record of “experiences, reactions, and ... assumptions or biases” ^b to inform the analysis process, and/or critical discussion with peer researchers and participants regarding correction, direction and feedback on interpretations of findings ^c
Adequacy of Data	Used various types/sources of information; spent sufficient time in the setting to build rapport; and gathered evidence until no new or disconfirming evidence emerged.
Adequacy of Interpretation	Articulation of analytic framework; balance researchers’ interpretations of the findings and supporting quotations; clarity and depth of interpretations describing how data was integrated.

a. This criteria drew on the work of Wolf, M. M. (1978); b. Morrow 2005; c. Morrow explained this step is especially important when the interviewer is very familiar with or an insider to the culture or phenomenon studied.

3.6.1 Social validity

This study is proposed to have *social validity* given the central constructs of inactivity and chronic disease among older adults—especially in rural areas, represent significant social issues and Canadian health care system priorities.^{27, 28} Furthermore the goals for this dissertation are to provide contextual examples to enhance our understanding of exercise as self-care and self-management. In doing so, the findings from this dissertation could inform chronic disease care strategies and practices enacted by older adults and community health service providers, particularly physiotherapists.

3.6.2 Subjectivity and reflexivity

A journal was used to record participant observations, informal discussions, and non-verbal gestures during interviews. This journal was also used to flesh out an

understanding of my assumptions about observations, informal discussions, non-verbal gestures, and co-construction of themes with respect to my experiences as a physiotherapist, as a Nova Scotian and as a seasonal community resident of the research setting in Study 1. Each interview transcript for Studies one and two was reviewed separately by my thesis supervisor and myself. A critical discussion followed to flesh out preliminary development and final refinement of themes with a conscious reflection on my personal influences or assumptions in relation to the findings and interpretations. In Study one follow up interviews were conducted to share preliminary themes with participants and to allow opportunity for further discussion and construction of themes. In study two, follow up interviews were not conducted, but the interviewing technique was modified to ensure shared understanding of experience was being achieved. Specifically, I stopped to summarize and ask for further clarification on each explanation provided by the participants. The purpose of these checks was to ensure themes and case constructions resonated with the participants themselves.

3.6.3 Adequacy of data

To demonstrate adequacy of data I articulated the semi-structured interview strategies with open-ended questions employed for studies one and two. I continued to gather data, seeking confirming and disconfirming findings until patterns or similarities between the transcripts were co-constructed. This was accomplished by comparing interpretations with various sources of data. Specifically, I used participant checks, follow-up interviews, and (in Study 1) participant observations. Furthermore, I sought to acquire additional sources of information from local and published literature on each research setting and prospective participants, and through informal dialogue with gatekeepers to round out my understandings and highlight any possible personal assumptions that might have influenced the analysis processes.

According to Morrow, the interpretive status of evidence is influenced by the amount of time spent immersed in the setting and time building rapport. Immersion in the field is particularly important for ethnography. I have lived and worked in the investigated settings for both Study 1 and Study 2 for several months and years, respectively. From ethnography literature, I would position my role as a participant-as-observer, where I

participate in both settings and am known to the members of both settings.²⁹ However, the extent of my participation is limited to the extent to which the members of each setting view me as an insider.²⁹ To residents of the community interviewed for Study 1, I may have been considered both an insider and an outsider. Specifically, I was born and grew up in southern Nova Scotia until I was twenty-one at which time I moved to Ontario to pursue graduate studies. I lived and worked in the investigated community seasonally over three years. However, I was arguably an outsider given that I did not live year-round nor grow up in the community studied. Additionally, I am in my twenties, interviewing individuals who were over the age of sixty-five. The majority of the residents in this community were over the age of sixty-five. I could be called an insider by those who represent community physiotherapists in southern Ontario being that I am a physiotherapist, who lives and works in southern Ontario. During my first year of physiotherapy training in southern Ontario I completed a six-week student clinical placement in a community physiotherapy practice setting which provided me the opportunity to experience community practice first-hand. The majority of the clients I saw on placement were older adults. I had two preceptors: one provided service in the urban setting and the other provided service in the rural areas outside of the city. My current job requires that I liaise with community physiotherapists to negotiate continuity of care for clients in transitions to/from outpatient care. However, I am an outsider to community physiotherapists where I work in the outpatient department of an urban Southwestern Ontario rehabilitation hospital. Moving beyond the dichotomous insider/outsider debate, I move to acknowledge myself as a *relative insider*.^{52, 53} Meaning although I can claim partial membership to both settings, I cannot be an absolute insider in either setting. My position as a relative insider augmented the quality of the transcripts and interpretations. Specifically, my familiarity with local, shared, and technical language enabled me to remain faithful to the words of the participants.⁵² Unfortunately, my familiarity or closeness to local, shared, and technical language also means that, in describing my findings, tacit or taken-for-granted knowledge⁵⁴ may not be explicitly clear to the reader. To avoid this and therefore ensure *thick* descriptions of the findings,³³ we employed strategies to enhance the adequacy of the interpretation, discussed below.

3.6.4 Adequacy of interpretation

Following the recommendations from Morrow,⁵¹ I sought to improve *adequacy of the interpretation* by first providing a detailed articulation of the analytical framework for each study. I described rationale and theoretical influences for each step, and described my role and experiences in relation to the settings and interpretations of the findings. Studies one and two involved multiple steps of inductive analysis, sharing the reflexivity journal of field notes and analytical memos with my supervisor, triangulating data from various sources by cross-checking interpretations from interviews, observations, and literature with participants and my supervisor; and finally selecting participant quotes to validate findings. Lastly, theme labels were chosen to remain as faithful to the participants' words as possible. I provided description of study context, culture, and rapport with participants, in addition to ensuring a balance in number of quotations to researcher description while remaining true to the language used by participants. These strategies helped to create *thick* descriptions³³ and clarity or understanding of findings.⁵¹

3.7 Dissemination plan

For both studies, I collaborated with the research participants and those who helped with recruitment (i.e., gatekeepers) to determine how to best disseminate these findings to participants within their local communities, to health care practitioners, and other possible stakeholders. In the end, the findings of Study 1 were disseminated to the community at large by means of an audio-recorded PowerPoint presentation. I offered to share copies of the transcripts with participants, but only Study 2 participants were interested in receiving copies. Findings have been and will continue to be disseminated to both the academic and health professional communities via peer-reviewed journals, and local and national conference presentations. Future opportunities to promote consideration of these findings among regional health care policy makers (e.g., Ontario Southwest Local Health Integrated Network or the Nova Scotia South Shore District Health Authority), and health professional educators continue to be explored.

3.8 References

1. Klus MA. Community Physiotherapy, Capital District Health Authority, Nova Scotia. Graham L, editor. London, Ontario: Graham, L.; 2012.
2. Jackson J. Physiotherapist and Case Manager at the Southwest Community Care Access Centre. Graham L, editor. London, ON: Graham, L.; 2012. 1 p.
3. Finlay L, Gough B, editors. Reflexivity: A practical guide for researchers in health and social sciences. Oxford, UK: Blackwell Science Ltd; 2003. 255 p. (.
4. Finlay L. "Outing" the researcher: The provenance, process, and practice of reflexivity. Qual Health Res [Internet]. 2002 [cited 13 March 2013];12(4):531-45.
5. Fetterman, DM. Ethnography: step-by-step. [Internet]. 3rd ed. Los Angeles: Sage; 2010. 173 p
6. Donatelle RJ, Davis LG, Munroe AJ, Munroe A, Casselman M. Health: the basics. 3rd Canadian ed. Toronto, ON: Pearson Education Canada Inc; 2004. 482 p.
7. Bandura A, Adams NE, Beyer J. Cognitive processes mediating behavioral change. J Pers Soc Psychol. 1977;35(3):125-39.
8. Prochaska JO, Velicer F. The transtheoretical model of health behavior change. Am J Health Promot. 1997;12(1):38-48.
9. World Health Organization. International Classification of Functioning, Disability and Health (ICF) [Internet]. WHO 2013 cited May 14, 2013.]; [1]. Available from: <http://www.who.int/classifications/icf/en/>
10. Katz, S. Cultural aging: life course, lifestyle and senior worlds. Peterborough, ON: Broadview Press; 2005. 272 p.
11. National Physiotherapy Advisory Group. Essential competency profile for physiotherapists in Canada. 2009 Available from: <http://www.physiotherapyeducation.ca/Resources/Essential%20Comp%20PT%20Profile%202009.pdf>

12. Ponterotto JG. Qualitative research in counseling psychology: A primer on research paradigms and philosophy of science. *J Couns Psychol* [Internet]. 2005 [cited 13 March 2013];52(2):126-36.
13. Guba EG, Lincoln YS. Paradigmatic controversies, contradictions, and emerging confluences. In: Denzin NK, Lincoln YS, editors. *The sage handbook of qualitative research*. 3rd ed. Thousand Oaks, CA: Sage; 2005; p. 191-215.
14. Schwandt TA. Three epistemological stances for qualitative inquiry: Interpretivism, hermeneutics, and social constructionism. In: Denzin NK, Lincoln YS, editors. *Handbook of qualitative research*. 2nd ed. Thousand Oaks, CA: Sage; 2000; p. 189-213.
15. Denzin N, Lincoln Y. Introduction: entering the field of qualitative research In: Denzin N, Lincoln Y, editors. *Handbook of qualitative research*. Thousand Oaks, California: Sage; 1994; p. 1-17.
16. Schwandt T. Constructivist, interpretivist approaches to human inquiry In: Denzin N, Lincoln Y, editors. *Handbook of qualitative research*. Thousand Oaks, California: Sage; 1994; p. 118-37.
17. Jensen GM, Gwyer J, Hack LM, Shepard KF. Chapter 9: Expert practice in physical therapy. In: *Expertise in physical therapy practice*. Boston, MA: Butterworth-Heinemann; 1999; p. 175-206.
18. Gadamer, HG. *Truth and method*. New York, NY: Seabury Press; 1975. 551 p.
19. Annells M. Hermeneutic phenomenology: Philosophical perspectives and current use in nursing research. *J Adv Nurs*. 1996;23:705-13.
20. Dowling M. From husserl to van manen. A review of different phenomenological approaches. *Int J Nurs Stud* [Internet]. 2007 [cited 12 May 2013];44(1):131-42.
21. Guba E. The alternative paradigm dialog In: Guba E, editor. *The paradigm dialog*. Newbury Park: Sage; 1990; p. 17-27.
22. Guba E, Lincoln Y. Competing paradigms in qualitative research In: Denzin N, Lincoln Y, editors. *Handbook of qualitative research*. Thousand Oaks, California: Sage; 1994; p. 105-17.

23. Broemeling AM, Watson D, Prebtani F. Population patterns of chronic health conditions, co-morbidity and healthcare use in Canada: Implications for policy and practice. *Healthc Q*. 2008;11(3):70-6.
24. Keating N, Swindle J, Fletcher S. Aging in rural Canada: A retrospective and review. *Can J Aging* [Internet]. 2011 [cited 13 March 2013];30(3):323-38.
25. Romanow RJ. Building on values: The future of health care in Canada. [Internet]Saskatoon, SK: The National Library of Canada; 2002. Report No.: ISBN: 0-662-33043-9 Available from: http://www.hc-sc.gc.ca/english/pdf/romanow/pdfs/HCC_Final_Report.pdf
26. Rejeski WJ, Brawley LR. Functional health: Innovations in research on physical activity with older adults. *Med Sci Sports Exerc*. 2006;38(1):93-9.
27. Unit for Population Health and Chronic Disease Prevention on Behalf of Working Group Members. Nova Scotia chronic disease prevention strategy. Halifax, NS: Dalhousie University; 2003 Available from: <http://www.gov.ns.ca/hpp/cdip/cd-prevention-strategy.asp>
28. Ontario Ministry of Health and Long Term Care. Preventing and managing chronic disease: Ontario's framework. 2007 Available from: <http://www.health.gov.on.ca/english/providers/program/cdpm/index.html#1>
29. Hesse-Biber SN, Leavy P. Ethnography In: Hesse-Biber SN, Leavy P, editors. *The practice of qualitative research*. [Internet]. Thousand Oaks: SAGE Publications; 2006 p. 229-78.
30. Hunt M. Taking culture seriously: Considerations for physiotherapists. *Physiotherapy* [Internet]. 2007 [cited 18 April 2014];93(3):229-32.
31. Muecke MA. On the evaluation of ethnographies In: Morse JM, editor. *Critical issues in qualitative research methods*. [Internet]. Thousand Oaks: Sage Publications; 1994 p. 187-209.
32. Harper S, La Fontaine J. Ethnography In: Neale J, editor. *Research methods for health and social care*. New York, NY: Palgrave MacMillan; 2009; p. 238-52.
33. Geertz C. Chapter 1/Thick description; toward an interpretive theory of culture In: Geertz C, editor. *The interpretation of cultures: selected essays*. New York, NY: Basic Books; 1973; p. 3-30.

34. Statistics Canada. Physical activity during leisure time, 2010. Canadian Community Health Survey [cited 2013 Jan] Available at <http://www.statcan.gc.ca.proxy1.lib.uwo.ca/pub/82-625-x/2011001/article/11467-eng.htm> .
35. O'Reilly, K. Key concepts in ethnography. Thousand Oaks, CA: Sage; 2009. 234 p.
36. Goffman E. On fieldwork. *J Contemp Ethnogr*. 1989;18(2):123-32.
37. Resnick B. Functional performance and exercise of older adults in long-term care settings. *J Gerontol Nurs* [Internet]. 2000 Mar;26(3):7-16.
38. Crosato KE, Ward-Griffin C, Leipert B. Aboriginal women caregivers of the elderly. *Rural Remote Health* [Internet]. 2007 [cited 14 March 2013];7(4):796.
39. Robbins LK. A focused ethnographic study of women in recovery from alcohol abuse [D.S.N. on the Internet]. United States -- Texas: The University of Texas Health Science Center at Houston School of Nursing; 2004 Available from: <http://search.proquest.com.proxy1.lib.uwo.ca/docview/305057664?accountid=15115>
40. Boyatzis, RE. Transforming qualitative information: thematic analysis and code development. [Internet]. Thousand Oaks, CA: Sage Publications; 1998. 184 p
41. Edwards I, Jones M, Carr J, Braunack-Mayer A, Jensen GM. Clinical reasoning strategies in physical therapy. *Phys Ther* [Internet]. 2004 [cited 16 August 2013];84(4):312-30.
42. Kralik D, Koch T, Price K, Howard N. Chronic illness self-management: Taking action to create order. *J Clin Nurs*. 2004;13(2):171-83.
43. Koch T. Interpretive approaches in nursing research: The influence of husserl and heidegger. *J Adv Nurs* [Internet]. 1995 [cited 12 May 2013];21(5):827-36.
44. Ray M. The richness of phenomenology: Philosophic, theoretic, and methodologic concerns. In: Morse J, editor. *Critical issues in qualitative research methods*. Thousand Oaks, CA: Sage; 1994; p. 187-209.
45. Fleming V, Gaidys U, Robb Y. Hermeneutic research in nursing: Developing a gadamerian-based research method. *Nurs Inq* [Internet]. 2003 [cited 12 May 2013];10(2):113-20.

46. Little H, Webster V, Knussen C, Holdsworth L. Gadamerian hermeneutics: a new approach to qualitative research for physiotherapists. In: Special interest report platform presentation ; 2007 June 3; Vancouver, BC. Vancouver, BC: World Confederation for Physical Therapy; 2007. p. S669.
47. Davis CM. Geriatric expert practice. Chapter 11 Commentaries on expert practice. In: Jensen GM, Gwyer J, Hack LM, Shepard KF, editors. Expertise in physical therapy practice. Woburn, MA: Butterworth-Heinemann; 1999; p. 252-9.
48. Fleming V, Gaidys U, Robb Y. Hermeneutic research in nursing: Developing a gadamerian-based research method. *Nurs inquiry*. 2003;10(2):113-20.
49. Bjornsdottir G, Arnadottir SA, Halldorsdottir S. Facilitators of and barriers to physical activity in retirement communities: Experiences of older women in urban areas. *Phys Ther* [Internet]. 2012 [cited 24 March 2013];92(4):551-62.
50. Strauss A, Corbin J. Chapter 12: memos and diagrams In: Strauss A, Corbin J, editors. *Basics of qualitative research: grounded theory procedures and techniques*. Newbury Park: Sage; 1990; p. 197-223.
51. Morrow SL. Quality and trustworthiness in qualitative research in counseling psychology. *J Couns Psychol* [Internet]. 2005 [cited 13 March 2013];52(2):250-60.
52. Witcher C. Negotiating transcription as a relative insider: Implications for rigor. *IJQM*. 2010;9(2):123-32.
53. Aguilar JL. Insider research: an ethnography of a debate In: Messerschmidt D, editor. *Anthropologists at home in north america*. Cambridge, UK: Cambridge University Press; 1981; p. 15-26.
54. van Manen, M. *Researching lived experience: human science for an action sensitive pedagogy*. 2nd ed. London, ON: Althouse Press; 1997.

Chapter 4

4 “Any movement at all is exercise”: a focused ethnography of exercise as self-management.¹

Over 70% of Canadians 60 years or older are reported to have at least one chronic health condition.¹ Additionally, 49% of Canadian older adults were found to have two or more persistent chronic diseases that significantly impacted their quality of life and health care.¹ The impact of chronic disease is greater for older adults living in rural areas compared to urban centres,² given poorer health status and health service access in rural areas.³ At the federal level, helping rural-residing Canadians with health care is a long-standing priority;³ and current provincial governments, including Nova Scotia and Ontario, view chronic disease as a priority health care issue, with *self-management* advocated as the prevailing approach.^{4,5} Government priorities align with essential competencies for physiotherapists in Canada, where facilitating self-management or enabling older adults to care for themselves at home describes an important physiotherapy practice role. As primary health care practitioners, physiotherapists provide client-centred services in collaboration with clients, family members and other health care practitioners.⁶ The practice role of physiotherapists in health promotion and chronic disease is to facilitate self-management through, for example, education, consultation, and therapeutic exercise.⁶ To successfully advocate for and implement chronic disease self-management, physiotherapists would benefit from deepening their understanding of how older adults perceive health, where perceptions inform health care behaviours.

Health is a dynamic construct that changes with living longer, exposure to resources, knowledge, manifestation of disease, and variables introduced during the life course of an

¹ Graham L, Connelly D. “Any movement at all is exercise”: a focused ethnography of rural community-dwelling older adults’ perceptions and experiences of exercise as self-care. *Physiother Can.* 2013; 65(4): 333-41.

individual. An individual's perception of his or her own health status may therefore drive the perceived need for self-management behaviours. The World Health Organization has defined health as "a complete state of physical, mental and social well-being, and not merely the absence of disease or infirmity."^{7(p.1)} More recently culture and personal responsibility have been highlighted in the definition of health. Bircher⁸ defines health as "a dynamic state of well-being characterized by a physical and mental potential, which satisfies the demands of life commensurate with age, culture, and personal responsibility".^{8(p.335)}

The concept of self-management, which traditionally implied active client participation in treatment interventions,⁹ aligns well with Bircher's concept of personal responsibility in health.⁸ Thomas Creer and Walter Christian,⁸ who were two of the first to use this term, acknowledge having drawn on Albert Bandura's writings of behaviour modification for their work on rehabilitation in children with chronic illness.^{9, 10} Self-management tasks for older adults with chronic disease, as described by Corbin and Strauss,¹¹ might include taking medications as prescribed by a physician or adhering to a therapeutic exercise program prescribed by a physiotherapist or occupational therapist (referred to as *medical or behavioural management*); changing the way one participates in daily activities or sports, such as choosing a simpler meal preparation or switching from running to walking to conserve energy (*role management*); and engaging in relaxation or coping techniques to manage worry associated with disease prognosis (*emotional management*). Self-management tasks may also be defined as self-care behaviours, given that in the nursing literature self-care is defined as "the practice of activities that individuals initiate and perform on their own behalf in maintaining life, health and well-being."^{12(p.43)} Findings from a large focus group study with community-dwelling older adults described "being healthy" as including "functional independence, self-care, management of illness, positive outlook, and personal growth and social contribution."^{13(p.249)} Participants conceptualized being healthy based on self-evaluation within the context of their chronic illness or disability and within their social and/or physical environment. 'Exercise as self-care' refers to purposeful physical activity of a certain type, intensity and duration to reach a sufficient level of exertion to improve health or, for example, to prevent chronic disease exacerbation.¹⁴ Little research to date has addressed the interplay between self-

management or self-care behaviour and exercise, both of which are central to the practice of physiotherapy.

Strong evidence exists to support the benefits of exercise to improve, for example, functional mobility in chronically ill populations.¹⁵ However, a study published in 2011 demonstrated that only 15% of Canadians were active enough to meet recommended guidelines for healthy living: 150 minutes of moderate to vigorous activity each week. Moderate to vigorous, for example is walking more than 3.2km/h, vacuuming, washing car, or bicycling for pleasure, to jogging or competitive team sport participation.¹⁶ Findings from previous studies demonstrate that the percentage of moderately active Canadians decreased with age.¹⁷ This trend is similar in other countries, including the United States and New Zealand, as well as the United Kingdom.¹⁸⁻²⁰ In an attempt to understand why older adults are not sufficiently active, many researchers have explored older adults' perceived motivators and barriers to exercise. However, an exploration of older adults' beliefs or values concerning the worth, role and/or influence of exercise in their lives may yield further insight beyond the accumulated knowledge of perceived exercise motivators and barriers. For the purpose of this manuscript, a literature review was performed to construct an understanding of older adults' exercise values and beliefs, and exercise adherence or non-participation behaviour in relation to perceived exercise barriers. Findings are summarized in the subsequent sections, including an explanation of how these exercise values, beliefs, and behaviours (adherence, compliance, participation) relate to physiotherapy practice roles.

4.1 Exercise Values and Beliefs

To flesh out the role of exercise values and beliefs as they relate to exercise participation and self-management, this section summarizes findings from papers focused on exercise values and beliefs in relation to characteristics of the person and self-efficacy, characteristics of the social and physical environments, and older adult perceptions of motivating factors. What individuals believe and value concerning health is thought to be culturally bound^{21, 22} and dependent upon shared values, peer-modeled behaviours, and past personal experiences.²³ Similarly, exercise behaviour is said to be influenced by

characteristics of the person, such as age and health status; and characteristics of both social and/or physical environments.¹⁴ Characteristics of the person and social environment would also include personal and shared attitudes, values, and beliefs, such as self-efficacy.²⁴ Self-efficacy is the belief that one can perform a given behaviour and is considered an important predictor of human behaviour.^{25, 26} Self-efficacy is a central concept in Social Cognitive Theory (SCT), which has been previously supported in physical therapy and older adult exercise literature, and as a predictor of human behaviour.²⁷⁻³⁰ In SCT, self-efficacy is thought to influence outcome expectancy, which is the belief that a specific outcome will occur due to a given behaviour.²⁹ When examining older adults' motives to exercise, affective outcome expectancies (e.g., expecting to feel good) and health-related outcome expectancies (e.g., anticipate improved health through exercise) have been shown to be useful outcome expectancy sub-divisions.³¹⁻³³ This is thought to be because older adults have been shown to preferentially make emotionally meaningful goals.³⁴ Another important assumption about SCT, with respect to the way people live their lives, is the reciprocal influence of cultural values, beliefs, and physical activity experiences.³⁵ Therefore, research informed by SCT hypothesizes that older adults are more likely motivated to be physically active if they "value physical activity as a meaningful behaviour."^{35, 36(p.83)} When physical activity is valued as meaningful behaviour there is greater likelihood they will be motivated to engage in physical activity or exercise. Additional beliefs that lead to increased motivation to exercise may include recognition of support from peers and/or family, as well as expectancy of positive outcome, and finally belief in one's ability to be physically capable.³⁶

Older adults in rural communities are an important group to study, where the impact of chronic disease is thought to be worse in rural areas compared to urban centres,² and poorer health status and health service access in rural areas.³ A review of living in rural Canada demonstrated that rural community-dwelling older adults highly valued independent living.² Findings from one study that took place in a rural Canadian community on the east coast described older adults who live and grew up in a rural community may not value or make leisure-time physical activity a priority after retirement, because they were active through their work activity.^{26, 37-39} The role of sociocultural context on exercise beliefs and expectations in older generations has been

described to explain why women with ‘traditional upbringings’—where the women worked inside the home to care for the children and the home, and the majority of women in this age cohort had no experience of regular exercise.^{26, 40-42} Beyond their responsibilities to care for the home and children, there was not an opportunity to participate in sport or physical activity for leisure. A large scale Canadian survey reported that older adults believed sleep, stress control, diet, weight control, and smoke-free environment were more important to health than physical activity.⁴³

Two articles examined older adults’ exercise beliefs in order to better understand what motivates this cohort to exercise.^{38, 44} Resnick interviewed older adults residing in a continuing care retirement community and found that older adults who held positive exercise beliefs were more likely to regularly exercise.⁴⁴ However, older adults who purported they did enough exercise during daily activity did not believe it was necessary to exercise regularly during leisure time.⁴⁴ The sample of community-dwelling participants from Hutton, Frame, Maggo, and colleagues did not all agree with this position.³⁸ Some participants viewed involvement in daily activities sufficient for physical activity requirements, whereas others believed one had to participate in physical activity in addition to their daily activities in order to exercise the whole body at a higher intensity.³⁸ Findings from both studies highlight misunderstandings concerning appropriate exercise intensity required to achieve health benefits, which might help to explain why older adults are not sufficiently active. However, some findings suggest that, regardless of an individual’s exercise beliefs, there exist real and perceived barriers impeding older adults’ engagement in exercise behaviours.²⁶

4.2 Exercise Behaviours and Barriers

One way researchers have attempted to understand non-participation in exercise is to examine perceived exercise barriers. The literature summarized in this section highlights Canadian physiotherapy intervention studies and discussion papers pertaining to exercise perceptions. Bjornsdottir, Arnadottir, and Halldorsdottir⁴⁵ studied exercise facilitators and barriers of older women residing in retirement communities and found that their health, environmental design (physical environment) and local culture (social environment) were

considered facilitators or barriers for these women depending on the context. This meant that what may be considered a barrier in some instances, would be considered a facilitator in the opposite circumstance. Physical and social environmental exercise barriers included the lack of available or accessible sidewalks, parks, and fitness/recreation centres or programming.^{26, 45-47} Poor weather and no means of transportation have also been cited as barriers for older adults.^{26, 30, 45-49} Bjornsdottir, Arnadottir, and Halldorsdottir⁴⁵ found that local culture (i.e., social environment) created a barrier for exercise in places where exercise was not considered a common practice among peers.

Health and chronic illness are considered both motivators and barriers to participation in exercise for older adults.^{19, 26, 30, 45, 47-51} This means that exercise is thought to enable older adults to manage their conditions, but that their chronic conditions sometimes also prevent them from participating in exercise due to disease-related sequelae, such as weakness and shortness of breath³⁰. Smith, Carr, and Wiseman and colleagues⁵² interviewed older adults who previously indicated personal health status (i.e., presence of a health condition, illness or injury) was not a barrier to exercise. However, analysis of the data demonstrated that chronic disease actually best predicted these older adults' lack of participation in physical activity. These findings suggest that the sample may not have a great understanding of the relationship between their underlying chronic disease and their health status. Smith, Carr, Wiseman, Calhoun, McNevin, and Weir⁵² recommended that exercise programming target older adults' specific chronic disease care needs to enhance awareness of the link between chronic disease symptoms and exercise participation. Physiotherapists are perfectly positioned to provide such education to clients. In fact, Hill, Hoffmann, McPhail, and colleagues⁵³ studied older adults' adherence to physiotherapy-prescribed exercise program following hospital discharge and found patients were more likely to engage in exercise following discharge, if exercise was recommended by a physiotherapist or if they lived with a partner or spouse. These conclusions dovetail with another documented exercise barrier: older adults did not know the importance of exercise in relation to chronic disease management because they may not have been able to access the appropriate information,⁴⁸ or may not be receiving regular exercise counselling from their physician, as their primary health care provider.²⁶

Additional exercise participation barriers included time constraints (e.g., conflicting appointment times);⁴⁷⁻⁵¹ ‘inertia’ or being busy, lazy, bored, lacking discipline or interest as described by the older adults participants themselves,^{30, 47, 48, 50} negative affect (depression or lack of motivation),^{30, 47, 49, 50} and personal safety, such as fear of falling.^{26, 30, 47-49, 51} Conversely, Hill and colleagues⁵³ found that older adults recently discharged from hospital were more likely to adhere to a physiotherapist-prescribed home exercise program, if they perceived themselves to be at risk of injury secondary to a fall. Individuals who abstained from physical activity due to fear of falling may have low self-efficacy,⁵⁴ where experience with a given task influences one’s confidence in their ability to complete said task. For example, Schutzer and Graves²⁶ explained that team sport participation in youth has consistently been cited as a positive influence on adult exercise participation later in life. Lee, Arthur, and Avis⁴⁸ published a discussion paper on psychological barriers to exercise framed within the lens of the Self-Efficacy Theory⁵⁵ to demonstrate how this theory might be used to ameliorate health promotion interventions designed to help older adults overcome these barriers. Furthermore, Lee, Arthur, and Avis⁴⁸ explained that understanding confidence, perceived exercise enjoyment and satisfaction are essential to designing effective physical activity programs, where many of the barriers to engaging in physical activity for older adults are attitudinal. The conclusion that some barriers to physical activity are attitudinal for older adults is supported in physiotherapy literature⁴⁵ and gives credence to the importance of understanding both exercise values, beliefs and social or physical barriers to exercise participation in older adults who are not sufficiently active.

4.3 Physiotherapy and Exercise as Self-care

Health concerns or the exacerbation of chronic disease often warrants a referral to a health care practitioner. As exercise experts, it is the role of physiotherapists to be competent collaborators providing client-centered health promotion and self-management support through education, consultations, and therapeutic exercise.⁶ Put simply, promoting exercise as a means to self-care is an important part of physiotherapy practice. However, the assumption that physiotherapy practice is meant to be client-centered,^{6, 56} implies that physiotherapists engage in continuous communication and decision-making

with clients, families and other health care practitioners to promote their active participation in client care, and to enhance client and family-centred treatment goals and values.⁶ Engaging clients in goal-setting and clinical decision-making or simply respecting client views is valued by clients.²² In an inquiry of health values, beliefs, and practices of rural residents in northern Manitoba and southern Alberta, Thomlinson, McDonagh, Crooks, and Lees²² found that participants strongly valued health professionals who listened and demonstrated respect for their health practice choices. A study examining adult patient compliance with physiotherapist-supervised therapeutic exercise regimens⁵⁷ found that lack of positive feedback from clinicians was a significant factor for noncompliance. However, the most significant predictor of noncompliance was perceived barriers to exercise and lack of confidence in ability to exercise. Bjornsdottir, Arnadottir, and Halldorsdottir⁴⁵ concluded that physiotherapists also need to be keenly aware of the impact of social and physical environment influences when promoting exercise as a means to self-care—in other words look at the client's chronic illness or self-care needs within the greater sociocultural and physical contexts. Considering the previously cited literature on older adults' barriers, values and beliefs, adopting a patient-centered approach might mean that physiotherapists should strive to understand older adults' beliefs, values and behaviours to help their older clients navigate exercise barriers and facilitate opportunities for socialization (connecting clients with community programs) and engage in purposeful activity. This conclusion is supported by earlier work in physiotherapy literature advocating the importance of understanding clients' beliefs and values in order to maximize or ensure patient compliance with physiotherapy-prescribed therapeutic exercise in both short and long-term interventions.⁵⁸ Therefore, examining older adults' values, beliefs, and behaviours related to exercise as self-care, can provide important insights for physiotherapist-prescribed exercise interventions, so that they may be more efficacious.⁵⁸

4.4 Purpose Statement

The purpose of this study was to understand rural community-dwelling older adult participants' shared values, beliefs, and behaviours related to exercise as self-care. Seeking to understand older adults' values, beliefs, and behaviours within the

sociocultural context of a rural community could help to shed light on how older adults and/or clinicians could help older adults navigate barriers to exercise and exercise beliefs and therefore enable physiotherapists to design and prescribe exercise interventions that are more likely to be taken up by this group.

4.5 Methodology and Methods

Ethnography provides a means to gain an understanding of how members of a group make sense of their world by exploring their culture or shared values, beliefs, and behaviours.^{59, 60} When compared to traditional ethnographies, focused ethnography draws more heavily on interviewing than participant observation to explore a single concept in a comparatively shorter time frame.⁶¹ Constructivist focused ethnography was used here to understand the concept of exercise as it was understood and enacted by community-dwelling older adults within the sociocultural context of a Canadian Maritime rural community. The constructivist paradigmatic underpinnings⁶² of this study assumed that how a concept was understood, valued and enacted varied according to an individual's sociocultural location and experiences; and that members of particular cultural groups may over time have developed shared understandings by way of social interaction. This acknowledges that some individuals believe or value concepts differently due to various reasons including personal experience and culture. Epistemologically, a constructivist position requires a transactional relationship between the researcher and the researched.⁶² This means that participants acted as co-constructors to cooperatively create an understanding of the concept of exercise, self-care and of exercise as self-care.⁶² Furthermore, knowledge claims made from constructivist research are not purported to be permanent or universal realities.⁶³ Knowledge claims are more closely aligned with relativism, given that a constructivist approach recognizes realities are constructed⁶⁴ and thus have the capacity to evolve over time.

4.5.1 Procedure

As the primary investigator, I engaged in participant observation of older adults' daily activities in public spaces whenever I was in public spaces while at special events or

festivals. These places included the community centre, which also housed the office for my seasonal employment, the waterfront, walking trails, local gym, church, pharmacy, grocery store, café, and others. Additionally, I engaged in informal discussions with local leaders from the community centre, churches and other local businesses including the café and pharmacy (see Appendix A for informal discussion and recruitment guide with gatekeepers). These initial steps, recorded in the field experiences journal, were conducted to understand possible contextual influences on residents' exercise perceptions, and locally available health and exercise services prior to recruiting and interviewing participants.

4.5.1.1 Participant recruitment and sampling

Recruitment of participants was facilitated with assistance from the local leaders, and was supplemented using snowball sampling and posted advertisements at the community centre, churches, pharmacy, and postal office. A sample of 15-20 participants was estimated to be sufficient to achieve the depth of understanding required based on a review of health-related focused ethnographies.⁶⁵⁻⁶⁷ Community residents over 65 years old who lived on their own or with family, but not in an assisted-living or nursing home were considered eligible to participate.

4.5.1.2 Interviewing and analysis

Each participant engaged in two audiotaped interviews with myself at a location of their choosing, individually or with their spouse, if both had consented to participating. Interviews were guided by questions focused on understanding the participant's engagement in and perceptions of exercise and self-care. For example, "what do you do to take care of yourself?" and "what does it mean to you to exercise?" (See Appendix B for initial interview guide). Audio recordings were transcribed and analysed using inductive coding methods.⁶⁸ Specifically, each transcript was reviewed line-by-line to identify statements and phrases representative to the research purpose. NVivo 7 software (QSR International, Doncaster, Victoria, AUS) was used to sort statements into similar groupings or themes looking for patterns in thought and behaviour. To enhance adequacy

of interpretation findings from initial interviews were compared with participant observation field notes to flesh out confirming and disconfirming evidence that the co-construction of preliminary themes would resonate with both the investigators and the participants. Given the constructivist underpinnings of this study, this step recognizes that I may have understood participants differently than they had intended and thus seeking understanding through additional means (i.e., participant observation) enabled me to further my understanding of participants' perceptions and experiences. Interview summaries and preliminary themes were then shared with participants during second interviews to ensure themes resonated with participants and to provide an opportunity for discussion and clarification (see Appendix C for follow up interview guide). As themes were refined, visual diagrams were constructed to demonstrate links between themes and participant quotations (see Appendices J and K for Theme Development Diagrams). Finally, transcripts were discussed with my thesis supervisor to refine themes and to select participant quotations that illustrated or validated each of the key themes.

4.5.1.3 Dissemination of findings

The exit from the community was conducted by providing thank you notes and acknowledgements to gatekeepers. Additionally, an audio-recorded PowerPoint presentation of the findings was given to the leader of the community centre's special project for seniors, as a means to disseminate findings to participants and community residents. A condensed version of the manuscript was published in the Canadian physiotherapy journal for physiotherapy clinicians and researchers, *Physiotherapy Canada*.⁷⁰

4.5.2 Reflexivity

The primary researcher (myself) and my thesis supervisor are both physiotherapists trained in qualitative methods of interviewing and analysis. I grew up in Nova Scotia, and lived and worked in the investigated setting for more than three summers before, during, and after the study. For six weeks in 2010 and six weeks in 2011, I was a student physiotherapist on clinical placement in neighbouring towns. For four months in 2008, four months in 2009, and 2 weeks in 2010, I was employed 84-hours per week every

other week at a seasonal job that required me to be on the waterfront and to frequently engage in public relations initiatives. When I was not working, I attended and participated in local festivals and community events. I engaged in researcher reflexivity⁷¹ by maintaining a journal of my field experiences: participant observations,⁶⁹ informal discussions, and participants' postures or gestures during interviews. I shared the journal with my thesis supervisor, to acknowledge and discuss my influences on the interpretation of the findings.

4.5.2.1 Methodological rigour

To enhance methodological rigour, consistent attention was paid to transcendent criteria for trustworthiness, described by Morrow:⁷² social validity, subjectivity and reflexivity, adequacy of data, and adequacy of interpretation. This study is proposed to have *social validity* given the central construct is a health care system priority.^{4,5} *Subjectivity and reflexivity* were attended to through the use of a journal to record participant observations, informal discussions, and non-verbal gestures during interviews. I shared this journal with my thesis supervisor and verified my findings with participants through follow up interviews and with my thesis supervisor for final analyses to ensure resonance of themes. I sought *adequacy of data* using various types/sources of information including personal experiences of having grown up and lived in the researched setting, informal dialogue with gatekeepers, interview data, and observations. I attended to *adequacy of interpretation* by articulating the analytical framework below. Specifically, the framework involved using multiple steps to inductive analysis, triangulating data from various sources, crosschecking interpretations with participants and my thesis supervisor, and selecting participant quotes to validate findings.

4.5.2.2 Ethical approval

The University of Western Ontario's Health Sciences Research Ethics Board approved this study. There was found to be no formal research ethics board to submit to within the community to be studied, but I engaged in informal discussions with local leaders from the community centre, marina, and other local businesses, such as the café, pharmacy and churches whom I identified as community gatekeepers. The gatekeepers assisted with

participant recruitment and provided (through dialogue) a better understanding of contextual influences on local older adults' perceptions of exercise, and available health and exercise promotion services. Participants were informed that their participation was completely voluntary and anonymous, and that they could choose to withdraw at any time. Confidentiality was maintained using alphanumeric coding of participants and de-identifying the name of the research setting. Audio recordings and transcripts were kept on a password protected computer and in a locked file box in a locked room when in the field, and in a locked filing cabinet in a locked office when at the university campus.

4.6 Findings

4.6.1 Setting

At the time of this study, the local community centre ran programs and social events to support older adults and encourage participation in community, volunteer-based initiatives. The same building housed a small, independent gym equipped with weightlifting and aerobic training equipment. As well, there was a pharmacy and two private health care practices: a chiropractor and a medical clinic with two family physicians, one of whom planned to retire in March 2011. There were no local walk-in medical clinics. The closest hospitals were 11-17 km away in the next towns. Public transportation was not locally available. Participants who required public transportation relied on taxis from neighbouring towns, if they were unable to enlist family or friends. Participants commented on the ease of getting about their town; the availability of sidewalks, trails, relatively flat terrain; an interest in getting fresh air; and observing local scenery, including the waterfront.

4.6.2 Participant demographics

Seventeen community residents volunteered to participate in this study, provided written informed consent and were interviewed twice. Overall, the majority of participants were in their 70s, had completed post-secondary education, two or more chronic diseases and few mobility challenges (Table 2). All participants engaged in some form of regular physical activity, from walking in apartment hallways with a walker to walking 13 km

daily along a wooded trail. Six participants were interviewed simultaneously with their spouses, while the remaining eleven participants were interviewed individually.

Table 2. Participant Demographics

Participant (n=17)	Age / Gender	Years as Resident	Living Arrangement	Education	Gait Aid	Chronic Disease
P1	69/W	1.5	S/Apt	Post 2°		DM
P2	68/M	45	S/H	Some 2°		V
P3	73/W	30	A/H	Grad		V
P4	77/W	20	S/Apt	Post 2°	C+	VP, DM, CV, MSK
P5	78/M	20	S/Apt	Some 2°		V, CV
P6	75/M	4	S/H	Grad		CV
P7	67/W	4	S/H	Post 2°		
P8	65/M	12	S/H	Post 2°		
P9	72/M	39	S/Apt	Grad		V, CR
P10	92/W	25	A/H	Post 2°		V, CV
P11	71/W	40	A/Apt	Post 2°	C	V, CV, MSK, O
P12	69/M	1.5	S/Apt	Some 2°		V, CR, CV, MSK
P13	88/M	5	A/H	Post 2°		O
P14	67/W	63	S/H	Some 2°		V, MSK
P15	71/M	50	S/H	2°		V, DM, CV
P16	71/W	16	S/Apt	Grad		CR, MSK
P17	89/W	89	A/Apt	Post 2°	C++, W+, W/C	V, DM, CR, CV, MSK
Mean/ Mode	74.2	27		Post 2°		2
Total	8M	492	5A, 8Apt		3 with aids	

M=Man, W=Woman; Years as resident in current community; S = living with Spouse, A = living Alone; Apt = living in Apartment or Condo; H = living in House; 2° = Completed High School; Post 2° = Undergraduate or professional program not taught in an academic institution (e.g., nurse, secretary), Grad = Masters or Doctorate; C= Cane, W = Walker, W/C = Wheelchair; ++ = always, + = daily; no "+" indicates occasional use; DM = Diabetes (Type I or II not specified); V = Vision-related conditions (e.g., macular degeneration); CV = Cardio-vascular conditions (e.g., atrial fibrillation); MSK = musculoskeletal conditions (e.g., osteoporosis, arthritis); CR = cardio-respiratory conditions (e.g., asthma, emphysema); O = Other health conditions (e.g., hearing impairment).

4.6.3 Participants' shared values, beliefs and behaviours

Three primary characteristics emerged from the interview transcripts and participant observation field notes to represent shared values, beliefs and behaviours among the

participants – *being with others*, *independence*, and *sense of community*. These characteristics were relevant within the sociocultural context and to the interpretation of the main themes (described below) concerning exercise and self-care. Follow up interviews demonstrated that these findings resonated clearly with participants, who either nodded repeatedly, providing little feedback or offered further examples that confirmed preliminary findings. In-text notations, for example, P1 refers to participant 1 from Table 2.

4.6.3.1 Being with others

Participants spoke about the joy of meeting new people and spending time with friends, spouses, pets and neighbours while exercising. They also talked about the importance of having someone to go with for a walk or to the gym as a motivation to persist with the activity, and as a source of safety. P1, who goes to the local gym said, “I go to the gym with somebody and that’s always nice, you know, to have somebody to encourage you even if you don’t feel like going...” Participants 6 and 7 related their experiences of having lived in this setting and the importance of the availability of the local infrastructure in relation to *being with others* in the following conversation.

P6: I think it’s been good. I mean we’ve made a lot of [good] friends here, you’re never lacking something to do, to visit someone or help someone and the exercise, you do that on your own, that’s nothing, there’s all kinds of exercise programs to join here. There’s a walking club up at the [community] centre and they’ve got swimming over in [the next town] and the yoga classes and the [meditation centre] thing they’ve got going up here. They’ve got a number of things for anyone to do.

P7: And the exercise program at the gym is a great idea because a lot of people don’t like to walk by themselves, but if they have somebody to go with then they enjoy it more.

P6: And in the wintertime we don’t enjoy walking on an icy sidewalk. We shouldn’t be.

P7: No. I think people will go walking if they have somebody to talk to while doing it then it's not such a chore, because I know some people have done that, you know they've never walked, but they go there and they enjoy it and it's also a social thing.

4.6.3.2 Independence

Participants operationalized independence as functional capacity and self-reliance (i.e., not needing help from others). Participants explained their rationale for walking long distances and doing their own laundry as a means to demonstrate they can still do things by themselves. P11 explained, "...it's important to do something for yourself and not to just let yourself be a victim, ..." When asked what types of help he was receiving from family or friends, P12 said simply, "I'm very independent" and P08 said, "I prefer to do things myself." Even when participants did not require help from others, the question, "what type of help, if any, are you receiving from others" seemed to offend some participants. Specifically, their tone of voice was abrupt; brows furrowed, and mouth frowning. These non-verbal gestures spoke volumes beyond their monosyllabic responses of "no." Participants sometimes elaborated with examples of all the chores and errands they do independently, as exemplified below.

P02: My daily life is get up, go on the computer 15-20 minutes, come down, have my coffee, go walk 10 mile, and do my yard work, some gardening, whatever. ... It's not a whole lot of work to the gardening part of it, but there is the grass and the trimming and repairs to the house and I do the repairs to my cars and whatever. Like I do pretty near everything that is done around the house or vehicles, myself. [I walk] eight to ten miles a day, Usually once a year I walk to [neighbouring town] and back. That's about a 30-32 mile walk. Takes me about seven and a half hours, and then I do [a walk to another neighbouring town] once a year just to do it. To know that I can still do it. ... I walked for years when I worked for the town I did a lot of mowing and stuff; pushing a mower and a

lot of walking for fertilizing and different things in the ball field and whatever, so I'd always walk to keep in shape.

P11: I fell in mid-June I could not walk, ... when they said it's going to take six months to get in [to physiotherapy] and I said to myself [sardonically] I'm going to be crippled if I don't do something, boo hoo poor [me], boo hoo, she can't walk, she better get doing something... so that's why I've been working so hard ...I have rubber tubing that has a handle at both ends, so I put my foot in the middle and just keep doing this [demonstrates repeated dorsi and plantar flexion] and that's building up the muscles. I sit there and watch TV and just hold this thing, it's very boring but it's working... My doctor told me how to do it. You know and I think it's important for older people to realize that you can't be a prisoner in your home, but you have to look at situations and say okay, yeah [I can do this], you got to weigh your options.

4.6.3.3 Sense of community

A strong sense of belonging or investment into and ownership of the community was characterised by three shared values among the group: importance of helping others; loyalty to what was local; and convenience of what was local. All participants volunteered in the community. Many spoke to the importance of or the need to do more to help others because they had the functional capacity to do so which emphasized the finding that participants valued their *independence*. P13 who lives on his own in a split-level home explained why he feels the need to help others:

P13: I feel I should be helping. I'm very fortunate in having good health and being able to live as I do...no question about it, I should do more. ...I owe the community, I owe my friends...I'm damn lucky, at 88 years of age to be able to move around like I do [and] participate in things I enjoy.

Participants 14 and 15 elaborated on the importance of helping others in this dialogue about the volunteering they did at the local nursing home.

P 15: [helping others] feels very rewarding. It's nice to know that you're doing something for somebody else and like when I go to the nursing home, you walk in and people talk to you and you know, put their hand out to say hello. To see that it's important to them.

P14: I don't know if it makes you feel any better, [helping others] it's just something we do naturally, you know, it's just something you [do].

A loyalty to what is local within the community was evident when participants indicated their preference for supporting the waterfront and the people who own the local deli, gym, and café versus the larger grocery stores in neighbouring towns and the international franchise gym. P12 explained why he supported and volunteered at the local deli:

P12: I do it for [the deli owner] because ... she was born and raised in [this town] and she is a local girl and you just have no idea the money that she donates to people on a daily basis. She helps a lot of people ... she gives a lot of soul and we give a lot back to her.

Valuing the convenience of what was local came out of participants' comparisons to other neighbouring communities that were faster paced or had steeper hills and no sidewalks. Participants stated that they enjoyed being able to walk to their local gym, post office, grocery store, waterfront, and wooded trails; but disliked having to go into the neighbouring towns to access public health services, for example, a cardiac rehabilitation program.

P1: I wouldn't live in [neighbouring town] for a bit because of all the hills.... I don't really want to drive all the way out

to [another town] three times a week and we try to stay away from [there] as much as we can we're not crazy about it... we stay away from it, because we like it down around here.

P 3: It is very lovely and if you ever get to feel a little bit, not distressed, but bored, just walk down to the waterfront and listen to the waves or walk over by the church there's a walkway all along the water...I don't like the pool. I got the biggest swimming pool in [this province] and that's the whole of the [Atlantic Ocean].

4.6.4 Main themes

Two main themes each with two sub-themes emerged from the analysis. The first main theme was *self-care is holistic* with the sub-themes: *eating well* and *exercising for health benefits*. The second main theme was *exercise as movement* with the sub-themes: *enjoyable activity* and *past activity experience and present participation*. Where for some participants the main themes did not resonate, evidence of their disconfirmation is described in relevant subsections. The interaction between these themes and the participants' shared values, beliefs, and behaviours is described in Figure 1.

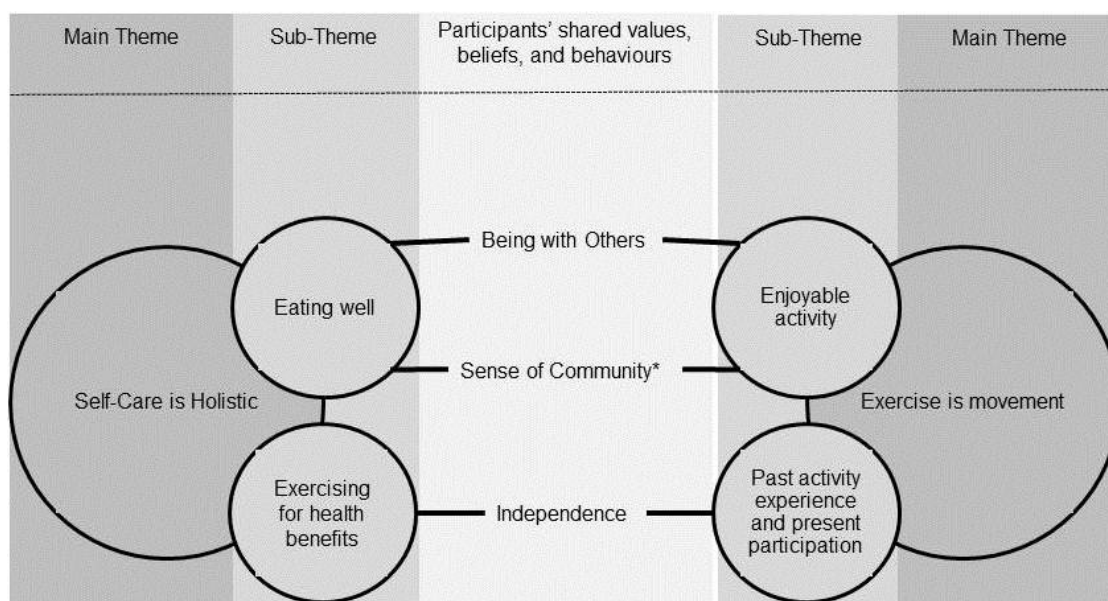


Figure 1. Interaction of main and sub-themes with participations' shared values, beliefs, and behaviours. This figure is not meant to directly apply to another setting. *Sense of community included 3 sub-themes: importance of helping others, convenience of what was local, and loyalty to what was local.

4.6.4.1 Self-care is holistic

When asked what they did to take care of themselves, each participant spoke to multiple strategies, conveying a holistic view of self-care. Specifically, some participants referred to avoiding the sun or wearing sunscreen, others spoke of regular sleep, personal hygiene, taking medications as prescribed, or finding and using appropriate over-the-counter cold

and flu medication. However, the most commonly mentioned self-care behaviour (by fourteen participants) and the first response from ten participants was eating well/healthily. Given exercise was the study focus, probes were used during interviews to stimulate participants to talk about exercise, if they did not independently indicate exercise as a means to self-care.

4.6.4.1.1 Eating well

Participants spoke to removing specific foods from their diet due to allergies or age-related digestive changes, and opting for regular meals with lots of vegetables. Participants with diabetes described their ability to care for themselves by selecting or avoiding certain types of food (e.g., refined sugar), by reading labels and monitoring quantity consumed. Individuals with macular degeneration spoke to their effort in seeking and over-consuming vitamin A-rich foods.

P3: I eat pounds and pounds of raw carrots, and I try to eat a lot of broccoli, and things that are good for your eyes... I have that all the time and I'm trying now to wean myself away from coffee, because I was finding that I was getting [an] allergy.... I was starting to itch and I had a history of allergies when I was in my twenty-five [to] thirties ... and it took me about a year to get over it, so I know what I'm allergic to, so I just have to be more cautious that's all. I just have to be moderate. Moderation—my dad used to say—moderation in all things and that's true.

Food appeared to be a significant aspect of this sample's culture as food or eating and dining were often described as a way to spend time *being with others* and to demonstrate a strong *sense of community* by helping others. Some described the gift of food as a means to meet and communicate with neighbours; as a way to come together with friends by bringing food to functions and as a reason to gather with others. Those who described food as a means to help others spoke about their enjoyment of cooking for others and as part of the way in which they give back to their community in their volunteer roles for

local food and church programs. When asked about their daily life many described dining out with friends and family as a treat or as a form of recreation.

P1: I eat well. I eat properly. Being a diabetic I have to.
 ...we eat out an awful lot, so that's kind of entertainment
 for us. When you are retired you can do that.

4.6.4.1.2 Exercising for health benefits

Participants described many health benefits of exercise, in relation to their personal health problems. Exercise was said to decrease blood glucose levels, blood pressure and cholesterol, improve heart and lung function, increase heart rate, and improve circulation for healing; improved balance “when your feet are bad” (P6), improved muscle mass and reduced ‘flab’, and improved weight control. Improved mobility and fitness, and improved agility were also perceived health benefits derived from being active. Other non-specific health benefits included perspiring to ‘unload toxins’, improved kidney and bowel function, and pain control. Here, P10 describes her understanding of the health benefits resulting from exercise:

P10: ...in my own experience... I have found that ...when my knee started giving me trouble... I thought that I better strengthen the ligaments and muscles around it, so I started walking more. ... If you are fortunate enough to be able to do it, I think that it does alleviate a lot of the physical stresses. [Of] course it helps your circulation. I think it will help to keep your weight under control and hopefully it helps to keep your lungs [working]... .

A common experience amongst the group was the incidence of a significant personal life event that caused these participants to realize the importance of exercise in relation to their own health. With the exception of P8 and P17, every participant shared a significant life event that explained their increased awareness of exercise health benefits. These life events included neurovascular and cardiac health events, such as stroke and myocardial

infarction, chronic pain, musculoskeletal injury, and weight gain. P05 was an avid runner in his youth. His wife (P04) referred to his running as “his religion,” and added that since his stroke and her chronic arthritis pain “now we know we really should do [exercise] for our health.” For P06, it was a slightly different story. He gained a lot of weight at work, reaching 245lbs, before realizing that he should do something to lose the weight: “I did lose a few pounds quick over a period of nine days, but it was too late and then I had coronary artery disease. [My] exercise program has not really changed, it’s just been either jogging or walking. Of course there’s pain periods, ...[I go] as fast as I can and with as much breath as I can produce” P7 and P11 indicated that after being exhausted from walking during holidays they realized they needed to do something to make themselves stronger and independent in order to continue going on vacations. For example, P11 indicated her awareness grew following the diagnosis of a heart problem,

Well it made me aware of it up until the point where I ...was diagnosed with the a-fib... I was planning to go out west to visit my brother and getting your suitcase up on the rack and being strong enough to [do that] I shouldn’t have survive[d] a trip, but to be comfortable looking after myself I knew I had to be physically strong. There was a lady down here in [neighbouring village] at that time who had a gym so I went to her ... I went there for a couple of months to get physically strong to prepare myself for this trip I was taking, so that was about the first time that I realized that you have to be fit in order to do these extra things, yeah, the projects or whatever I wanted to do.

P10 relates her story concerning her experience following a back injury at work when she was younger:

P10: ... I wasn’t in [to] barbells then, I was working in a [nursery school] ...and I pulled my back so um I went to [the] doctor... I was living outside of [the city] at that

point; and um, he said ‘well I think you might have to have your back fused or you must do these exercises every day, and if you don’t want to do either of those you must find another doctor.’ I did the exercises every day and I’ve done them ever since.

Participant 01 recalled what was a frightening time for her when her mobility significantly changed following a two-month period of sitting with her dying friend.

P01: I like exercising ... I feel good after I am finished exercising for the day. I’m certainly more mobile than I was a while ago. [My friend] was in such bad shape, we went down and lived with her and I sat for two months beside her. We planned her funeral and oh it was awful. Anyways, we did a lot of stuff but it was all sitting and I could barely walk by the time that two months was over. I was just so crippled up just because of inactivity. Anyways, so I got going with a gym and it was amazing how much better I feel after I exercise—especially [my] knees; and so I’ll never do that again, but I had to do that. I mean she was my friend and we just had to do it. I couldn’t get up... I’m very happy that I am more physically active now. That really kind of frightened me thinking, “oh am I going to be like that for the rest of my life?”, but I got through that.

4.6.4.2 Exercise as Movement

The participants described exercise as a very broad and unstructured activity involving movement. Participants concluded that some types of exercise are better than others, but any exercise is better than none. Exercise was described as anything that makes “your body feel tired at the end of the day” (P3) and moving your arms and legs. The generalized inclusiveness of what was considered exercise by this group can be summarized by Participant 2: “I think getting up off of the couch is exercise... any

movement at all is exercise....” P2 used this generalization to express his opinion about how simple it is to engage in exercise as part of your everyday life. His work mainly involved manual labour and when recalling the reportedly poor conditions of a nursing home he visited he had this to say:

P2: They would bring the patients out at ten o'clock in the morning, set them in a hallway in a wheelchair. At 12 o'clock they'd take them down for their dinner. So they, you know sit there for 2 hours, ...I didn't see no exercise programs or nothing. I always thought mentally, if they'd even ...bring them all out in the halls before they're going to take them to dinner or supper or whatever ...if they'd raise their hands, lower their hands...anything, except sitting there in a wheelchair, doing nothing. Mentally and physically it's got to help the people....if they got them to do anything...like wiggle your toes and put your hands up and wiggle your fingers..., but there was nothing.

Some more specific examples of *what exercise is* included dance, going to the gym, swimming, and boat maintenance. With the exception of P8 and P9, all agreed that their paid jobs (i.e., pre-retirement) were exercise. For example, some participants were retired educators, health care workers or manual labourers. With the exception of P8 and P16, all reported that walking to the post office or to do an errand was exercise. P16 explained, “Well I don't count running errands as walking because you can't really feel the stride and enjoy walking. I just feel that when you walk, you should just walk. Because I'm doing errands, I'm doing things all over the house but that doesn't really count [as exercise].”

Participants indicated that some types of exercise are ‘better’ than (superior to) others: going to the gym is better than walking and vice versa, running is better than walking, walking outdoors is better than walking indoors, lifting weights is better than doing aerobic activity, swimming in the ocean is better than swimming in a pool, and moving

faster is better than moving slower. Here, better seemed to reflect personal values. Most agreed that any exercise is better than none, while some did indicate that a certain distance or at least half an hour is needed to gain improvement. Here, the term better seems to relate to perception of benefit rather than value of a particular activity. When probed to understand why some types of exercise were better than others, participants revealed these conclusions were not primarily based on what they felt provided the superior or more effective health benefit. What they described as being ‘better’ was based on whether they deemed an activity to be *enjoyable* and what they could do now compared to what they could do previously, that is their *past experience and present participation*. Here, P12 explains why he feels walking and taking the stairs is better exercise than going to the gym.

P12: I do exercise, I don't go to a gym, ...I don't like them. I use the stairs more often ... we'll take [our dog] and go to the beaches and do the walk thing. [The gym] is too regimented for me. I just don't like that you've got to be there at eleven and someone tells you what to do; and I'm just not that kind of person.... I played badminton this winter for the first time in a long time.... I really enjoyed it; and if there's a pool available someplace, I like to swim.

4.6.4.2.1 Enjoyable activity

Participants explained that they chose to participate in activities that ‘felt good’ to them in some way. P5 explained, “It has to be something that you can enjoy. If it was work then you wouldn't do it.” P13, who is a self-identified poor golfer, explained that he continues to golf every week with his friends because he has a great time doing it. P16 spoke about why she enjoyed walking along the trails through the woods:

P16: ...walking is exercise and I'd rather get my exercise through something like that where there's something so exciting that you go for three hours and you don't even know you've done it. I mean your whole body is

completely rejuvenated because your blood is rushing through it but that's great.

What made these activities enjoyable for some participants was *being with others*. Specifically, participants explained that they would rather exercise at the gym compared to exercising at home. Some indicated that they purposefully attended group exercise classes or walked to the waterfront where there would be other people about, because they enjoy meeting new people.

4.6.4.2.2 Past experience and present participation

Participants explained that their generation was not the type to go out to exercise simply for the sake of exercise. Those participants who still engaged in running or organized sport, such as golf or curling, did so because they had participated in these activities as youth. Sports that they did as youth changed, as they got older. For example, running was replaced with walking. For others, participation in particular activities or sports changed or was discontinued secondary to having children, retirement and the onset of disease processes. P9 describes his experience as a youth and his reflection on how his past experience influenced his present participation and how that might relate to other older adults.

P9: When I was in university for two years, I did go to the gym ... body building was becoming significant and there were various guys who were writing books and photographs all over the place, and gyms were starting to appear. ...I did [lift weights] and I knew what [body building] was about. I knew how to do it ... I wasn't ashamed to be doing it. ...[Now] I can get up and go for a walk and not feel 'stumbly,' so that's a major aspect of this [exercise] strategy, ...I'm starting to realize that it's lucky that I did that as a youth, because it's very hard for a mature person who hasn't done that to even imagine it's worth doing. ...I'm one of the best arguments for that kind

of training in the elderly, and I'll make the argument to anybody.

While P9 described past experience in leisure-time exercise, P2 spoke about how the physical demands of his job got him interested in staying active through walking. He walks ten miles a day "to know that [he] can still do it."

P2: I walked for years when I worked for the town I did a lot of mowing and stuff; pushing a mower and a lot of walking for fertilizing and different things in the ball field and whatever, so I'd always walk to keep in shape; it was a seasonal job and I walked to keep in shape for when I'd go back to work in the summertime.

Quotes from P2 and P9 represent past leisure- and work-related activity that influenced present participation in exercise. Their stories represent continuity in exercise participation for P2 and P9, while other participants spoke about the barriers for continuing in previously enjoyed exercise. For example, change in life roles (e.g., becoming parents and childrearing) or change in health status (e.g., developing chronic obstructive pulmonary disease) were described as reasons for having changed or given up certain activities. Participant 4 said, "before we had kids, we used to walk at night even in the winter after supper." While childbearing and chronic disease may be similar catalyst for change among many, the following quote from participant 10 sums up the influences of the time (World War II), her change in responsibilities as a parent, and the convenience of what was local or accessible (hockey at university and water for swimming).

P10 Oh, well I mean you find as years go on you gradually you find you have one reason or another to give up one form of exercise or another. After I left college I never played hockey again, Then of course the war broke out, so that put an end to a lot of things. And tennis I went on playing for some years. Then eventually what with children I gave up

tennis. I went on with swimming whenever I was near water, so that was good. I've always walked, long walks...

4.7 Discussion

This study addressed older adults' perceptions of purposeful exercise participation for self-care within a rural Canadian Maritime context by examining the sociocultural characteristics of the sampled setting and of the participants in relation to the regular self-care activities they perform to maintain their health and well being. Participants more readily described the link between self-care and eating well when compared to the perceived role of exercise in relation to caring for their personal health problems. A review of the participant demographics, research setting, and shared values, beliefs, and behaviours demonstrated possible influences on participant's perceptions and experiences of exercise as self-care. These findings demonstrated similarities between the participants within the present study and older adults living in other rural and non-rural Canadian and non-Canadian contexts. These findings enhance our understanding of client-centred collaboration. In particular, this example highlighted the intersecting influences of a group's social and physical environment on what participants perceived and enacted as exercise and self-care and thus demonstrated the importance of asking questions about a client's values, beliefs, behaviours with respect to exercise and self-care and of their social and physical environments. This study further contributes to the literature by providing a contextual example of the importance of integrating enjoyable and personally familiar activities when promoting exercise for chronic disease self-management.

4.7.1 Connecting exercise and self-care

Participants valued many activities as self-care, but the most important appeared to be *eating well*. They described the importance of food quality and quantity and the relationship of ingredients or nutrient sources to their disease processes. Participants agreed that exercise provided health benefits, but it was not described as a primary means to self-care. Participation and awareness of the importance of exercise for self-care grew following a significant health event, injury, or disease onset, but there was no articulation of the importance of matching activity to their personal health problems for specific

health benefits. Participants defined whether one type of exercise was better than another based on whether the activity was enjoyable or familiar and not whether an activity was well-suited for their specific care needs (e.g., weight-bearing activities for osteoporosis or aerobic activity to reduce blood sugar levels for individuals with diabetes). Participants did not demonstrate an explicit understanding of exercise intensity required to gain health benefits, where participants agreed that any exercise is better than none. A large-scale study of older adults' perceptions of physical activity and diet on brain health found a similar disconnect between participants' perceptions of specific activities or exercise types and personal health conditions.⁷³ Participants from the brain health study were able to articulate how to modify dietary practices to support brain health by, for example, portion control and increasing fish and vegetable consumption. However, despite agreement that physical activity was beneficial for brain health, participants from the brain health study did not demonstrate a good understanding of exercise recommendations for frequency, intensity, type and duration to gain benefit.⁷³ Furthermore another recent study concluded that participants, including healthy young adults, and older adults attending chronic disease rehabilitation programs, were largely unaware of the Canadian Physical Activity Guidelines.⁷⁴ Poor access to or translation of important publications, such as physical activity guidelines, can explain why participants from this and previous studies do not appear to understand the link between exercise type and personal health conditions. Additionally, these findings echo the literature on perceived exercise barriers among older adults.^{26, 51} For example, previously reported perceived exercise barriers included older adults not having access to information about exercise⁴⁸ or not receiving regular exercise counselling from a physician.²⁶

Another important finding from this study was that the participants indicated their participation in and perceptions about the importance of exercise in relation to their health increased or was enhanced following a personally significant health event, injury, or disease onset. Participants spoke about the need to become stronger in order to be able to walk or avoid a recurrence of back pain or immobility; and of walking to maintain a healthy body weight and heart health. Some participants, for example P10 and P11, clearly reported that their change in exercise participation was due to physician counselling following the health-related event. A treatment or intervention employed

after a person experiences a health event, whether or not it is prescribed by a regulated health professional, is known as tertiary prevention.⁷⁵ Primary prevention is any effort made to prevent problems in advance of disease-related symptoms, and secondary prevention is employed early in the development of a health problem but after diagnosis of the health condition (e.g., before heart disease results in a stroke). Primary and secondary prevention are essential to reducing the incidence of preventable diseases. This is important with respect to the findings from the present study, where the health events that led these participants to greater awareness of the importance of exercise for health benefits were modifiable through exercise participation (e.g., heart disease due to obesity, immobility due to sedentary behaviour). On the larger scale, Nova Scotia has high rates of chronic illness compared to the rest of the country: the highest death rate due to cancer and respiratory disease, and second highest death rate due to diabetes and circulatory problems,⁴ These findings support the need for health care resources to address the use of exercise as a means to primary and secondary prevention of significant health events or chronic diseases. Given physiotherapists' expertise in exercise prescription and promoting self-management of chronic diseases,⁶ physiotherapists could fill this gap in primary and secondary prevention through exercise counselling services by enhancing participants' understandings of exercise as self-care. Physiotherapists could help older adults get the most out of their efforts to exercise for health benefits by explaining physiological training principles and interpreting exercise guidelines, such as the Canadian Physical Activity Guidelines for Older Adults.⁷⁶ However, in order to successfully advocate for exercise as a means to self-care, physical therapists must understand the social and physical environmental influences on what older adults perceive and enact as exercise and self-care.

4.7.2 Connecting exercise and self-care to context and characteristics

The research setting, participant demographics and shared values, beliefs and behaviours demonstrated possible influences on older adults' perceptions and experiences of exercise as self-care. Bjornsdottir, Arnadottir, and Halldorsdottir⁴⁵ concluded that physiotherapists needed to be keenly aware of the impact of social and physical environmental influences

when promoting exercise as a means to self-care. Furthermore, examining older adults' values, beliefs, and behaviours related to exercise as self-care, is thought to provide important insights for efficacy of therapeutic exercise interventions prescribed by physiotherapists.⁵⁸ The following sections integrate the findings of this study with previously cited work on behaviours, barriers, values and beliefs to demonstrate the influences of these factors on exercise participation.

4.7.2.1 Influence of the setting on exercise and self-care

The centrally located community centre held a gym and ran programs specifically marketed to older adults residing in the community. Participants spoke to the importance of having sidewalks, trails, and relatively flat terrain, as making it easier for them to walk around town. These elements of the setting could be considered motivators or facilitators of exercise participation, where these findings are comparable to literature on older adults' perceived barriers to exercise participation. Specifically, the lack of available or accessible sidewalks, parks, and fitness/recreation centres or programming are considered barriers to exercise participation for older adults.^{26, 45, 47, 51} Unfortunately, there were elements of this setting that echoed published perceived exercise barriers for older adults including the lack of public transportation.^{26, 30, 45, 47, 49, 51} The lack of public transportation was a frequently cited barrier for participants who could not access local services due to impaired mobility (unable to walk the distance) or were unable to drive. Given there was no local, publicly funded, medical walk-in clinic, and the nearest hospitals were in the neighbouring towns, some participants might not have received regular exercise counselling or feedback on their health status.

The lack of exercise counselling from a physician is another commonly cited perceived barrier to exercise participation for older adults.²⁶ With the exception of two participants who indicated their physician as the individual who spurred them onto exercise in response to their health events, it was not possible to know whether participants received regular exercise counselling from physicians, because it did not come up in the interviews or participant observations. The community centre hosted regular educational lectures with local experts, and served as a meeting place for festival organizers, and members of a meditation group. However, participants did not speak to programming offered by the

community centre as a source of information concerning the link between chronic disease symptoms and exercise. The local pharmacist, chiropractor, and family physicians could have been potential resources for exercise counselling as well, but participants did not mention these resources as sources for exercise counselling either. Sufficient exercise counselling within the context of chronic disease self-management is an important consideration given Canadian researchers Smith and colleagues⁵² reported that older adults did not relate their chronic disease symptoms to their perception of their own health status even though their chronic disease was determined to be a significant barrier to exercise participation.⁵² Future research could examine potential partnering opportunities between the community centre and health care practitioners, such as the local pharmacists, family physicians, and chiropractor with respect to provide exercise counselling.

4.7.2.2 Influence of demographics on exercise and self-care

When compared to existing literature, it is reasonable to believe that the participants' ages, number of chronic diseases, and level of education could have had an impact on participant's shared values, beliefs, and behaviours, and what they perceive and enact as exercise and self-care. The majority of participants were in their seventies. Therefore, participants lived and grew up in this or another rural community may have shared an upbringing similar to other rural-residing older Canadians of the same age group. Specifically, participants may have grown up in a sociocultural context that strongly valued work activity, with diminished priority for leisure-time physical activity following retirement;^{26, 37-39} in a place where exercise participation was not considered a common practice,⁴⁵ or with no experience of regular exercise.^{26, 40-42} Although all participants were living in the rural community at the time of study, some grew up in other areas of the province or even out-of province and in urban settings. All participants engaged in some form of regular physical activity, from walking in apartment hallways with a walker to walking 13 km daily along a wooded trail. The fact that so many of this sample reported having regularly participated in exercise implied there was motivation among this group to engage in exercise. Findings from the interview transcripts revealed that this motivation or rationale was not necessarily self-care given the previously stated

disconnect between an understanding of exercise and self-care for chronic disease. The majority of participants were living with two chronic diseases, but had few mobility impairments. Similarly, 70% of older Canadians are reported to have at least one chronic disease, and 49% of older Canadians were found to live with two or more.¹ However, a physiotherapy study on therapeutic exercise program participation among older adults with systemic diseases, trauma and postoperative conditions, or back, neck or shoulder pain⁵⁷ found that type and number of chronic illnesses were not significantly related to exercise participation. However, the authors did note that older adults with greater disability due to illness were more likely to participate in the therapeutic exercise program than those with less disability. The same article demonstrated that a higher level of education was significantly related to lower exercise participation among women, but not among men.⁵⁷ The majority of participants from this study completed at least some post-secondary education. Future research could explore correlations between perceptions of exercise and self-care, and exercise participation among this group. Participant demographics aside, shared values, beliefs, and behaviours can further explain participants' perceptions and experiences of exercise and exercise as self-care, and provide important insights for therapeutic exercise interventions prescribed by physiotherapists.⁵⁸

4.7.2.3 Influence of shared values, beliefs and behaviours on exercise and self-care

Independence, a sense of community, and being with others were shared, important and defining group characteristics or values, beliefs, and behaviours. These group characteristics are known to be defining features of older adults across rural Canada² and in this study were found to influence self-care and exercise behaviours, as touched on throughout the Findings, summarized in Figure 1, and discussed further below. These shared characteristics align with findings from a large focus group study with community-dwelling older adults who described "being healthy" as including "functional independence, self-care, management of illness, positive outlook, and personal growth and social contribution".^{13(p.249)} The participants from the present study valued *independence* as functional capacity and self-reliance or not needing help from

others. When compared to the findings from Miller and Iris¹³ one can argue that the value of independence or functional independence is an important consideration with respect to understanding what this group perceives as health and exercise or even exercise as self-care. In Miller and Iris¹³ functional independence was operationalized as taking responsibility for and carrying out one's own usual activities while avoiding help from or dependence on others. Social contribution was described as giving of 'oneself to others' through sharing with peers their knowledge and skills pertaining to health and health behaviours.¹³ Social contribution aligns with the *sense of community* found in the present study, where participants described a strong sense of community through their stated value and belief in the importance of helping others.

In the present study, *being with others* was a source of enjoyment, motivation, and safety while exercising. Given this explanation, being with others could also be referred to as social support or an important form of social influence. Drawing the link between being with others and social influences is important given that social influences are known to have important, positive effects on exercise.⁷⁷ For example, Hill and colleagues⁵³ demonstrated that older adults were more likely to engage in therapeutic exercise prescribed by a physiotherapist, if they lived with a partner. Participants from this study also described being with others as a source of safety while exercising. This is an important finding that could begin to explain how physiotherapists could help older adults navigate a commonly cited barrier to exercise participation among older adults, which is fear of falling or re-injury.^{26, 30, 47-49, 51} Where *being with others* was also reported as a source of enjoyment and motivation, *being with others* could be described as a source of confidence or self-efficacy, as described in Social Cognitive Theory (SCT). Specifically, learning from peers through modeling behaviour (known as vicarious experience) or encouragement from peers to go for a walk or to the gym (known as social persuasion) could have been the mechanisms for motivation, as described by participants. Being with others provided enjoyment, which could have positively influenced self-efficacy through positive physiological state.²⁴ Specifically, if an individual engages in exercise and has a pleasant experience, their confidence in their ability to perform that activity is increased. However, an individual may exude lower self-efficacy for exercise after s/he had an unpleasant exercise experience or had stayed home because they had no

one to walk with. Understanding confidence is important when designing therapeutic exercise programs.⁴⁸ Highlighting the link between confidence, being with others and enjoyment begins to explain how this study provides a contextual example of the importance of making therapeutic exercise programs enjoyable and familiar for older adults.

4.7.3 Connecting therapeutic exercise with what is enjoyable and familiar

This study provided a contextual example of why it is important for physiotherapists to understand and incorporate knowledge of what their older clients enjoy and have done previously when encouraging exercise participation for self-care or prescribing therapeutic exercise. Poorer health status and health service access in rural areas³ support the notion that there is greater impact of chronic disease in rural compared to urban settings.² At the federal level, helping rural-residing Canadians with health care is a long-standing priority;³ and current provincial governments, including Nova Scotia and Ontario, view chronic disease as a priority health care issue, with *self-management* promoted as best practice.^{4,5} The previous sections presented the findings of this study to highlight connections between participants' perceptions of exercise and self-care, and the possible influences of participants' characteristics and the social and physical environments. These findings demonstrated the importance of choosing activities that enable functional independence or self-reliance, incorporate local infrastructure, and if possible, capitalize on participants' proclaimed importance of helping others and being with others. Physiotherapists can use specific outcome measures and theoretical frameworks to integrate this knowledge and understanding of their clients when prescribing therapeutic exercise or exercise for self-care.

In the present study, participants described exercise as a broad concept that included a variety of types of movement, activities of daily living, and sports. However, participants preferred engaging in activities that were enjoyable and had been previously experienced. Previous research demonstrates that perceived enjoyment is a significant motivator for physical activity participation among older adults⁷⁸ and can be measured using a valid

and reliable outcome measure, called the Physical Activity Enjoyment Scale.^{79, 80} As previously mentioned *being with others* made exercise enjoyable and motivated participants to persist in the activity. We described how this relationship might be explained from a social cognitive perspective, as a source of self-efficacy. Brawley, Rejeski, and King, and Ettinger and colleagues concluded that therapeutic exercise interventions are far more effective when behavioural or cognitive-behavioural strategies are incorporated.^{81, 82} Furthermore, Sirur, Richardson, Wishart, and Hanna²⁷ compared the Health Belief Model, Protection Motivation Theory, Theory of Reasoned action/planned behaviour, Self-efficacy theory and Social Cognitive Theory (SCT) with respect to adherence to physiotherapist-prescribed interventions. Sirur, Richardson, Wishart, and Hanna²⁷ concluded that SCT takes the most comprehensive approach to representing proposed influences on adherence to exercise behaviour. SCT also describes a reciprocal influence between cultural values, beliefs, physical activity experiences and individuals' lifestyles.^{24, 35} This triadic reciprocity²⁴ helps to explain the present finding that past exercise experience was an indication for present participation. For example, Schutzer and Graves²⁶ explained that team sport participation in youth has consistently been cited as a positive influence on adult exercise participation. One could argue that persistence in an activity is an indication of enjoyment; however, this might also be explained by what is known as mastery experience. In SCT, mastery experience is yet another important source of self-efficacy where a person's experience with an activity or a similar activity informs their perception of their ability to perform that activity.⁸³ Furthermore, research informed by SCT hypothesizes that older adults are more likely motivated to be physically active if they "value physical activity as a meaningful behaviour."³⁶ Occupational therapy researchers have demonstrated this effect among elderly women,⁸⁴ and have advocated for integrating meaningful activity when interpreting physical activity guidelines with clients.⁸⁵ Future research in physiotherapy could employ SCT as a framework to design meaningful, context-specific therapeutic exercise interventions that may better facilitate engagement and adherence to therapeutic exercise as a means to self-care.²⁷

4.8 Limitations

Existing literature suggests participants interviewed with their spouses may have divulged less ⁸⁶ than if interviewed independently. Therefore interviewing participants independently may have helped to further thicken the description of exercise as self-care. Given that the majority of participants volunteered for this study in response to advertisements calling for older adults to talk about exercise and self-care, it is possible that a form of selection bias occurred. Specifically, it is understandable that only those who are interested in exercise responded to the advertisements and it is possible that there are more residents who were not interested in talking about exercise and therefore did not participate in the study.

4.9 Conclusion

This study contributes to the literature by providing a contextual example that could enhance physiotherapists' understandings of how to enact client-centred collaboration and promote exercise for chronic disease self-management. In particular, the findings provide an example of the intersecting influences of a group's social and physical environment on what participants perceived and enacted as exercise and self-care; and of the importance of integrating enjoyable and personally familiar activities when promoting exercise for chronic disease self-management. Physiotherapists could not only enhance participants' understanding of exercise as self-care by educating them about exercise guidelines and physiological training principles, but by also take the time to understand and incorporate older adults' past experiences with exercise and what they enjoy doing into treatment interventions. This approach may not only facilitate client adherence to therapeutic exercise, but also supports the self-management approach to dealing with the growing incidence of chronic disease which has become a priority health care issue for older adults across Canada and especially those in rural communities.

4.10 References

1. Broemeling AM, Watson D, Prebtani F. Population patterns of chronic health conditions, co-morbidity and healthcare use in Canada: Implications for policy and practice. *Healthc Q.* 2008;11(3):70-6.
2. Keating N, Swindle J, Fletcher S. Aging in rural Canada: A retrospective and review. *Can J Aging* [Internet]. 2011 [cited 13 March 2013];30(3):323-38.
3. Romanow RJ. Building on values: The future of health care in Canada. [Internet]Saskatoon, SK: The National Library of Canada; 2002. Report No.: ISBN: 0-662-33043-9 Available from: http://www.hc-sc.gc.ca/english/pdf/romanow/pdfs/HCC_Final_Report.pdf
4. Unit for Population Health and Chronic Disease Prevention on Behalf of Working Group Members. Nova Scotia chronic disease prevention strategy. Halifax, NS: Dalhousie University; 2003 Available from: <http://www.gov.ns.ca/hpp/cdip/cd-prevention-strategy.asp>
5. Ontario Ministry of Health and Long Term Care. Preventing and managing chronic disease: Ontario's framework. 2007 Available from: <http://www.health.gov.on.ca/english/providers/program/cdpm/index.html#1>
6. National Physiotherapy Advisory Group. Essential competency profile for physiotherapists in Canada. 2009 Available from: <http://www.physiotherapyeducation.ca/Resources/Essential%20Comp%20PT%20Profile%202009.pdf>
7. World Health Organization. Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference. In: ; 1948 19-22 June 1946; New York, NY. World Health Organization; 1948
8. Bircher J. Towards a dynamic definition of health and disease. *Med Health Care Philos.* 2005;8:41.
9. Creer T, CW. Chronically Ill and Handicapped Children. Champaign, IL: Research Press; 1976.
10. Lorig KR HH. Self-management education: History, definition, outcomes, and mechanisms. *Ann Behav Med.* 2003;26(1):1-7.

11. Corbin J, SA. Unending work and care: Managing chronic illness at home. San Francisco: Jossey-Bass; 1988.
12. Orem DE. Nursing concepts of practice. 6th ed. ed. St. Louis, MO: Mosby; 2001.
13. Miller AM, Iris M. Health promotion attitudes and strategies in older adults. *Health Educ Behav* [Internet]. 2002 [cited 26 March 2013];29(2):249-67.
14. Ulbrich SL. Nursing practice theory of exercise as self-care. *J Nurs Scholarship* [Internet]. 1999 [cited 13 March 2013];31(1):65-70.
15. Rejeski WJ, Brawley LR. Functional health: Innovations in research on physical activity with older adults. *Med Sci Sports Exerc*. 2006;38(1):93-9.
16. Colley RC, Garriguet D, Janssen I, Craig CL, Clarke J, Tremblay MS. Physical activity of Canadian adults: Accelerometer results from 2007 to 2009 Canadian Health Measures Survey. Ottawa: Statistics Canada; 2011. 1 p. Report No.: Catalogue no. 82-003-XPE
17. Statistics Canada. Physical activity during leisure time, 2010. Canadian Community Health Survey [cited 2013 Jan] Available at <http://www.statcan.gc.ca.proxy1.lib.uwo.ca/pub/82-625-x/2011001/article/11467-eng.htm>. .
18. Ministry of Health. A portrait of health – Key results of the 2006/07 New Zealand Health Survey. Wellington: Ministry of Health; 2008
19. Belza B, Walwick J, Shiu-Thornton S, Schwartz S, Taylor M, LoGerfo J. Older adult perspectives on physical activity and exercise: Voices from multiple cultures. *Prev Chronic Dis* [Internet]. 2004 [cited 20 March 2013];1(4) Available from: http://www.cdc.gov/pcd/issues/2004/oct/04_0028.htm.
20. British Heart Foundation National Centre (BHFNC) for Physical Activity and Health. Fact sheet: current levels of physical activity in older adults [Internet]. Loughborough University: BHFNC 2012 cited 24 Oct 2012]. Available from: <http://www.bhfactive.org.uk>
21. Sellers SC, Poduska MD, Propp LH, White SI. The health care meanings, values, and practices of anglo-american males in the rural midwest. *J Transcult Nurs* [Internet]. 1999 [cited 30 March 2013];10(4):320-30.

22. Thomlinson E, McDonagh MK, Crooks KB, Lees M. Health beliefs of rural Canadians: Implications for practice. *Aust J Rural Health* [Internet]. 2004 [cited 26 March 2013];12(6):258-63.
23. Rosenstock IM. Historical origins of the health belief model. *Health Educ Quart*. 1974;2(4):328-35.
24. Bandura A, Adams NE, Beyer J. Cognitive processes mediating behavioral change. *J Pers Soc Psychol*. 1977;35(3):125-39.
25. Gellert P, Ziegelmann JP, Schwarzer R. Affective and health-related outcome expectancies for physical activity in older adults. *Psychol Health* [Internet]. 2012 [cited 24 March 2013];27(7):816-28.
26. Schutzer KA, Graves BS. Barriers and motivations to exercise in older adults. *Prev Med* [Internet]. 2004 [cited 24 March 2013];39(5):1056-61.
27. Sirur R, Richardson J, Wishart L, Hanna S. The role of theory in increasing adherence to prescribed practice. *Physiother Can* [Internet]. 2009 [cited 13 March 2013];61(2):68-77.
28. Rotter, JB. *Social learning and clinical psychology*. Englewood Cliffs, NJ: Prentice Hall; 1954.
29. Williams DM, Anderson ES, Winett RA. A review of the outcome expectancy construct in physical activity research. *Ann Behav Med* [Internet]. 2005 [cited 26 March 2013];29(1):70-9.
30. Forkan R, Pumper B, Smyth N, Wirkkala H, Ciol MA, Shumway-Cook A. Exercise adherence following physical therapy intervention in older adults with impaired balance. *Phys Ther* [Internet]. 2006 [cited 24 March 2013];86(3):401-10.
31. Lawton R, Conner M, Parker D. Beyond cognition: Predicting health risk behaviors from instrumental and affective beliefs. *Health Psychol* [Internet]. 2007 [cited 26 March 2013];26(3):259-67.
32. Trafimow D, Sheeran P. Some tests of the distinction between cognitive and affective beliefs. *J Exp Soc Psychol* [Internet]. 1998 [cited 26 March 2013];34(4):378-97.

33. Van Der Pligt J, De Vries NK. Expectancy-value models of health behaviour: The role of salience and anticipated affect. *Psychol Health* [Internet]. 1998 [cited 30 March 2013];13(2):289-305.
34. Carstensen LL, Mikels JA. At the intersection of emotion and cognition: Aging and the positivity effect. *Curr Dir Psychol Sci* [Internet]. 2005 [cited 26 March 2013];14(3):117-21.
35. Bandura, A. *Self-efficacy: the exercise of control*. New York: Freeman and Co.; 1997.
36. O'Brien Cousins S. Grounding theory in self-referent thinking: Conceptualizing motivation for older adult physical activity. *Psychol Sport Exerc* [Internet]. 2003 [cited 30 March 2013];4(2):81-100.
37. Witcher CSG, Holt NL, Spence JC, Cousins SO. A case study of physical activity among older adults in rural newfoundland, canada. *J Aging Phys Activ*. 2007;15(2):166-83.
38. Hutton L, Frame R, Maggo H, Shirakawa H, Mulligan H, Waters D, Hale L. The perceptions of physical activity in an elderly population at risk of falling: A focus group study. *N Z J Physiother*. 2009;37(2):85.
39. Phillips EM, Schneider JC, Mercer GR. Motivating elders to initiate and maintain exercise. *Arch Phys Med Rehabil* [Internet]. 2004 [cited 31 March 2013];85(SUPPL. 3):S52-7.
40. Chao D, Foy CG, Farmer D. Exercise adherence among older adults: Challenges and strategies. *Control Clin Trials* [Internet]. 2000 [cited 31 March 2013];21(5 SUPPL. 1):212S-7S.
41. Rhodes RE, Martin AD, Taunton JE, Rhodes EC, Donnelly M. Factors associated with exercise adherence among older adults. an individual perspective. *Sports Med*. 1999;28:397-411.
42. Branigan KP, Cousins SO. Older women and beliefs about exercise risk: What has motherhood got to do with it? *J Women Aging*. 1995;7:47-66.
43. Torrance G. *Campbell Survey Results for Older Canadians*. Canadian Fitness and Lifestyle Research Institute; 1999 Available from: <http://www.cflri.ca/node/485>
44. Resnick B. Functional performance and exercise of older adults in long-term care settings. *J Gerontol Nurs* [Internet]. 2000 Mar;26(3):7-16.

45. Bjornsdottir G, Arnadottir SA, Halldorsdottir S. Facilitators of and barriers to physical activity in retirement communities: Experiences of older women in urban areas. *Phys Ther* [Internet]. 2012 [cited 24 March 2013];92(4):551-62.
46. Mathews AE, Laditka SB, Laditka JN, Wilcox S, Corwin SJ, Liu R, Friedman DB, Hunter R, Tseng W, Logsdon RG. Older adults' perceived physical activity enablers and barriers: A multicultural perspective. *J Aging Phys Act* [Internet]. 2010 [cited 26 March 2013];18(2):119-40.
47. Costello E, Kafchinski M, Vrazel J, Sullivan P. Motivators, barriers, and beliefs regarding physical activity in an older adult population. *J Geriatr Phys Ther* [Internet]. 2011 [cited 24 March 2013];34(3):138-47.
48. Lee LL, Arthur A, Avis M. Using self-efficacy theory to develop interventions that help older people overcome psychological barriers to physical activity: A discussion paper. *Int J Nurs Stud* [Internet]. 2008 [cited 24 March 2013];45(11):1690-9.
49. Lees FD, Clark PG, Nigg CR, Newman P. Barriers to exercise behavior among older adults: A focus-group study. *J Aging Phys Act* [Internet]. 2005 [cited 24 March 2013];13(1):23-33.
50. Newsom JT, Kaplan MS, Huguet N, McFarland BH. Health behaviors in a representative sample of older Canadians: Prevalences, reported change, motivation to change, and perceived barriers. *Gerontologist* [Internet]. 2004 [cited 24 March 2013];44(2):193-205.
51. Mathews AE, Laditka SB, Laditka JN, Wilcox S, Corwin SJ, Liu R, Friedman DB, Hunter R, Tseng W, Logsdon RG. Older adults' perceived physical activity enablers and barriers: A multicultural perspective. *J Aging Phys Act* [Internet]. 2010 [cited 24 March 2013];18(2):119-40.
52. Smith KL, Carr K, Wiseman A, Calhoun K, McNevin NH, Weir PL. Barriers are not the limiting factor to participation in physical activity in Canadian seniors. *J Aging Res* [Internet]. 2012 [cited 24 March 2013];2012
53. Hill AM, Hoffmann T, McPhail S, Beer C, Hill KD, Brauer SG, Haines TP. Factors associated with older patients' engagement in exercise after hospital discharge. *Arch Phys Med Rehabil* [Internet]. 2011 [cited 24 March 2013];92(9):1395-403.

54. Seeman TE, Unger JB, McAvay G, Mendes de Leon CF. Self-efficacy beliefs and perceived declines in functional ability: MacArthur studies of successful aging. *J Gerontol*. 1999;54B(4):214-22.
55. Bandura A. Self-efficacy: Toward a unifying theory of behavioral change. *Psychol Rev* [Internet]. 1977 [cited 13 March 2013];84(2):191-215.
56. Jensen GM, Gwyer J, Hack LM, Shepard KF. Chapter 9: Expert practice in physical therapy. In: *Expertise in physical therapy practice*. Boston, MA: Butterworth-Heinemann; 1999; p. 175-206.
57. Sluijs EM, Kok GJ, Van der Zee J, Turk DC, Riolo L. Correlates of exercise compliance in physical therapy. *Phys Ther* [Internet]. 1993 [cited 30 March 2013];73(11):771-86.
58. Sluijs EM, Knibbe JJ. Patient compliance with exercise: Different theoretical approaches to short-term and long-term compliance. *Patient Educ Couns* [Internet]. 1991 [cited 30 March 2013];17(3):191-204.
59. Hesse-Biber SN, Leavy P. Ethnography In: Hesse-Biber SN, Leavy P, editors. *The practice of qualitative research*. [Internet]. Thousand Oaks: SAGE Publications; 2006 p. 229-78.
60. Hunt M. Taking culture seriously: Considerations for physiotherapists. *Physiotherapy* [Internet]. 2007 [cited 18 April 2014];93(3):229-32.
61. Muecke MA. On the evaluation of ethnographies In: Morse JM, editor. *Critical issues in qualitative research methods*. [Internet]. Thousand Oaks: Sage Publications; 1994 p. 187-209.
62. Ponterotto JG. Qualitative research in counseling psychology: A primer on research paradigms and philosophy of science. *J Couns Psychol* [Internet]. 2005 [cited 13 March 2013];52(2):126-36.
63. Guba EG, Lincoln YS. Paradigmatic controversies, contradictions, and emerging confluences. In: Denzin NK, Lincoln YS, editors. *The sage handbook of qualitative research*. 3rd ed. Thousand Oaks, CA: Sage; 2005; p. 191-215.
64. Schwandt TA. Three epistemological stances for qualitative inquiry: Interpretivism, hermeneutics, and social constructionism. In: Denzin NK, Lincoln YS, editors. *Handbook of qualitative research*. 2nd ed. Thousand Oaks, CA: Sage; 2000; p. 189-213.

65. Crosato KE, Ward-Griffin C, Leipert B. Aboriginal women caregivers of the elderly. *Rural Remote Health* [Internet]. 2007 Oct-Dec;7(4):796.
66. Robbins LK. A focused ethnographic study of women in recovery from alcohol abuse [D.S.N. on the Internet]. United States -- Texas: The University of Texas Health Science Center at Houston School of Nursing; 2004 Available from: <http://search.proquest.com.proxy1.lib.uwo.ca/docview/305057664?accountid=15115>
67. Resnick B, Spellbring AM. Understanding what motivates older adults to exercise. *J Gerontol Nurs* [Internet]. 2000 [cited 26 March 2013];26(3):34-42.
68. Boyatzis, RE. Transforming qualitative information: thematic analysis and code development. [Internet]. Thousand Oaks, CA: Sage Publications; 1998. 184 p
69. Fetterman, DM. Ethnography: step-by-step. [Internet]. 3rd ed. Los Angeles: Sage; 2010. 173 p
70. Graham L, Connelly D. "Any movement at all is exercise": A focused ethnography of rural community-dwelling older adults' perceptions and experiences of exercise as self-care. *Physiother Can.* 2013;65(4):333-41.
71. Finlay L. "Outing" the researcher: The provenance, process, and practice of reflexivity. *Qual Health Res* [Internet]. 2002 [cited 13 March 2013];12(4):531-45.
72. Morrow SL. Quality and trustworthiness in qualitative research in counseling psychology. *J Couns Psychol* [Internet]. 2005 [cited 13 March 2013];52(2):250-60.
73. Wilcox S, Sharkey JR, Mathews AE, Laditka JN, Laditka SB, Logsdon RG, Sahyoun N, Robare JF, Liu R. Perceptions and beliefs about the role of physical activity and nutrition on brain health in older adults. *Gerontologist* [Internet]. 2009 [cited 13 March 2013];49(SUPPL. 1):S61-71.
74. Berry TR, Witcher C, Holt NL, Plotnikoff RC. A qualitative examination of perceptions of physical activity guidelines and preferences for format. *HPP* [Internet]. 2010 [cited 13 March 2013];11(6):908-16.
75. Donatelle RJ, Davis LG, Munroe AJ, Munroe A, Casselman M. Health: the basics. 3rd Canadian ed ed. Toronto, ON: Pearson Education Canada Inc; 2004. 482 p.

76. Canadian Society of Exercise Physiology. Canadian physical activity guidelines for older adults-65 years and older. 2011 Available from: www.csep.ca/guidelines
77. Carron AV, Hausenblas HA, Mack D. Social influence and exercise: A meta-analysis. *J Sport Exerc Psychol* [Internet]. 1996 [cited 31 March 2013];18(1):1-16.
78. Dacey M, Baltzell A, Zaichkowsky L. Older adults' intrinsic and extrinsic motivation toward physical activity. *Am J Health Behav* [Internet]. 2008 [cited 13 March 2013];32(6):570-82.
79. Mullen SP, Olson EA, Phillips SM, Szabo AN, Wójcicki TR, Mailey EL, Gothe NP, Fanning JT, Kramer AF, McAuley E. Measuring enjoyment of physical activity in older adults: Invariance of the physical activity enjoyment scale (paces) across groups and time. *Int J Behav Nutr Phys Act* [Internet]. 2011 [cited 13 March 2013];8
80. Kendzierski D, DeCarlo KJ. Physical activity enjoyment scale: Two validation studies. *J Sport Exerc Psychol*. 1991;13(1):50-64.
81. Brawley LR, Rejeski WJ, King AC. Promoting physical activity for older adults: The challenges for changing behavior. *Am J Prev Med* [Internet]. 2003 [cited 24 March 2013];25(3 SUPPL. 2):172-83.
82. Ettinger Jr. WH, Burns R, Messier SP, Applegate W, Rejeski WJ, Morgan T, Shumaker S, Berry MJ, O'Toole M, Monu J, Craven T. A randomized trial comparing aerobic exercise and resistance exercise with a health education program in older adults with knee osteoarthritis: The fitness arthritis and seniors trial (FAST). *J Am Med Assoc* [Internet]. 1997 [cited 31 March 2013];277(1):25-31.
83. Bandura A. Health promotion from the perspective of social cognitive theory. *Psychol Health*. 1998;13(4):623-49.
84. Wagstaff S. Supports and barriers for exercise participation for well elders: Implications for occupational therapy. *Phys Occup Ther Geriatr* [Internet]. 2005 [cited 26 March 2013];24(2):19-33.
85. Handcock P, Tattersall K. Occupational therapists beware: Physical activity guidelines can mislead. *BAOT* [Internet]. 2012 [cited 26 March 2013];75(2):111-3.

86. Yorgason JB, Roper SO, Wheeler B, Crane K, Byron R, Carpenter L, Sandberg JG, Sheffield R, Higley D. Older couples' management of multiple-chronic illnesses: Individual and shared perceptions and coping in type 2 diabetes and osteoarthritis. *Fam Syst Health* [Internet]. 2010 [cited 13 March 2013];28(1):30-47.

Chapter 5

5 *Making connections*: Engaging rural-residing older adults in chronic disease self-management

Chronic disease represents a complex health care issue for most Canadians over 60 years of age.¹ Chronic disease is defined as a slowly progressing condition of long duration, resulting in pathological symptoms, not due to physical injury.² The view that chronic disease is a complex problem is especially true for older adults living in rural areas,³ where poorer health status and health service access is reported.⁴ At the federal level, helping rural-residing Canadians with health care is a long-standing priority;⁴ the Ontario provincial government views chronic disease as a priority health care issue, with *self-management* advocated as the prevailing approach.⁵

Currently, there is a national shift in health care delivery from the hospital to community, which has spurred the belief that home health care is the next essential health care service.⁴ Given the national shift in health care delivery, we should expect community (home care) physiotherapy to be a growing sector of the physiotherapy profession. Facilitating self-management or enabling older adults to care for themselves at home is an important aspect of physiotherapy. The Canadian Physiotherapy Association actively advocates for the federal government to support physiotherapists in rural and remote areas, as well as the role of physiotherapists in chronic disease management.^{6,7} As primary health care practitioners, physiotherapists provide client-centered services in collaboration with clients, family members, community programs and other health care practitioners.⁸ The practice role of physiotherapists in health promotion and chronic disease is to facilitate self-management through, for example, education, consultation, and therapeutic exercise.⁸

5.1 Physiotherapy Practice Roles

To understand physiotherapy practice roles, we must first look to the profession's history in shaping the philosophy of practice. Physiotherapy practice is strongly rooted within medicine's historically biomedical model.⁹ Physiotherapy practice has perhaps since

demonstrated some evolution or divergence from a purely biomedical model, as it now is described as client-centered, meaning decisions about physiotherapy assessments and interventions begin and end with the client. Jensen, Gwyer, Hack, and Shepard⁹ explained that clinicians should intently listen to clients' narratives of living with their illness to inform intervention design and implementation; and client and family education and collaboration. The thought is that the physiotherapist's depth of understanding of the client and of the client's life, obtained through narrative, will better inform practices aimed at enhancing the client's quality of life. Building upon the concept of client-centered physiotherapy practice was Davis' proposal that physiotherapists take on a holistic practice approach, and enact a role as healers—helping older adults regain function to become whole again.¹⁰ She described an approach that both began and ended with the client. These papers both describe a shift away from the biomedical roots of physiotherapy practice, and towards a holistic, client-centered approach to practice. More recently, Edwards¹¹ explained that we need to approach practice by valuing both perspectives: the biomedical focus on physical dysfunction, pathology and movement; and the client-centered focus on client's culture (values and beliefs) and illness experiences. A multi-modal focus on biomedical, holistic, and client-centered models resonates with the expectations described as the Essential Competencies of Physiotherapists in Canada. These competencies are described within a published document that was co-constructed by numerous Canadian physiotherapy professional organizations and individuals from academic, accreditation, regulatory, and clinical communities.

The Essential Competencies Profile for Physiotherapists in Canada⁸ describes seven practice roles. However, there are two that specifically describe holistic, client-centered practice that resonate with the focus of the present study: expert and collaborator. The collaborator is meant to work with clients, families and other health disciplines to work towards clients' goals and integrate clinical expertise, current research, and client values into the clinical decision-making process. The expert role requires physiotherapists to implement interventions for condition-specific health promotion and self-management through education, consultation, therapeutic exercise and more.⁸ These roles were meant

to be enacted in all clinical settings and with all client populations, including community physiotherapy and rural-residing older adults with chronic disease.

5.2 Physiotherapy and Chronic Disease Self-management Using Exercise

Self-management means the client is an active and informed participant in his or her health care.¹² Given a holistic definition of health, this approach could include elements of medical, behavioural, personal/social roles, and emotional management strategies.¹³ For older adults with chronic disease, this might include taking medications as prescribed and participating in a therapeutic exercise program (medical and behavioural management); conserving energy by choosing meals that require less preparation time or minimizing arthritis knee pain by changing from a squatting to a standing curling rock delivery or stick curling (role management); and/or adopting coping strategies to manage fear or anger in response to perceived limitations and prognosis of chronic disease (emotional management). Although some individuals may already possess the knowledge and understanding of how to participate in their own care, others may require the support of prepared and proactive health professionals.

A health care practitioner's role in chronic disease self-management is described as facilitating 'self-management support'^{14,15} by reinforcing clients' competence and confidence to self-manage their chronic disease, to make informed care decisions, and to adopt positive health behaviours.¹⁵ For example, Glasgow described a holistic, client-centered model for facilitating self-management support, called the 5A model, which requires clinicians to assess and understand a client's values, beliefs, and behaviours prior to advising the client on health risks, identifying problems, and co-constructing goals based on a client's interests or values.¹⁶ An understanding of older adults' values, beliefs and behaviours concerning exercise as a means to self-care might help us to understand further why so few Canadians are sufficiently physically active.¹⁷ This statistic is important given strong evidence supports exercise, for example aerobic and resistance training, as an important strategy for chronically ill older adults to maintain or to improve functional independence or mobility.¹⁷⁻¹⁹ Exercise is one self-care activity that when combined with additional self-care activities, such as taking medications as prescribed,

builds upon a holistic strategy for chronic disease self-management. Exercise as a means to self-care may be an appropriate strategy for multiple individuals living with various types of chronic disease. For example, an individual with osteoporosis would benefit from weight bearing exercises to improve strength and maintain bone density, or individuals with diabetes or heart disease would benefit from a walking program to improve weight management and cardiovascular endurance.

Two meta-analyses of chronic disease self-management programs reveal that not all programs are created equally and specifically, not all included exercise as a means to self-care. Conclusions drawn from this meta-analysis included that chronic disease self-management programs have not consistently demonstrated statistically significant improvement in physical function, pain,²⁰ and reduction in hospitalizations and visits.²¹ Findings from a physician-led self-management intervention study found that older adults were more likely to continue exercising, if they received intensive exercise counselling from an exercise and health counselling expert, compared to usual care.²² The majority of chronic disease self-management studies involving exercise participation for individuals over 65 years old were carried out by nursing staff in long-term care or community care settings.²³⁻²⁶ Physiotherapists are described as experts in prescription of therapeutic exercise,⁸ and are ideally placed to support older adults in chronic disease self-management using exercise, but physiotherapists' role in exercise promotion has been minimalized in multidisciplinary teams, and has gone largely unrecognized by the public and other health care practitioners.²⁷

Three recent self-management intervention studies have included physiotherapists as chronic disease self-management facilitators for older adults.²⁸⁻³⁰ Devereux, Robertson, and Briffa²⁸ conducted a randomized controlled trial and demonstrated that a 10-week water-based exercise and self-management program significantly improved balance and quality of life in elderly women with osteoporosis or osteopenia. Norweg and colleagues²⁹ reviewed clients' perspectives on the efficacy of a chronic obstructive pulmonary disease self-management program led by physiotherapists and occupational therapists. Findings reported only the role of occupational therapy, omitting the impact of the physiotherapy. A 15 month-long physical and occupational therapy-led chronic

disease self-management intervention ³¹ was assessed in a randomized controlled trial. Participants were all over 44 years of age, where 43% were over 65 years old. The intervention group received both physical and occupational therapies for functional decline and goal setting, and participated in a chronic disease self-management workshop. The workshop curriculum reviewed the link between rehabilitation and chronic disease management, information about exercise training principles, and information about assistive devices. The intervention group demonstrated statistically significant improvement in satisfaction of rehabilitation services and significantly reduced number of planned hospital days compared to the control group. The control group did not receive rehabilitation services nor participate in the chronic disease self-management program. This meant the hospital saved \$490/per person each day or \$65,000 total over the total 15 months of the study. These authors claimed to be the first to examine a chronic disease rehabilitation intervention within a primary care setting. ³¹ However, at the fifteen month follow up there was no significant between group difference in number of emergency room visits or health status measures (i.e., functional exercise capacity, walking speed, balance, fall history, grip strength, and home safety). Lack of statistically significant findings at the fifteen month follow up may be related to an insufficient duration of the intervention ³² and/or reversibility of physiological changes, such as aerobic capacity and strength, with reduced activity following cessation of the intervention. For example, participants may have stopped participating upon completion of the intervention period, or six weeks was not long enough for the participants to successfully integrate the proposed lifestyle changes in order to adopt the self-management program. The lack of research involving physiotherapists in promoting exercise as chronic disease self-management limits our ability to determine their effectiveness in changing client outcomes.

Promoting self-management and prescribing therapeutic exercise are crucial to enacting the essential competencies of physiotherapy practice in Canada. ⁸ Therefore, the lack of evidence may contribute to a perceived lack of guidance for physiotherapists motivated to enact chronic disease self-management promotion, but it does not mean that physiotherapists are not enacting this practice role. A look to physiotherapists' experiences in promoting exercise as chronic disease self-management can contribute to

an understanding of whether or not this practice role is being enacted and what are the perceived contributing and impeding factors.

5.3 Physiotherapists' Experiences in Promoting Exercise

Physiotherapists can use exercise as a means to supporting clients with health promotion. Healey, Broers, Nelson, and Huber³⁰ described the health promotion practices of 14 physiotherapists working with individuals 65 and older living and working in urban areas of the mid-western United States of America. Health promotion was defined as “the combination of educational and environmental supports for actions and conditions of living conducive to health,”^{33(p.4)} Qualitative analysis of focus group interviews with physiotherapists revealed the physiotherapists believed health promotion was part of regular practice. Physiotherapists defined health promotion as holistic, given that their approach to health promotion required a patient-centered focus to addressing patients' needs and, for example, connecting patients with additional health care practitioners who could meet patients' needs that were outside of the physiotherapists' scope of practice. Only one physiotherapist from the interviewed sample worked in home care or community care. Physiotherapists from outpatient and acute care settings comprised the majority of the interviewed sample. Healey and colleagues concluded that what or how the physiotherapists enacted health promotion was dependent on the clinical setting in which they worked. Those working in acute care clinical settings were reported to have focused on fall prevention, wound prevention, and factors contributing to hospitalization; while those working in outpatient clinical settings focused on healthy aging and making referrals to outside/additional therapies. Healey and colleagues reported exercise and chronic disease were described as the primary focus of health promotion by physiotherapists³⁰ Rea, Marshak, Neish, and Davis studied physiotherapists' perceptions about health promotion practice using content analysis. The sample comprised physiotherapists from various areas of the United States. Findings demonstrated physiotherapists believed exercise and chronic disease were the primary focus of health promotion for physiotherapists.³⁴ Gahimer and Domholdt performed a similar study concerning physiotherapists' perceptions of the impact of informal patient education.

Gahimer and Domholdt also described exercise and chronic disease as the primary focus of informal education for clients.³⁵

Healey and colleagues also described clinician and client-related barriers to providing health promotion. Client sources of barriers to enacting health promotion included lack of social and financial support, transportation, and engagement in taking charge of own health issue. Physiotherapists experienced time constraints and lack of reimbursement, which impeded their ability to engage clients. Time constraints are a barrier described elsewhere in home care literature, concerning nursing staff who experienced tensions between attending to client needs versus employee responsibilities.³⁶ Healey and colleagues focused on urban settings only.³⁰ However, an interdisciplinary study concerning health service delivery in urban versus rural settings suggests that lack of reimbursement is a concern in rural community care settings as well.³⁷ Specifically, authors concluded that reimbursement for home visits to clients in rural communities should be higher, given that older adults in rural communities have comparatively poorer health status and thus require longer visits.

The study by Healey and colleagues provided initial findings of the issues surrounding health promotion among chronically ill older adults. Healey and colleagues concluded that what and how a clinician enacted health promotion was dependent on the clinical setting. However, the sample did not represent community physiotherapy in rural settings, where only one participant worked in home care, and all participants worked in urban settings. Therefore, further research is required to address the experience of community physiotherapists in promoting chronic disease self-management among older adults in rural settings.

5.4 Purpose Statement

The purpose of this study was to understand the phenomenon of promoting chronic disease self-management, as experienced by community physiotherapists working with older adults in rural communities. Building an understanding of the experience of promoting chronic disease self-management may highlight a need for change or

implementation of strategies to support community physiotherapists in collaborating with older adults in rural communities.

5.5 Methodology and Methods

Phenomenology is a research methodology that enables researchers to engage in open-ended interactions with participants to interpret or co-construct the contextualized meanings of their experiences with a particular phenomenon.³⁸ Many philosophers have described phenomenology, and different types of phenomenology. Gadamer's approach to hermeneutic phenomenology has been characterized as inherently constructivist³⁹ and assumes that the meaning of experience is understood through a study of language.⁴⁰⁻⁴² Therefore, the purpose of a hermeneutic phenomenology was interpreted as being able to develop a deeper understanding of a topic through conversation. The deeper understanding is described as a new understanding of the topic, because this new understanding is a co-construction or fusion of the researcher and researched perspectives.⁴³ In conversation with the research participants and in review of the interview transcripts, there was a constant back and forth between interpreting and co-constructing meaning of the individual parts or experiences of each participant to understand the experiences of the group as a whole. The construction of the phenomenon must resonate with the individual experiences of the participants and of the group as a whole. This circular approach to understanding is referred to as the *hermeneutic circle*.⁴⁴ The new understanding constructed from the dialectical interpretation of the whole and the parts begins with an understanding of self, where the researcher reflexively makes transparent their own pre-understandings of the phenomenon.

Our pre-understandings represent our initial horizon of understanding. Horizon of understanding refers to our prejudices that are meant to represent our understandings of the world given our previous experiences. For the purpose of this study, prejudices were interpreted as taken-for-granted influences on our understanding of the world around and a part of us. The interpretation of Gadamer's methodology was that prejudices should be embraced and highlighted throughout the research process to construct a new understanding or a 'fusion of horizons.' Further, we interpreted that 'fusion of horizons' should resonate with the research participants and perhaps those readers who share

something culturally common with the researcher and the researched. Resonance or a shared understanding between the reader, researcher, and the researched is referred to as *universality*. *Universality* was interpreted as implying that readers who understand the research product or ‘fusion of horizons’ share something culturally common with the researched and the researcher, and it is that connection that makes understanding possible.⁴⁰

Together, *prejudice* and *universality* are two important concepts central to Gadamerian philosophy of phenomenology. The concepts of prejudice and universality illustrate why findings from hermeneutic phenomenologies informed by a constructivist paradigm are not meant to be generalizable in the way it is defined within the post-positivist paradigm. Specifically, findings from this study should not be directly translated, applied or generalized to all clinical care settings. It is anticipated that only those readers who understand and therefore share something culturally common with the researcher and the researched will derive insights relevant to their practice. For example, these readers could be community care physiotherapists working with older adults in rural communities. However, findings could provoke development of new understandings among those who share interest in the topic of physiotherapists and using exercise as a means to promoting chronic disease self-management, such as policy makers and educators.

5.5.1 Reflexivity

The primary researcher (myself) and my thesis supervisor are both physiotherapists trained in qualitative methods of interviewing and analysis. I completed a six-week student physiotherapy clinical placement in a community clinical setting. This placement was in both rural and urban areas within Southwestern Ontario, where I have lived for five years. My assumption prior to commencing this phenomenology was that community physiotherapists regularly promote chronic disease self-management with older clients using a collaborative and holistic approach that incorporates client and family values in the process. I engaged in researcher reflexivity⁴⁵ by maintaining a journal of my pre-understandings concerning promoting chronic disease self-management. I shared excerpts from the journal through dialogue with my thesis supervisor throughout the research

process, to acknowledge and discuss the change in my pre-understandings and my influences on the interpretation of the findings.

5.5.2 Procedure

The procedure for this study was based on the five-step method for Gadamerian hermeneutic phenomenology, developed by Fleming, Gaidys, and Robb:⁴¹ (1) deciding on a research question, (2) identification of pre-understandings, (3) gaining understanding through dialogue with participants, (4) gaining understanding through dialogue with text, and (5) establishing trustworthiness. The rationale for the research question is described in the introduction and purpose statement, and the interpretation of my pre-understandings is described under reflexivity. Interviewing and analysis describes gaining an understanding through dialogue with participants and with text (steps 3 and 4). Finally, steps to establish trustworthiness are outlined in methodological rigour.

5.5.3 Participant recruitment and sampling

The primary investigator (myself) engaged in informal discussions with local leaders within the Southwest Community Care Access Centre (CCAC) and service provider organizations, contracted by the Southwest CCAC, who provide physiotherapy services in the community. These discussions were undertaken to learn about the structuring and execution of the community care service model within southern Ontario: service availability and access; physiotherapy practice roles; reasons for referral; and average number of visits per client. This process helped to develop a deeper understanding of the study context and to identify service provider organizations for participant recruitment and sampling.

Physiotherapists providing physiotherapy in community care settings do not work within a hospital or a clinic, but rather are travelling from client home to client home throughout the day. The physiotherapist may work primarily in either the town or city, or in rural areas surrounding the city, or may have a mixed caseload of clients living in rural or city (urban) settings. The company employing the physiotherapist to provide care to clients in their homes, referred to as the service provider organization, normally has an office located in the city or town. The people working at the office are administrative staff and

managers, who run the operations of the company. Health care services are not typically provided at the office site.

Contact between the employer and the physiotherapist largely occurs by telephone, email or fax on a daily basis, or the physiotherapist may come into their employer's office for paperwork-related reasons if their clients live in the urban centre. Contact with the employer may occur at monthly meetings, which draw all the physiotherapists together at the employer's office. A network exists within the employing company for communication between the administrative staff and managers and the physiotherapists for client referrals, consultation and documentation. Opportunity for collegial interaction to discuss a client case or inquire about resources for a client, for example, are available to physiotherapists at a distance by phone or email, or in person if the physiotherapist is working in the urban centre or drives in from the rural areas. The community physiotherapist thereby works largely on their own, from their car, with clients living in their homes within the urban centre or in the surrounding rural areas.

Due to the nature of the location of clients and the practice of providing care in client's homes in the community, participants were recruited via electronic advertisements within monthly *iblasts*, or emails, distributed by the Ontario Physiotherapy Association and posted advertisements at local companies who employ physiotherapists to provide community based care to clients in their homes (i.e., Service Provider Organizations). Service provider organizations were asked, at their discretion, to forward the participant request to physiotherapists in their agency. Physiotherapists who are members of the national professional physiotherapy association, the Canadian Physiotherapy Association, are automatically also members of their provincial branch (e.g., Ontario Physiotherapy Association) and receive electronic and paper communications from the professional associations. Recruitment was undertaken to reach as many physiotherapists providing care to clients in their homes as possible through these two strategies, while also making the recruitment attractive and personalized to potential study participants.

Community physiotherapists, registered with the College of Physiotherapists of Ontario, and who had at least 50% of their caseload comprised of rural community-dwelling

clients over the age of 65 were considered eligible for participation. While all participants were employed to provide physiotherapy for clients in their homes, each would have their own experiences being in clients' homes, style in providing care, professional beliefs and behaviours, coping strategies and individual characteristics. The diversity in participant characteristics encouraged construction of a shared meaning for providing community-based physiotherapy by identifying common themes among the narratives of experiences of diverse participants.

5.5.4 Interviewing and analysis

Interviewing participants who directly experience the phenomenon of promoting chronic disease self-management allowed me to become immersed in the topic, moving towards a fusion of understanding. My interpretation of Gadamer's writings was that the researcher could never fully understand the participant, as this would require abandoning all *prejudices* or pre-understandings (i.e., one's own personal history, values, beliefs, or culture). Therefore the purpose of hermeneutic phenomenology was not to replicate the participant's experience, but to reach a shared (new) understanding. Each participant engaged in semi-structured, audiotaped interviews with myself over the telephone. Telephone interviews made it easier for community physiotherapists to participate in the study. Interviews were 60-90 minutes in length and focused on participants' experiences in promoting chronic disease self-management among rural community-dwelling older adults. Participants were asked to describe how they define chronic disease self-management, recount experiences of when they promoted chronic disease self-management that had either positive or negative outcomes, and how their experiences may have influenced their practice (see Appendix F for Study 2 interview guide). Analytic memos⁴⁶ or interview notes were made to record preliminary case constructions of participants' experiences and possible follow-up questions. Participants were asked follow-up questions during the interviews in an attempt to achieve a deeper level of understanding of their experiences. Asking follow-up questions during the interviews allowed time to reflect on and to establish trustworthiness of the co-constructions of the participants' experiences. Fleming, Gaidys, and Robb described this analytical step as gaining understanding through dialogue with participants.⁴¹ This was an essential step

given the nature of hermeneutic phenomenology informed by the writings of Gadamer does not provide criteria for cessation of participant recruitment or for theme saturation. The goal was not to determine whether the co-construction was final, but whether the co-construction resonated with both the researcher and the researched. The goal was to describe the co-constructed themes in a way that the language and context would be transparent to others and brought together the parts of each participant's experiences into a whole—closing the hermeneutic circle.⁴⁴ To further ensure the understanding was sound transcripts were read and re-read to become familiar with the text. This process represented gaining understanding through dialogue with the text.⁴¹

Text segments describing participants' experiences of promoting chronic disease self-management were then coded (See Appendix L for example of preliminary transcript coding). Codes were made into case constructions for each participant and then shared with the thesis supervisor to ensure resonance between the individual parts and the whole of each and all transcripts (See Appendix M for example of transcript coded into case constructions). This process facilitated gaining understanding through dialogue with the text by highlighting further researcher pre-understandings within the constructions. This process was done to promote transparency and reflexivity. Connections were drawn between the case constructions to synthesize findings into a main analytical framework (See Appendix N for example of theme development document bringing together citations from all participants). Transcripts were reread to compare the framework with individual interviews and to identify main, overarching themes describing the intractable elements of participants' experiences in promoting exercise as chronic disease self-management. Themes were further refined in collaboration with the thesis supervisor. Once the findings were written up, each participant was sent a copy of their interview transcript and a summary of the findings with an invitation to share feedback if their understanding of the themes did not resonate with their own experiences. No participants responded to invitation or provided feedback on findings. A written report of the findings was shared with two researchers with experience in qualitative research to ensure adequacy of interpretations.

5.5.5 Dissemination of findings

Each participant was provided a copy of their interview transcript attached to an e-mail that thanked them for their participation and included a summary of the study findings. Preliminary findings were presented at a local health science research conference and a national physiotherapy conference, which provided an opportunity to discuss whether these findings resonated with community physiotherapists within and outside of the sampled setting. Dissemination of the findings in this way aided in determining the extent to which universality was achieved beyond those directly involved in the study. Additionally, the concepts of prejudice and universality were highlighted to explain why findings are not meant to be generalizable, as described within the post-positivist paradigm. Instead these findings were meant to construct a contextual example of practical experiences, from which practical, clinical, and political implications can be interpreted.

5.5.6 Methodological rigor

To enhance methodological rigour, consistent attention was paid to transcendent criteria for trustworthiness, described by Morrow:⁴⁷ social validity; subjectivity and reflexivity; adequacy of data; and adequacy of interpretation. These criteria for trustworthiness are appropriate to apply to various qualitative methodologies, as they are not paradigm-specific. In using criterion that transcends multiple paradigms, I hope to appeal to a wider audience while staying true to the constructivist paradigmatic underpinnings. In Gadamerian phenomenology, describing the rationale for making such methodological decisions as well as how quality criteria were employed further enhances trustworthiness.⁴⁴

This study is proposed to have *social validity* given that the central construct is a health care system priority.^{5, 48} *Subjectivity and reflexivity* were attended to through the use of a journal to flesh out my pre-understandings and their evolution throughout the interviews. I shared this journal with my thesis supervisor. To ensure themes resonated with participants and community physiotherapists, ongoing validation/verification of findings was sought during participant interviews and through dialogue with my thesis supervisor

and informally with non-participating community physiotherapists. *Adequacy of data* was attended to through articulation of the semi-structured interview strategy, recruitment of a sample with diverse backgrounds, presumably representing different perspectives on the experience of promoting chronic disease self-management with older adults in rural communities. The sample represented physiotherapists who are both new (recent physiotherapy graduates) and those who have been practicing for many years; the sample represented physiotherapists who lived in both rural and urban settings, and those working on and off of native reserves. I continued to recruit new participants until the interpretation of the findings demonstrated harmony within the horizon of understandings among participants within the sample. Articulation of the analytical framework in the methodology section speaks to the *adequacy of interpretation*: used multiple steps to inductive analysis; triangulated data from various sources; validation of interpretations with participants and the thesis supervisor; and selected participant quotes to substantiate the findings.

5.5.7 Ethical approval

The University of Western Ontario Health Sciences Research Ethics Board approved this study. This study was also approved by the research ethics board of VHA Home Health Care, a service provider organization for community physiotherapy services in the Ottawa Region, the Greater Toronto Area, and London. Participants were informed that their participation was completely voluntary and anonymous, and that they could choose to withdraw at any time. Confidentiality was maintained using alphanumeric coding of participants and de-identifying the name of the research setting. Audio recordings were stored on a password-protected computer and interview transcripts were stored in a locked filing cabinet in a locked office on the university campus.

5.6 Findings

Six community physiotherapists employed by home care companies in Southern Ontario volunteered to participate in this study, provided written informed consent and were interviewed once. On average, rural-residing older adults comprised 80% of the participants' caseloads. Five of the participants were women, with an average of 10 years

of community experience (range 1-25 years). The sample demonstrated variation in years of experience in community care settings and variation of clinical experience in additional care settings. Three participants reported having previously worked in other health care settings, including small Northern Ontario hospitals, private practice, and long-term care facilities. At the time of the study, all participants lived and worked within Southern Ontario. Four of the participants lived within South Western Ontario while two participants lived within South Eastern Ontario.⁴⁹ Through dialogue with participants and the transcripts, it was evident that promoting chronic disease self-management did not include exercise as a primary means to self-care within the self-management strategy. Participants shared their definition of and their experiences with promoting chronic disease self-management. This led to the co-constructed understanding of promoting chronic disease self-management as *making connections*. Three specific ways in which connections were made are represented by the sub-themes: building rapport to *connect the physiotherapist with the client*, educating the client about their chronic disease to *connect the chronic disease with signs, symptoms, and prognoses*, and connecting the client with individuals and services or organizations in the community that could facilitate self-management support—*connecting the client and context*. Each connection built upon the previous and was influenced or modified by the client, previous experiences, service model, and rural context. Interpretations of themes are supported by quotes with participants' own words. Diverging perspectives, where or when they arose, are described. Participants are identified with numerical codes to protect their identity. Text included in square brackets within the participants quotes represent clarifying text added by LG.

5.6.1 Defining chronic disease self-management

Co-constructing participants' understanding of chronic disease self-management was an important step towards understanding participants' experiences of promoting chronic disease self-management among older adults. Participants described chronic disease self-management for clients as “gaining their own independence” (Participant 3) and as an important part of physiotherapists' work in the community.

Participant 5: I think that [chronic disease self-management] just means having the tools necessary in order to kind of control their chronic condition as best as possible. Where having the knowledge to know who to go to for help or having the knowledge, from a physio[therapy] standpoint, to be safe at home to prevent further complications or knowing what exercises to do to kind of maintain where they're at and not de-condition even more. Basically just having the knowledge to care for themselves and be as independent as possible.

Participant 2: I think particularly working in a community with the diseases that we see and then how significant the impact of those diseases can get... I think it's a big part of what we should be doing and probably what a lot of us are doing but not a lot of what we got taught to do so much and I think that's shifting, because I think our profession wants to see us more in those positions and I agree with that, we've got the skills to do it and the knowledge, a really good knowledge base to providing that education to people.

Participants' descriptions of what is chronic disease self-management within the context of community practice and physiotherapy is an important consideration with respect to understanding and interpreting community physiotherapists' experiences in promoting chronic disease self-management. These quotes represent coherence or agreement among participants with respect to a definition of chronic disease self-management involving enacting skills, know-how, or tools to maintain or improve one's health in an attempt to maintain or attain independence. Not only did participants have similar definitions of chronic disease self-management, they recognized that promoting chronic disease self-management is an important physiotherapy practice role. Participants' definitions of chronic disease self-management framed the discussions of how participants promoted self-management through making connections, and illuminated recurrent influences that modified participants' experiences in promoting chronic disease self-management.

5.6.2 Promoting chronic disease self-management: Making connections

Participants' experiences in promoting chronic disease self-management were interpreted as *making connections*. This involved building rapport to *connect the physiotherapist and the client*, educating the client to *connect chronic disease with signs, symptoms, and prognosis*, and to link the client with community services, appropriate/additional health care practitioners, and involve supportive family members to *connect the client with context*. Participants' efforts in making connections were consistently influenced by the *client, the rural context, the service model, and the physiotherapist's previous experiences*. These influences were described as modifiers that either helped or hindered the physiotherapists' efforts, in making connections. The following quotes are examples of how these concepts fit together.

Participant 5: ... resources that I would give to a client for example would just be like, it's limited in terms of the rural setting whereas there are more resources within [the urban setting] so just different community places they can be going to for support like the MS Society and also just giving them general knowledge about their condition, information that's in the medical literature, the internet is a huge resource I know for myself, and tools in terms of like giving them exercises ...of what types of exercises are beneficial for what type of client population or pathology... .

Participant 5 described her experience in making connections as being limited by the rural setting. Specifically, this limitation concerned connecting the client and community programs (context). Participant 5 also described educating the client to connect the chronic disease with signs, symptoms, and prognosis with respect to appropriate exercise recommendations. Below, Participant 6 described connecting the client and context to ensure their physical home environment is safe and that the client may progress their self-management program within the home setting. Participant 6 reported feeling constrained by time, imposed by the service model, and strives to connect the client with additional health care practitioners.

Participant 6: I think just my role is to make sure people have an understanding of how they can be more safe and progress [their exercises and care behaviours] themselves a little bit in a home environment so I am kind of limited what I can do over the course of six weeks or so, so I try and give them as much information as I can, I ask them if there is anything they would like to know or if there is anything else I can arrange for them, ...when [a client] is [referred] into the community rehab team I let them take over because they are more specialized with that kind of recovery.

These participants' stories express the efforts of making connections and the influences of possible modifiers, which are further described below. Figure 1 provides a visual representation of the connections facilitated by the physiotherapists in their efforts to promote chronic disease self-management: connecting the client and the physiotherapist; connecting the client and the chronic disease; and connecting the client with the physical and social context, described by participants as additional health care providers, supportive family members, or additional community programming. The four components identified from the descriptions of making connections are the physiotherapist, the client, the context and the chronic disease, with the client located at the center of the Venn diagram to represent the underpinning client-centered practice approach. Panel A lists modifiers that facilitate making connections between the client, physiotherapist, chronic disease, and context. Panel B demonstrates modifiers that were described as impediments to making connections.

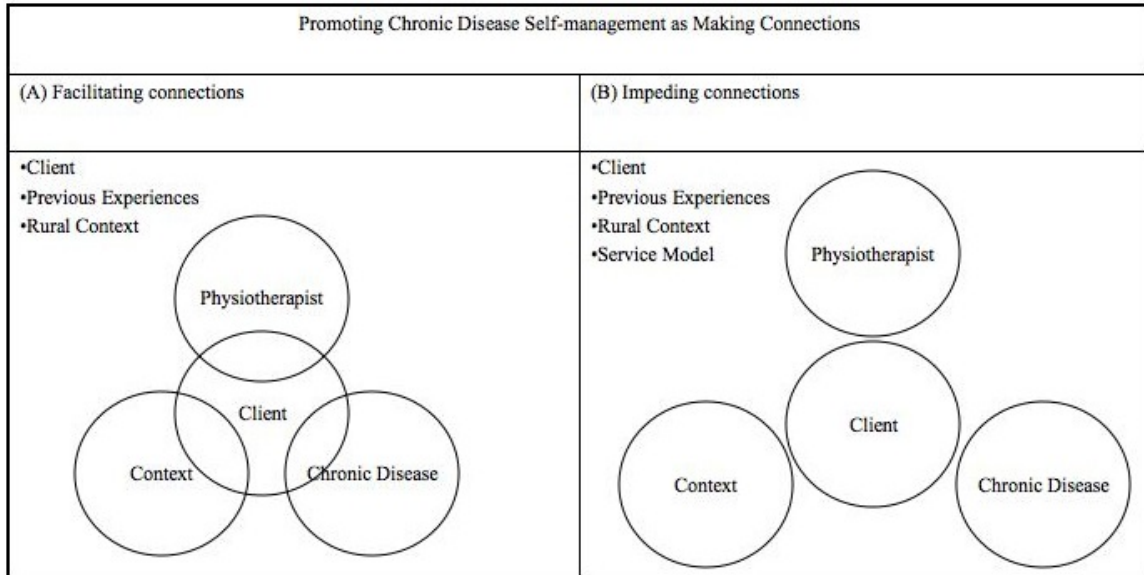


Figure 2. Promoting chronic disease self-management by making connections.

Graphic representation of promoting chronic disease self-management as making connections (i.e., the interaction between the client, the physiotherapist, knowledge of the chronic disease, and the context). These connections were described as building rapport to connect the client and the physiotherapist, providing education to help the client understand their chronic disease, its signs, symptoms, prognosis in relation to the clients' behaviours, and connecting the client and the context of their social and physical environment. Specifically, this means connecting the client with the physical and social environment: supportive family members, additional health practitioners, community service programs, and creating exercise programs based on what the client has available to them in their home. Panel A demonstrates a list of modifiers that facilitate these making these connections. Panel B demonstrates a list of modifiers that impeded making these connections. This is not meant to be generalizable to another setting.

5.6.2.1 Connecting physiotherapist and client

Taking the time to build rapport and/or get to know the client before engaging in chronic disease self-management promotion was interpreted as an important aspect of participants' experiences in making connections. Participant 4 explained the importance of using social conversation to build rapport between client and

physiotherapist: “if you can communicate with someone [about their personal interests] it certainly helps in your treatment approach...[clients] are certainly more willing to listen to what you have to say about [chronic disease self-management], if you can communicate with [the client]. It’s just a lot easier.” Participants described that they can build rapport by taking the time to learn more about their clients, who they are, and what their interests are: “I guess it’s just about learning a little bit more about them and helping find what their goals are or how you might design the information that you provide to them to align with their goals and objectives.” (Participant 2). Participants educated clients about the role of physiotherapists in relation to the clients’ chronic diseases, clients’ goals, and self-management. Some declared the importance of promoting the role of community physiotherapy in relation to facilitating chronic disease self-management, as explained by Participant 1: “I think the big thing...is for [the client] to know that physiotherapists can be part of helping them manage their chronic condition ... we could be the go-to profession that should be engaged in helping people get somewhere with their diseases.” Conveying the physiotherapist’s role in helping older adults learn about and participate in chronic disease self-management was in part about motivation and goal setting.

Participant 3: It’s the motivation piece for the client that is a big issue in there more so than anything else, so trying to motivate the client to see their goals, setting up goals with the client themselves, it’s not like I’m setting up the goals for the client, it is involving the client in the goal forming process is a key thing in helping clients being on track and being motivated and doing the things you have to offer so have them see what you are seeing and educating them is what I would say.

The participant goes on to explain that in order to motivate and engage clients in goal-setting you must first build rapport. However, rapport is something that must be continually cultivated throughout the development of the client-therapist relationship and each clinical interaction.

We have to build up rapport if we are working with the client, it is a part of the process to make the client understand every little change that we see and they might not be able to see... the rapport building I would say it's not just sit there and do the education piece for two or three sessions, it is an ongoing process in my practice from the start to the end and what I experience is that if they are comfortable with what you've educated them [on], [they] will be receptive to what you have to offer.

You've got to spend time, with the rapport build up, it's not like you go there, [and] the clients know what they are going through, [or] they understand that they need this help. For them to be motivated to do things that we have to offer and educating them right from the get go to let them know why you are there and educating them on the problem areas and explaining what physiotherapy could do to help in their management of those problem areas [all] play a key role in rapport building.

Participants described involving the client in the goal-setting process by inquiring about client's needs and interests. This ongoing inquiry was also described as a means to build rapport, highlighting the connection between building rapport and motivating client's to engage in self-care activities as a means to chronic disease self-management. This seemed to be a first step in making connections that was then built upon by explaining the role of physiotherapy in chronic disease self-management and illuminating, for the client, the connection between their chronic disease(s) and the accompanying signs, symptoms, and prognoses.

5.6.2.2 Connecting chronic disease with signs, symptoms, and prognosis

Participants educated clients about their chronic disease processes to make the connection between signs, symptoms, and prognosis, with when to access the health care system for help, and the importance of self-management (or risks of not doing so). In promoting chronic disease self-management, participants illuminated the risks of mismanagement or not participating in self-management in relation to disease progression.

Participant 2: Education would be around the risk of developing other impairments related to their disease if they don't manage their disease right now, so sure they're okay where their disease is at now but why manage the disease? Well the disease can progress and they can have further complications from it so that would be a good piece of the education. I suppose also the benefits of managing is not just that they're going to prevent bad things from happening but they actually might feel better if [the client] manages these things. Looking at the benefits and the risks of management.

I think the other thing that people, especially people who are elderly that I guess a lot of education can do more good than harm that they'll be, whether it's my knees because I have arthritis, but you know, doing the right activity they might actually reduce their pain, you know, they've got that fear of making something worse because that's been their experience in the past so teaching them about moderation again I guess is a big part of that.

In helping the clients make the connection between chronic disease and prognosis, participants also highlighted the connections between specific types of exercise and disease process in relation to disease prevention and self-management.

Participant 4: I give them a form of education ... regarding muscle strengthening, how the muscles support our joints, you may start to have them wearing away with [the] arthritic process, but you can continue to support them with strong muscles so that they can have an understanding of why it's important, but even as we age we can certainly continue to strengthen our muscles, talk to them from a preventative [perspective]. The stronger you keep things, the better off you'll be.

Beyond connecting exercise with signs and symptoms and the risk of not participating in self-management, participants helped clients understand that

given the nature of their chronic diseases, there is the possibility and sometimes expectation of relapse or exacerbation of symptoms.

Participant 5: I also, you know, gave her the explanation that because this is a chronic condition, you know, it's not going to help overnight, this is something that you need to do over months at a time and it's going to be small changes that you see over time.

In conveying the message that exacerbation of symptoms is a possibility and/or expectations, given the nature of their disease, participants provided further education concerning client's signs and symptoms, so that they know when and how to access help from a health care provider: I would like to be able to educate them on when they could call for help again ...to let them know that it's okay to call for help if things aren't going well and who they should they call (Participant 1).

5.6.2.3 Connecting client with context

Connecting the client with their community built upon the participants' efforts to establish rapport with the client and to provide education about their disease(s). Participants' strategies for goal setting and intervention planning involved determining what the client valued as important, what the client enjoyed doing or was already doing, and what the client's functional limitations were. Participants then employed a holistic approach by using this information about the client to guide their decision-making and strategies to connect the client with their physical and/or social context. Specifically, this meant connecting clients with family, additional health care professionals, and community services or organizations.

Participant 2: I guess educate them on what's available so that they can look at all the different options and they can try and find something that they enjoy or that they're already doing but turning it into more of an exercise so if they walk their laneway and they potentially have a long laneway to go and get their mail so I'll say, "well that's great, instead of

just getting the mail and doing the lane way once, can you do it twice?”
So, just sort of teaching them to add on to what they’re already doing to create that physical activity session for themselves.

To facilitate execution of a self-management intervention, participants connected clients with family members and additional health care practitioners. Additionally, participants initiated referrals to additional health care practitioners when necessary to meet client needs that were outside of the participant’s scope of practice.

Participant 3: Usually in the community, it is harder for clients to perform things on their own because there are many factors affecting the self-managing process. I need to involve personal support workers or I need to involve family members to help out with the process because there are cognitive concerns, there are mental health issues and there are other safety concerns that I really need to take into effect like vision problems or balance problems or, you know, those kinds of problems that play along with the chronic condition.

Participant 2: I had a woman who was diabetic and had ulcers on her heels and she was in a wheelchair. You know it was one of those hospital wingback wheelchairs, but she was restricted by the doctor to be completely non-weight bearing, except for transferring, and this has gone on for six weeks already. [I initiated] referrals for appropriate equipment, so that she could manage her ulcers appropriately without developing new ones sitting in that wheelchair. [The] referrals were to other health care providers or health care services, support services as well, so if they are having a hard time with getting their housework done and sort of managing their pain level then we can provide services for doing housework for them and not wearing themselves out with that and doing more active, structured active exercises rather than that stuff.

Participants connected clients to community by linking clients with relevant community exercise programs and support services, and disease-specific professional organizations, such as the Canadian Diabetes Association.

Participant 2: For one thing that's been really popular for some of the women and because it's a smaller community you find that a lot of the group things, lots of people will know each other so if you can get them into something where they might know someone then that will carry on because they feel the need to participate in that because there's that social draw as well.

Participant 1: I think the skill that you have to have is to know what you don't know and ... who else I can direct them to. For example, someone with diabetes, I'd direct them to the Canadian Diabetes Association. I carry that name and the contact information with me all the time. Same with the Parkinson's people or someone with osteoporosis. "Hey, have you ever connected with the Osteoporosis Foundation of Canada? You know there's some information that they can send out that will help you," so the osteoporosis might be something I know more about than diabetes, but I would do that kind of connection, get these people to the associations that are out there with all this information, not that they're part of our health care team but so that they can educate themselves.

Making connections between the client and the community supported community integration and client independence when the physiotherapist recognized the need for services beyond those they could provide themselves. Beyond the restrictions of their scope of practice, there were several influences that either facilitated or hindered participants' efforts to make these connections.

5.6.3 Modifiers to promoting self-management

Physiotherapists' experiences in promoting chronic disease self-management were consistently influenced by at least four modifiers: client; physiotherapists' previous

experiences; service model; and rural context. These modifiers build upon the constructed understanding of making connections as participants' experiences in promoting chronic disease self-management.

5.6.3.1 Client

Participants described experiences and provided ways in which the client sometimes impeded and at other times facilitated physiotherapist's efforts in making connections. The client may have been the modifier that resonated most strongly for participants, given the volume of contextual examples provided by the participants. There were multiple ways in which the client was described as having impeded or facilitated efforts to make connections. Client's lifestyle behaviours were interpreted as barriers to promoting behaviour change that would facilitate chronic disease self-management. "They are a hard bunch to deal with because a lot of the times we are dealing with people who [are] smoking which is, for example, is causing respiratory difficulties; and smoking is an integral part of their lifestyle and their community lifestyle."(Participant 1) Participants explained how client lifestyles negatively impacted their efforts to connect the client and chronic disease signs, symptoms, and prognosis, as well as connecting the client and community programming or health services (context).

Participant 2: Most of my clients who are elderly have chronic disease and mainly diabetes, heart disease and stroke are the big ones for me anyways. (pause) And ...the disease is often related to their lifestyle ...They've never taken care of themselves before and I don't think they have the skills [to take care of themselves] at this point either. They often don't ask for things or don't know there are services available that can provide them with some assistance in managing their disease or symptoms. ...self-care is not and doesn't seem to be a priority ...but I struggle with that a lot with my clients in trying to help them find a reason to take care of themselves and manage their behaviour to try so they end up with a better quality of life.

Client lifestyle choices were described as having led to or having exacerbated the clients' chronic diseases, as well as the participants' efforts to make connections. Additionally, participants' stories revealed a sense of power imbalance in the physiotherapist-client relationship, whereby the physiotherapist felt less able to promote behaviour change for a client within the context of the client's own home because the client has the control when within their home.

Participant 1: ...they're really a hard bunch to try and change anything for....I think it becomes very difficult to try to really enforce too strongly because it is their home, it is their own home and I think, I see that as a real barrier to maybe making a difference if somebody is in their own environment is they control it. I can only try to encourage them to make a change but I can't force them.

Participants' stories also revealed a possible impediment in connecting the client and physiotherapist, or more specifically the role of the physiotherapist in relation to the use of therapeutic exercise. Participants' described clients' perceptions of exercise intensity and history of exercise or physical activity participation as additional barriers to promoting chronic disease self-management.

Participant 4: They're not the ones that have gone to the gym every year, they've done their own type of manual labour, so they're not the ones that were into some regimen every morning to exercise for [a] period of time, they always did it in their regular activity, so it's just getting them back to doing that again....they're not the ones that are going to sit there for half an hour and say this is my exercise now, I have to work it within what I'm doing, I have to walk to the mail every day, and adding them up, I think that works better for them.

Participant 5: Some people say that if their breathing increases, immediately they quit [exercising] and they say that's it, I've had enough for the day and then you do get those clients that want to break a sweat

and they really want to push it and you do get that wide variety of what people want.

These quotes described clients who may not participate in exercise or sufficiently intense exercise because of a lack of understanding or experience in physical activity or exercise participation. However, participants also described clients who rejected efforts to promote chronic disease self-management using exercise because they were not interested in participating for a variety of reasons. Some stories described clients who just said no to exercise.

Participant 4: I remember an elderly client, she had some back issues and I said to her would she like me to provide her with some exercises and things she could do and she told me no and she had done all the exercises she wanted to do within her lifetime.

Participant 6: I had a lady I saw yesterday and she basically said I'm not doing any exercises. So with her I went in, I made sure I checked what I could check, I asked her to do certain things and there were certain things she didn't want to do, for example she didn't want to go down the steps of her home, she just said no I don't want to do that and I basically just made sure she was safe with walking but if she doesn't want to incorporate the exercises or that kind of stuff I ask a few times, if they say no, then you basically say okay that's fine, you can't force anyone to do anything... .

Participants' stories also described clients whose values, beliefs, and behaviours facilitated connecting the client and physiotherapist, additional health care providers, and supportive family members. The following quotes demonstrate two examples of clients whose personalities and/or approach to self-care, facilitated the physiotherapist's efforts to promote chronic disease self-management.

Participant 6: One lady [with multiple sclerosis] who is more confined to the [wheel]chair, she's not able to help as much by herself so working together with her husband and the personal support workers that are

involved, she can tell them I need this stretched out more or longer depending on that day, whereas people who are in the beginning stages of [multiple sclerosis] they are actually able to be at home by themselves, go through the exercises themselves, and self-manage in that way.

One participant, who lived and grew up in a rural community herself, described independence as a common value for older adults in rural communities—attributing this characteristic to facilitating client-physiotherapist interactions and in building rapport.

Participant 4: The majority [of older adults living in rural areas] tend to be very independent, they are good at helping to solve some of their own problems, really easy to relate with and get to know and have a good positive relationship with. Easy to communicate with. (pause) Anything you do for them, they are very appreciative usually not as demanding as other clients now in the more urban setting.

Participant 4 goes on to describe other common barriers to connecting rural-residing clients to community programming: cost and transportation.

She was a lovely lady, I just felt limited in what I could do, you think okay maybe going to a [exercise] program here would be good but you know that she wouldn't be able to afford or would have no transportation to get there so I don't like setting people up to talk to them about something knowing that from a practical point of view they could never take advantage of.... do a trial with [a piece of equipment] that they could never afford to buy themselves.

This participant described her decision-making process in relation to specific contextual factors: the client, the rural context, and perhaps her personal experience facilitated her efforts to choose a solution that would accommodate the barrier or drawbacks specific to that client's case.

5.6.3.2 Previous experiences

Building upon the theme of client as a modifier, participants described previous interactions with clients that both negatively and positively influenced their approach to practice – ‘previous experiences’. Previous experiences with clients influenced efforts to promote chronic disease self-management on subsequent visits, or with new clients. Participant 1 gave two succinct examples of positive and negative clinical experiences that impacted future clinical interactions.

Participant 1: If I hadn't gone in because they'd fallen, they might have continued to just disintegrate in their nutrition status [and] therefore the physical status and not being able to stay at home. So you come away with something like that and you say, yeah, I did a good thing today, you know, that was a good thing to do and I'm, you know, I'm going to keep my eye out for that kind of experience again, so that'd be a positive one.

Positive or successful experiences were described as moments when physiotherapists successfully collaborated with clients in finding solutions/opportunities to engage in self-management. These moments motivated participants to persist in their efforts to promote chronic disease self-management by making connections between the client and the chronic illness, and the client and additional health care practitioners (in this case, Dietetics). Alternatively, negative or unsuccessful experiences were described where participants could not make a connection with the client, or despite the physiotherapists' efforts, the client did not engage in exercises as part of an agreed strategy for self-management.

Participant 1: The negative ones are you go in to see somebody and it's COPD and they're using oxygen and you're trying to teach them better breathing techniques, better chest clearing techniques, get them up and moving and walking more and ...they're not following through with any of the suggestions that I'm making and at what point do you say, “you know what?” I'm wasting my time and I'm wasting the health care dollar

being in here and then that's discouraging, that's a fairly negative kind of result from a client visit.

In this instance, where the client did not appear to follow through with the participant's suggestions, she questioned her continued effort in relation to her responsibilities to the client, herself, and to some extent her employers, where her services are ultimately funded by tax payer dollars.

I would think if they appeared to look like it's going to be like my last failure, I might find myself not trying as hard because the reality also is the home care holds the purse strings, so I'm going to go in and see somebody and I know they're only going to grant me a certain number of visits to be effective or reach my goals or whatever they want to determine and if it seems like such an uphill battle to make any difference and I get a picture that this person isn't about to do anything that I'm asking him, I probably would find myself not trying so hard.

Here, the participant reflected on how negative experiences impacted future clinical interactions. This resultant decreased effort or motivation to continue promoting self-management occurred if and when a new client reminded them of a previous, negative or unsuccessful attempt in their previous experiences. In another example, Participant 2 reflected on a negative previous experience where her client died at home. The client was not motivated to engage in exercise, or any other intervention the therapist and the other team members proposed. Client would not answer the door, phone, or sometimes would not be at home when the physiotherapist arrived for a planned appointment. Participant 2 speaks about how her team tried to engage the client and how that experience affected the team moving forward.

Participant 2: We worked hard to try and engage her. If she didn't answer the phone we would go to her house anyway and try to find out where she was. It felt like a huge failure for our team. We've talked a lot about motivation since then.

Participant 3 shared his story of how previous experiences or client interactions have taught him to not judge a book by its cover, where a positive experience of facilitating change with a client with significant physical dysfunction secondary to multiple comorbidities gave him perspective on expectations of clients' prognoses.

Participant 3: You can't carry over from one client to another, but [previous experiences do] give you the confidence and understanding that even somebody with critical conditions can improve, it gives my perspective.

While previous experiences were largely related to the client as a modifying factor, participants' efforts in promoting self-management were further complicated by the influences of the home care service model.

5.6.3.3 Service model

Unlike the two previous modifying factors that sometimes facilitated and other times impeded making connections, the service model was repeatedly described as having only impeded participants' efforts to make connections. The service model in which these participants worked at the time of the study was regulated regionally by the Local Health Integrated Networks (LHINs) and locally by the Community Care Access Centers (CCACs) within southern Ontario. The LHINs receive funding from the provincial government (i.e., Ministry of Health and Long Term Care), to allocate to specific services across the geographic area of the LHIN. The CCAC receives a portion of this funding to provide provincially funded home care services to people living in the community. Older adults are eligible for home care physiotherapy services, if and when they cannot access outpatient services, or they have recently received a joint arthroplasty.⁴⁹ Each potential home care recipient is assigned a CCAC case manager, who coordinates referrals for services (e.g., personal support workers, physiotherapy, and occupational therapy), and approves treatment plans (i.e., number of allowable visits). While there exists no written policy on what constitutes an appropriate physiotherapy referral or number of allowed visits, the case manager's decision is based on an approved, standardized assessment

called the Resident Assessment Instrument for Home Care (RAI-HC).⁵⁰ The case manager can use their discretion to approve treatment plan extensions, if advocated for by the physiotherapist.⁵⁰ However, participants reported they have four to six visits per client, on average, which was confirmed by speaking with a coordinator at the Southwest CCAC office.⁴⁹ The impediment imposed by the service model that resonated most clearly from the transcripts was the constraint of time (i.e., length and number of allowed visits). Additionally, participants perceived they were not receiving referrals to promote chronic disease self-management, even in cases where the client's chronic disease and current self-care strategies were negatively impacting recovery from the primary reason for referral. For example, the effects of poor self-management of existing diabetes on healing of the surgical incision from knee arthroplasty rehabilitation. Although much time could be spent on promoting chronic disease self-management, participants felt they had to prioritize time spent on the primary reason for referral and on making connections between the physiotherapist and client to build rapport.

Participant 1: I could spend two hours with somebody going over how [to deal] with their chronic disease but if I spent that length of time with the number of people that need that I'd be paying home care to do my work. ...the trick on all of this is [to] do it within the time I've allotted for myself to be there with that client. So if my normal visit is $\frac{3}{4}$ to an hour, how can I wear two hats at the same time and accomplish something in both fields?

Participants' stories of attempting to promote self-management in the approved length of care time evoked a sense of defeat. Specifically, participants questioned whether their efforts were worth being put into promoting self-management when behaviour change can take so much time and effort to educate, motivate, and co-construct a feasible plan with a client.

Participant 5: You have limited visits through CCAC. Usually you get on average 3-6 visits to see someone so really, are you going to make a difference in these peoples' lives like with a chronic condition within a matter of 6 weeks, probably not ...so it's kind of hard to even sell your point that exercise is important to these

people if they're not seeing much of a change over your visits and then you stop seeing them so they don't have the people there to encourage them to keep going. That's kind of the dilemma with home care.

Even in planning for discharge, participants described how the service model, and more specifically the low probability of receiving approval for treatment plan extensions, impacted making connections between clients and family members, "The family is asking me, "can you come in more he won't listen to us?", and I know it would be beneficial for me to keep coming in but I can't because of the restrictions through the referral."

(Participant 6) In some cases, participants described having used the opportunity to make connections between the client and community resources as a means to ensure the client was connected with some chronic disease self-management resource (e.g., Canadian Diabetes Association, or diabetic foot clinic) in the case where or when the physiotherapist did not feel they had time to provide the patient education themselves. However, this strategy was further complicated by the added modifying layer of the rural context and access to services.

5.6.3.4 Rural context

Living in a rural area was described as having impeded and facilitated making connections between the participants and clients, and between clients and their community. For those participants who grew up in rural communities themselves, they recalled stories that demonstrated the rural context facilitated making connections between the physiotherapist and the client, and between the client and the context: "I live in a rural area and grew up in a rural area so I kind of know what's available as far as resources and know a lot of the people, their way of life, certainly I live on a farm so know well the agricultural sector." (Participant 4)

Many of the ways in which the rural context was described to have influenced practice experiences was described in comparison to the urban context. Physiotherapists described how having grown up in a rural area enhanced or made their rural experiences easier, whereas those who grew up in an urban setting described a lack of understanding of available resources or described a lack of resources available in rural areas.

Participant 5: I think especially because I'm not living in the areas that I'm working in that I rely on the internet more than if I was working in [the city] ...we've got public transportation in our urban setting and usually people have neighbours which is not as common in the rural area and there's just more availability for outpatient physio clinics. [In rural areas] people are forced to drive an hour to two hours just to get to physio and that's most often not an option for people.

Lack of locally available health services impeded efforts to make connections between clients and additional health services. Additionally, transportation and social support were also described as lacking resources in the rural setting that influenced the physiotherapist's approach to making connections with community services and family members.

Participant 1: A lot of these people because of the remoteness and the difficulty in transportation can't come in to some of the group [programs] that are put on by our health unit for smoking cessation, they can't travel there because of there is no public transit and they're kind of stuck out in the middle of nowhere so it's me or nobody.

Perceived impediments secondary to the remoteness of the rural context in some cases, not only impacted the participants' abilities to make connections, but as this quote demonstrates, participants described increased pressure within their allotted number of visits to provide support through promoting chronic disease self-management.

5.7 Discussion

For these participants, promoting chronic disease self-management was not primarily about facilitating opportunities for exercise as a means to self-care. Participants' experiences of promoting chronic disease self-management was about making connections, where participants defined chronic disease self-management as the client having the necessary tools to manage a chronic condition and gain independence.

Participants described three means by which connections were made: building rapport to connect with the client, educating the client about their chronic disease, and connecting the client with individuals and services or organizations in the community that could facilitate self-management support. Each connection built upon the previous and was influenced or modified by the client, participants' previous experiences, the service model, and the rural context. These findings were similar to previous findings about physiotherapists and health promotion activities with older adults in acute and outpatient care settings.³⁰ Specifically, that time constraints and clients impeded physiotherapists' health promotion activities with older adults. Additional similarities included exercise as the primary focus of health promotion, and positive or successful health promotion experiences made physiotherapists more confident in their ability to promote health. These similarities are described in more detail in the following paragraphs.

Participants' descriptions of making connections demonstrated a multi-modal or holistic care approach similar to approaches recommended in previously published self-management models.^{16, 51} Although the purpose of this study was not to map the findings onto existing theoretical models for health promotion and chronic disease care, future investigations into comparisons between practice experiences and existing models could illuminate important considerations for facilitating more effective physiotherapy practices by developing a reference to guide clinical decision-making and care strategies. The multiple ways in which participants made connections with clients and between clients and their chronic disease or context, and the positive and negative effects of the modifiers – participants' previous clinical experiences, the client, rural context and service model – would all be factors to consider in future research addressing practice care models. The service model was the only modifier described as having solely impeded making connections. Participants described having to negotiate the tensions between enacting physiotherapy practice roles (expert and collaborator) and behaviours and understanding client values within the limited time/number of visits in their community practice.

5.7.1 Practice constrained by time

Participants described their experiences of promoting chronic disease self-management as being constrained by the home care service model. Mainly the constraints were due to

perceived lack of time per visit and insufficient number of visits to cover important information the client and family needed in order to enact chronic disease self-management. Participants' descriptions did not address perceptions of their team members or colleagues' (e.g., nursing, case manager, personal support worker) possible struggle or ability to cope with constrained time. However, future exploration of whether other team members feel constrained by time in carrying out their care practices may provide support for policy change within the existing home care context from which these participants were sampled. A second problem related to time and the service model was physiotherapists' reports that the primary reason for a physiotherapy referral was not to facilitate chronic disease self-management support. However, physiotherapists described promoting self-management as an important part of their practice. Physiotherapists chose to prioritize goals associated with the primary reason for referral over promoting chronic disease self-management, even when an unmanaged chronic condition was evidently impacting recovery from the condition that spurred the referral. The larger impact of not referring physiotherapists to facilitate chronic disease self-management may perpetuate misunderstanding of physiotherapists' practice roles among other health care practitioners and the general public. Physiotherapists left clients with educational material related to their chronic disease and/or connected them with appropriate community services and additional health professionals in lieu of directly enacting physiotherapy expertise in promoting self-management.

The impact of time and service model specific to the provision of chronic disease self-management promotion in community physiotherapy is a key finding and to the best of our knowledge, is the first time it has been described in the literature. Schoot, Proot, Legius, ter Meulen, and de Witte³⁶ described nurses' perceptions of competing professional and personal responsibilities with respect to enacting client-centered home care with chronically ill older adults. Some nurses were described as placing their professional values for evidence-based practice ahead of the client's values or demands. Nurses detached themselves from the client's needs in order to adhere to protocols, work schemes, and care plans dictated by the case manager. In such instances, nurses were described as having experienced frustration and ethical distress, where the home care service organization became a barrier to their ability to enact the client-centered care

plan. Conclusions drawn in the study to limit competing responsibilities were that policy makers need to create conditions that allow for sufficient time with the client to enact these roles—whether through increased number or length of allowed visits.

Similarly, in a study including physiotherapists as members of interdisciplinary home care teams, recommendations about policy were made based on an evaluation of the direct care time of an interdisciplinary home care service in rural versus urban care settings.³⁷ Adams, Michel, DeFrates & Corbet³⁷ concluded that per episode, reimbursement should be higher for rural versus urban home care clients, where rural clients have poorer health status, require longer visits, and farther travel distances. Their analysis revealed no significant difference in direct care time for physiotherapy. However, the authors postulated this result was reflective of fewer, but longer visits with rural clients compared to urban clients. This conclusion was based on the fact that number, not length, of visits was recorded and that rural clients seen by physiotherapy resembled home care clients with complex and/or long-term chronic care needs. Where older adults in rural areas have poorer health status, and require further travel distance, community physiotherapists risk adopting strategies to serve clients that may not be client-centered or respectful of client values. Conversely, physiotherapists may have to prioritize their primary reason for referral ahead of or withdraw from promoting chronic disease self-management. Changing the service model to increase reimbursement for rural home visits might afford physiotherapists sufficient time to enact physiotherapy practice roles and client-centered behaviours in a more holistic manner.

5.7.2 Enacting physiotherapy practice roles and behaviours to understand client values

The findings from this study are relevant to physiotherapy practice in Canada where enacting the role of *collaborator* and *expert* are considered essential competencies for Canadian physiotherapists.⁸ The expert role encompasses the implementation of condition-specific health promotion and self-management interventions. Participants described how they enacted this role: provided education to clients about their disease; the role of physiotherapy, exercise, and available community resources, including programs, friends, and family; and consulted (or referred) clients to additional health care

practitioners who could further support the client's self-management needs. The collaborator role requires physiotherapists to engage, through dialogue or otherwise, with clients, families and other health care professionals whilst integrating clinical expertise, research and client values into the intervention planning or decision-making processes. The findings from this study demonstrated that the collaborator role was important to making connections: building rapport with clients (connecting with the client); and engaging family and additional health professionals (connecting with the context). Narratives of initial client visits described participants engaging clients in dialogue while striving to prioritize treatment goals based on what was important to the client (e.g., return to hunting or reduce pain), and/or proposing more than one treatment option to enable the client to choose one they would enjoy. Beyond that, the extent to which participants integrated client values into the intervention planning was less clear. Further examination of how participants described having integrated client values may help to explain why some client interactions were interpreted as negative experiences or unsuccessful collaborations, where the physiotherapist felt they had failed to engage the client.

Participants described negative or unsuccessful client interactions that were influenced by the *client* and *previous experiences*. The client modified participants' experiences in multiple ways. Of significance with respect to this study were physiotherapists' reactions to clients who did not choose to or want to engage in exercise as a means to self-management. For example, where the *client* expressed he/she did not want to engage in exercise, participant 6 described having engaged in dialogue to determine alternative exercising positions or refocused the intervention on non-exercise related interventions. Participant 6 described doing a walkthrough of the client's home to ensure the client's environment was safe with respect to fall risk, and explained that one cannot force a client to do something they do not want to do. Participants also described how *previous experiences* of failed or unsuccessful attempts to engage clients in self-management influenced their decision to not advocate to the client's case manager for additional visits and services, or to not work as hard to engage a client who was not immediately ready/motivated to participate in the physiotherapist-prescribed intervention. In these ways, the participants exhibited strategies that resembled *detaching*, as described by

Schoot and colleagues.³⁶ The choice to disengage or detach may be in an effort to fulfill their professional responsibility to the service organization by not wasting home health care dollars. Alternatively, this strategy prevents the physiotherapist from *directing* the client, which would require the physiotherapist to prioritize their professional values for evidence-based practice—to promote exercise as self-care, over what the physiotherapists' may have interpreted as the client's values—to not engage in exercise. Detaching or withdrawing from promoting exercise meant that the physiotherapist could respect the client's values—an important component of client-centred practice.

Detaching from their professional role to promote evidence-based practice in an effort to respect client values has its pros and cons. Edwards¹¹ explains why, in physiotherapy, we need practice to be both evidence-based and client-centered: (1) to identify the biomedical perspective related to the physical dysfunction, pathology, or prognosis, for example; and (2) to understand the client's perspective related to their beliefs and context as they relate their experiences in living with the chronic disease. Together, this allows a physiotherapist to enact a dialectical approach to clinical reasoning while enacting professional practice roles and a client-centered practice philosophy. Integrating client values into the decision-making and intervention planning process is a step beyond enacting essential competencies for physiotherapy practice and client-centered practice behaviours.^{8, 52}

The purpose of this study was not to determine how participants understood their clients and thereby the findings do not allow us to speculate whether the physiotherapists strived to attain a sufficient depth of understanding of their client's values, beliefs and behaviours in order to engage them in exercise for chronic disease self-management. Future research could examine—from either the clinician or client perspective, the depth of understanding physiotherapists uncover with respect to client's values and beliefs and whether physiotherapists have the skills to sufficiently develop and integrate a deeper understanding of clients' values and beliefs into the creation of a meaningful health promotion experience. In other words, a chronic disease self-management promotion strategy that attends to both the client's needs, and the physiotherapists' responsibilities to his/her service organization and professional roles.

5.8 Limitations

Gadamerian methodology was interpreted as having to flesh out an understanding of a phenomenon through the study of language. Telephone interviews facilitated research participation for community physiotherapists from a larger geographical area. Making it easier for community physiotherapists to participate outweighed the perceived need for face-to-face interviewing. However, we recognize that non-verbal language and therefore further understanding of a participant's story or stories could be lost or misinterpreted. To minimize the effects of this limitation, participants were asked multiple follow-up questions to further flesh out an understanding of their experiences. Participants were also provided with copies of the interview transcripts and initial coding to provide them the opportunity to clarify any part or parts of the transcript and/or themes that did not resonate with their experience or experiences. No participants requested correction or modification of transcripts or themes.

5.9 Conclusions

Making connections describes the experiences of community physiotherapists in promoting chronic disease self-management among rural-residing older adults in Southern Ontario. Findings from this phenomenological study provide a contextual example of how community physiotherapists could be further supported to enact their professional practice roles and client-centered practice behaviours. Community physiotherapists could be supported through service model policy change to either increase per session reimbursement for rural home visits or number of sessions per episode of care; and by gaining a deeper understanding of client's values and perhaps how to integrate client's values into care planning to facilitate engaging clients who do not express interest in exercise as a means to self-management.

5.10 References

1. Broemeling AM, Watson D, Prebtani F. Population patterns of chronic health conditions, comorbidity and healthcare use in Canada: Implications for policy and practice. *Healthc Q.* 2008;11(3):70-6.

2. World Health Organization. Chronic diseases [Internet]. Geneva, Switzerland: World Health Organization 2013 cited [cited 2013 Dec 13]; [1]. Available from:
http://www.who.int/topics/chronic_diseases/en/ English.
3. Keating N, Swindle J, Fletcher S. Aging in rural Canada: A retrospective and review. *Can J Aging* [Internet]. 2011 [cited 13 March 2013];30(3):323-38.
4. Romanow RJ. Building on values: The future of health care in Canada. [Internet]Saskatoon, SK: The National Library of Canada; 2002. Report No.: ISBN: 0-662-33043-9 Available from:
http://www.hc-sc.gc.ca/english/pdf/romanow/pdfs/HCC_Final_Report.pdf
5. Ontario Ministry of Health and Long Term Care. Preventing and managing chronic disease: Ontario's framework. 2007 Available from:
<http://www.health.gov.on.ca/english/providers/program/cdpm/index.html#1>
6. Canadian Physiotherapy Association. CPA encourages government to extend federal budget incentives to get more physiotherapists working in rural areas. Ottawa, Ontario: Canadian Physiotherapy Association; 2011.
7. Canadian Physiotherapy Association. The Value of Physiotherapy: Chronic Disease. 2012 Available from: http://www.physiotherapy.ca/getmedia/072b8d87-098e-41ac-a2ff-baedba49cc09/CPA_TheValueOfPhysio2012_ChronicDisease-v1.pdf.aspx
8. National Physiotherapy Advisory Group. Essential competency profile for physiotherapists in Canada. 2009 Available from:
<http://www.physiotherapyeducation.ca/Resources/Essential%20Comp%20PT%20Profile%202009.pdf>
9. Jensen GM, Gwyer J, Hack LM, Shepard KF. Chapter 9: Expert practice in physical therapy.In: Expertise in physical therapy practice. Boston, MA: Butterworth-Heinemann; 1999; p. 175-206.
10. Davis CM. Geriatric expert practice. Chapter 11 Commentaries on expert practice.In: Jensen GM, Gwyer J, Hack LM, Shepard KF, editors. Expertise in physical therapy practice. Woburn, MA: Butterworth-Heinemann; 1999; p. 252-9.

11. Edwards I, Jones M, Carr J, Braunack-Mayer A, Jensen GM. Clinical reasoning strategies in physical therapy. *Phys Ther* [Internet]. 2004 [cited 16 August 2013];84(4):312-30.
12. Creer T, CW. *Chronically Ill and Handicapped Children*. Champaign, IL: Research Press; 1976.
13. Corbin J, SA. *Unending work and care: Managing chronic illness at home*. San Francisco: Jossey-Bass; 1988.
14. Wagner EH. Chronic disease management: What will it take to improve care for chronic illness? *Eff Clin Pract* [Internet]. 1998 Aug-Sep;1(1):2-4.
15. Von Korff M, Gruman J, Schaefer J, Curry SJ, Wagner EH. Collaborative management of chronic illness. *Ann Intern Med* [Internet]. 1997 [cited 30 July 2013];127(12):1097-102.
16. Glasgow RE, Funnell MM, Bonomi AE, Davis C, Beckham V, Wagner EH. Self-management aspects of the improving chronic illness care breakthrough series: Implementation with diabetes and heart failure teams. *Annals of Behavioral Medicine* [Internet]. 2002 [cited 14 July 2013];24(2):80-7.
17. Colley RC, Garriguet D, Janssen I, Craig CL, Clarke J, Tremblay MS. *Physical activity of Canadian adults: Accelerometer results from 2007 to 2009 Canadian Health Measures Survey*. Ottawa: Statistics Canada; 2011. 1 p. Report No.: Catalogue no. 82-003-XPE
18. Statistics Canada. *Physical activity during leisure time, 2010. Canadian Community Health Survey* [cited 2013 Jan] Available at <http://www.statcan.gc.ca.proxy1.lib.uwo.ca/pub/82-625-x/2011001/article/11467-eng.htm> .
19. Rejeski WJ, Brawley LR. Functional health: Innovations in research on physical activity with older adults. *Med Sci Sports Exerc*. 2006;38(1):93-9.
20. Chodosh J, Morton SC, Mojica W, Maglione M, Suttrop MJ, Hilton L, Rhodes S, Shekelle P. Meta-analysis: Chronic disease self-management programs for older adults [with consumer summary]. *Ann Intern Med* [Internet]. 2005 Sep 20;143(6):427-38.
21. Jonker AA, Comijs HC, Knipscheer KC, Deeg DJ. Promotion of self-management in vulnerable older people: A narrative literature review of outcomes of the chronic disease self-management program (CDSMP). *Eur J Ageing* [Internet]. 2009 Dec;6(4):303-14.

22. Morey MC, Ekelund C, Pearson M, Crowley G, Peterson M, Sloane R, Pieper C, McConnell E, Bosworth H. Project LIFE: A partnership to increase physical activity in elders with multiple chronic illnesses. *J Aging Phys Act* [Internet]. 2006 Jul;14(3):324-43.
23. Brodie DA, Inoue A, Shaw DG. Motivational interviewing to change quality of life for people with chronic heart failure: A randomized controlled trial. *Int J Nurs Stud* [Internet]. 2008 Apr;45(4):489-500.
24. Van Hecke A, Grypdonck M, Beele H, Vanderwee K, Defloor T. Adherence to leg ulcer lifestyle advice: Qualitative and quantitative outcomes associated with a nurse-led intervention. *J Clin Nurs* [Internet]. 2011 02;20(3):429-43. Available from:
<http://search.ebscohost.com/login.aspx?direct=true&db=cin20&AN=2010904389&site=ehost-live>
25. Ersek M, Turner JA, Cain KC, Kemp CA. Results of a randomized controlled trial to examine the efficacy of a chronic pain self-management group for older adults. *Pain* [Internet]. 2008 Aug 15;138(1):29-40.
26. Kangchai W, Srisuphun W, Kompayak J, Charoenyooth C, Jitapunkul S. Efficacy of self-management promotion program for elderly women with urinary incontinence. *Thai J Nurs Res* [Internet]. 2002 2002;6(3):101-14. Available from:
<http://search.ebscohost.com/login.aspx?direct=true&db=cin20&AN=2004075980&site=ehost-live>
27. Verhagen E, Engbers L. The physical therapist's role in physical activity promotion. *Br J Sports Med* [Internet]. 2009 02;43(2):99-101. Available from:
<http://search.ebscohost.com/login.aspx?direct=true&db=cin20&AN=2010188296&site=ehost-live>
28. Devereux K, Robertson D, Briffa NK. Effects of a water-based program on women 65 years and over: A randomised controlled trial. *AUST J PHYSIOTHER* [Internet]. 2005 06;51(2):102-8. Available from:
<http://search.ebscohost.com/login.aspx?direct=true&db=cin20&AN=2005118005&site=ehost-live>
29. Norweg A, Bose P, Snow G, Berkowitz ME. A pilot study of a pulmonary rehabilitation programme evaluated by four adults with chronic obstructive pulmonary disease. *Occup Ther Int*

[Internet]. 2008 06;15(2):114-32. Available from:

<http://search.ebscohost.com/login.aspx?direct=true&db=cin20&AN=2009945767&site=ehost-live>

30. Healey WE, Broers BK, Nelson J, Huber G. Physical therapists' health promotion activities for older adults. *J GERIATR PHYS THER* [Internet]. 2012 2012;35(1):35-48. Available from: <http://search.ebscohost.com/login.aspx?direct=true&db=cin20&AN=2011459886&site=ehost-live>

31. Richardson J, Letts L, Chan D, Stratford P, Hand C, Price D, Hiltz L, Coman L, Edwards M, Baptiste S, Law M. Rehabilitation in a primary care setting for persons with chronic illness: A randomized controlled trial. *Prim Health Care Res Dev* [Internet]. 2010 Oct;11(4):382-95.

32. Pincus T. Limitations of randomized clinical trials to recognize possible advantages of combination therapies in rheumatic diseases. *Semin Arthritis Rheum* [Internet]. 1993 [cited 30 July 2013];23(2 SUPPL. 2):2-10.

33. Green, L, Kreuter, M. *Health Promotion Planning: An Educational and Environmental Approach*. 2nd ed. Mountain View, CA: Mayfield Publishing Co.; 1991.

34. Rea B, Marshak H, Neish C, Davis N. The role of health promotion in physical therapy in california, new york, and tennessee. *Phys Ther*. 2004;84:510-523.

35. Grahimer J, Domholdt E. Amount of patient education in physical therapy and perceived effects. *Phys Ther*. 1996;76:1089-1096.

36. Schoot T, Proot I, Legius M, ter Meulen R, de Witte L. Client-centered home care: Balancing between competing responsibilities. *Clin Nurs Res* [Internet]. 2006 11;15(4):231-57. Available from: <http://search.ebscohost.com/login.aspx?direct=true&db=cin20&AN=2009315232&site=ehost-live>

37. Adams CE, Michel Y, DeFrates D, Corbett CF. Effect of locale on health status and direct care time of rural versus urban home health patients. *J Nurs Adm* [Internet]. 2001 05;31(5):244-51. Available from: <http://search.ebscohost.com/login.aspx?direct=true&db=cin20&AN=2001110260&site=ehost-live>

38. Koch T. Interpretive approaches in nursing research: The influence of Husserl and Heidegger. *J Adv Nurs* [Internet]. 1995 [cited 12 May 2013];21(5):827-36.
39. Dowling M. From Husserl to van Manen. A review of different phenomenological approaches. *Int J Nurs Stud* [Internet]. 2007 [cited 12 May 2013];44(1):131-42.
40. Ray M. The richness of phenomenology: Philosophic, theoretic, and methodologic concerns. In: Morse J, editor. *Critical issues in qualitative research methods*. Thousand Oaks, CA: Sage; 1994; p. 187-209.
41. Fleming V, Gaidys U, Robb Y. Hermeneutic research in nursing: Developing a gadamerian-based research method. *Nurs Inq* [Internet]. 2003 [cited 12 May 2013];10(2):113-20.
42. Gadamer, HG. *Truth and method*. New York, NY: Seabury Press; 1975. 551 p.
43. Binding LL, Tapp DM. Human understanding in dialogue: Gadamer's recovery of the genuine: Original article. *Nursing Philosophy* [Internet]. 2008 [cited 26 April 2013];9(2):121-30.
44. Debesay J, Nåden D, Slettebø A. How do we close the hermeneutic circle? A gadamerian approach to justification in interpretation in qualitative studies: Feature. *Nurs Inq* [Internet]. 2008 [cited 26 April 2013];15(1):57-66.
45. Finlay L. "Outing" the researcher: The provenance, process, and practice of reflexivity. *Qual Health Res* [Internet]. 2002 [cited 13 March 2013];12(4):531-45.
46. Strauss A, Corbin J. Chapter 12: memos and diagrams In: Strauss A, Corbin J, editors. *Basics of qualitative research: grounded theory procedures and techniques*. Newbury Park: Sage; 1990; p. 197-223.
47. Morrow SL. Quality and trustworthiness in qualitative research in counseling psychology. *J Couns Psychol* [Internet]. 2005 [cited 13 March 2013];52(2):250-60.
48. Unit for Population Health and Chronic Disease Prevention on Behalf of Working Group Members. *Nova Scotia chronic disease prevention strategy*. Halifax, NS: Dalhousie University; 2003 Available from: <http://www.gov.ns.ca/hpp/cdip/cd-prevention-strategy.asp>
49. Jackson J. Personal communication with South West Community Care Access Centre Case Manager. Graham L, editor. London, Ontario: ; 2012.

50. Ladoucer D. South West Community Care Access Center, Senior Director of Client Services. Graham L, editor. London, ON: Graham, L.; 2013. 1 p.
51. Lorig K. Chronic disease self-management: A model for tertiary prevention. *Am Behav Sci* [Internet]. 1996 [cited 16 August 2013](6):676-83.
52. MacDonald CA, Houghton P, Cox PD, Bartlett DJ. Consensus on physical therapy professional behaviours. *Physiother Can*. 2001;53(3):212.

Chapter 6

6 Discussion

The aim of this two-study investigation was to enhance understandings of exercise as a self-care activity within the context of older adults living with chronic disease(s) and community physiotherapists' experiences promoting chronic disease self-management to rural-residing older adults. The first objective was to construct research findings of the influence of culture on older adults' self-care behaviours and of the experiences of community physiotherapists promoting self-management. The second objective was to construct findings that could bring insight to community physiotherapists' practices in promoting exercise as a means to chronic disease self-management among older adults living in rural communities.

Exercise as self-care was defined as physical activity practiced with the intent and sufficient intensity and frequency to influence health or the disease process.¹ Exercise, as a self-care activity in the context of this dissertation is described as a component of chronic disease self-management strategy. Constructed in Study 1 was a contextual example of older adults' perceptions and use of exercise in collaboration with or in contrast to their self-management strategy. Study 2 described tangible examples of physiotherapists' experiences of promoting chronic disease self-management among older adults in rural communities. Findings from these two studies highlight the possible tensions that may arise between older adults and physiotherapists with respect to promoting chronic disease self-management in the context of a rural community and of an existing community care service model. The purpose of this chapter is to review the findings and key insights gained and implications for practice, education, and future research.

6.1 Summary of Findings

Study 1 revealed that participants' viewed *self-care as holistic*, but more readily described the link between self-care and *eating well* when compared to the perceived role of *exercise for health benefits*. *Being with others, independence, and sense of community*

were shared values, beliefs, and behaviours that demonstrated possible influences on participant's perceptions and experiences of exercise as self-care. Participants defined exercise in general terms, *exercise as movement*, but did not demonstrate an understanding of the relevance or importance of exercise intensity to gain health benefits or exercise specificity in relation to their own chronic disease(s). Instead, participants' choices to engage in exercise were dependent on their perceptions of what was *enjoyable activity* and of their *past activity experience and present participation*. In other words, preferred exercise participation was based on what participants enjoyed doing and what they could do now in relation to what they had done in their youth.

Study 2 demonstrated that facilitating exercise participation was not the primary objective for community physiotherapists when promoting chronic disease self-management. Participants' experiences were about *making connections* to support clients in gaining or maintaining their own independence. Participants defined independence as a spectrum reaching toward a decreasing need for physical assistance or verbal cueing from a health care practitioner or family member. Participants described the importance of *connecting the physiotherapist and the client* by building rapport, *connecting the chronic disease with signs, symptoms, and prognosis* by educating the client, and *connecting the client with the community* by involving community services, additional health service referrals, or family members who could facilitate self-management support. Each connection built upon the previous and was influenced or modified by the *client's* values, beliefs, and behaviours, the physiotherapist's *previous experiences* during past client interactions, the home care *service model*, and the *rural context* in which they worked. Findings from both studies 1 and 2 highlighted key insights, as summarized below following a review of study limitations.

6.2 Study Limitations

Studies one and two were carried out within two particular and separate socio-cultural contexts at a particular time, and therefore should only be understood within those contexts. The findings have been co-constructed by researchers and participants within these particular contexts, and therefore should not be generalized or simply translated to older adults and community physiotherapists in other contexts. Study 1 participants

included older adults who independently lived in their own homes. Insights gained from studies one and two can inform physiotherapy practice in community care settings, but they cannot wholly represent the experiences of other community physiotherapists in Southern Ontario, nor the values, beliefs, and behaviours of other older adults in rural Nova Scotia. This statement of limitations is based on the fact that in applying a constructivist paradigm to studies 1 and 2, I recognize that all findings are co-constructions and will never completely represent the experiences, values, beliefs, and behaviours as they are solely lived and understood by the participants. However, through dialogue and ongoing analysis and writing in accordance with methodological criteria for ensuring quality, I have attempted to make these co-constructions resonate with both the research participants and the research readers.

6.3 Summary of Key Insights

The key insights summarized in this section arose from the findings of studies one and two, and form the basis of the implications for policy, practice, and education. The aim of this two-study investigation was to enhance understandings of exercise as a self-care activity within the context of older adults living with chronic disease(s) and community physiotherapists providing care to rural-residing older adults. However, the findings from both studies revealed exercise was not the most significant means to self-care for older adult participants or as a means to promoting self-management for physiotherapy participants. Participants in both studies described a holistic or multi-focal approach to participating in self-care and to promoting self-management that did not include exercise as the main focus. In line with the objectives of this dissertation, the key insights summarized in this sub-section highlight findings as they relate to exercise as self-care within the context of older adults living with chronic disease(s) and community physiotherapists providing care to rural-residing older adults.

The first key insight concerns physiotherapist participants *making connections* to facilitate chronic disease self-management. Physiotherapists described having enacted their expertise in condition-specific health promotion and self-management interventions while collaborating with clients and family members to help them understand the connection between their chronic illness, the role of physiotherapy, and of available

community and additional health service resources. Involving peers and connecting clients with community services could be very important for older adults. Consider the findings from Study 1, where being with others and sense of community represented important, shared values and beliefs of the older adults interviewed. However, it is less clear the extent to which these physiotherapists understood and integrated into the clinical decision-making process their clients' values, beliefs, and behaviours concerning exercise as a means to self-care. Physiotherapists described withdrawing or detaching from promoting exercise when the client was not interested in exercise participation or when the interaction resembled previously failed experiences of promoting chronic disease self-management with other clients. Enacting client-centered practice has been interpreted as requiring the physiotherapist to integrate both their biomedical knowledge of, for example the chronic disease, and their expertise in therapeutic exercise or exercise for self-management with their understanding of the client's perspective.² Understanding the client's perspective was interpreted as both an understanding of and an appreciation for the client's values, beliefs, and behaviours within the context of the client's experiences in living with the chronic disease(s). Findings from Study 2 described how physiotherapists then had to negotiate the tensions between their professional responsibilities and expertise, the constraints of the service model, and their understanding of the client's values, beliefs, and behaviours.

The second insight is the influence of the *client* and the significance of understanding clients' exercise values, beliefs, and behaviours within the context of their social and physical environments. Specifically, physiotherapists' narratives illuminated the influence of clients' values, beliefs, and behaviours on their chosen self-management promotion strategies. The physiotherapists described exercise prescription as an important part of practice, and needing to enact non-exercise-related strategies when and where the client did not wish to participate in exercise. This demonstrated the physiotherapists' understandings of the impact of the client on their ability to promote exercise as a means to chronic disease self-management. However, the depth of understanding of client values, beliefs, and behaviours was not clear. Study 1 constructed a contextual example of the ways in which older adults' shared values, beliefs, and behaviours can impact self-care practices and exercise values, beliefs, and behaviours.

Older adult participants recognized exercise begets health benefits, although exercise was not considered a primary means to self-care. Older adults chose to engage in exercise that was enjoyable and familiar, which highlighted the importance of promoting meaningfully enjoyable and/or familiar activities in therapeutic interventions.

Older adults did not describe involvement of primary care providers, such as physician or physiotherapists with respect to encouraging their exercise participation. We cannot hypothesize whether this is due to lack of awareness of physiotherapist roles in promoting exercise as a means to chronic disease self-management. However, the physiotherapists in Study 2 described the service model as a barrier to promoting exercise for chronic disease self-management. The third key insight to be addressed is therefore the influence of the service model with respect to limiting physiotherapists' experiences in making connections, and feeling constrained by time. Number and length of visits, as well as primary reason for referral were all interpreted as impeding the depth of connections physiotherapists sought to create within their experiences of promoting chronic disease self-management. As a result, these physiotherapists adopted strategies to work within the confines of the service model, but risked not being able to address self-management needs for chronic disease. Changing the service model to include physiotherapy referrals for chronic disease self-management and/or to increase reimbursement for rural home visits might enable physiotherapists to take more time to enact physiotherapy practice roles and client-centered practice in a more meaningful way.

Together, these insights helped us understand why exercise was not described as a main self-care activity or self-management strategy for both the older adult participants and as a means to self-management promotion for physiotherapists. In both studies, participants demonstrated a holistic approach to self-care that involved inclusion of additional health care and community services, family, and non-exercise-related activities, such as eating well. The insights from both studies speak to the complexity of promoting chronic disease self-management in relation to the need to prioritize and to navigate tensions between an understanding of the client, the context, and the imposition of the service model. The following sections describe each key insight in relation to existing literature before bringing them together to describe implications for physiotherapy practice,

professional education, community physiotherapy-related service policy, and future research.

6.3.1 First key insight: Making connections

Community physiotherapist participants' experiences of promoting chronic disease self-management were described as making connections. Participants' descriptions about making connections demonstrated moving beyond a focus on exercise to adopt a multi-modal or holistic approach similar to those recommended elsewhere in self-management literature.³⁻⁵ Making connections was about building rapport to connect with the client, educating the client about their chronic disease, and connecting the client with individuals and services or organizations in the community that could facilitate self-management support. Each connection built upon the previous and was described as having been both positively and negatively influenced by participants' previous clinical experiences, and interpretations of the client and the rural context. However, community physiotherapist participants consistently described having to negotiate the tensions between promoting chronic disease self-management, and attending to and understanding the clients' needs within the limited time/number of visits dictated by the service model. These findings were similar to a previous study concerning physiotherapists engaging in chronic disease health promotion with older adults in acute and outpatient clinical settings.⁵ Physiotherapists described a holistic, client-centered practice approach to address clients' needs, and referring on to additional health care practitioners who could support the clients' needs that fell outside of the physiotherapy scope of practice.

In Study 2, physiotherapists' approaches to making connections entailed implementing interventions specific to the client's chronic disease. Specifically, participants described having educated clients about their disease, the role of physiotherapy, exercise, and available community resources; and referred clients to additional health care practitioners who could further support the client's self-management needs. Participants described collaboration with clients, families, and health services providers in their experiential recounts of connecting with the client and context. Goals were prioritized and treatment alternatives were provided based on clients' preferences. This approach to making connections resonates with findings from Study 1 where older adults' shared values,

beliefs, and behaviours were constructed as the importance of spending time with family and friends, maintaining independence, and sense of community. Furthermore, findings from Study 1 demonstrated these older adults valued activities that were meaningful and/or they had tried or done previously. Recounts of the physiotherapists' experiences did not reveal the depth to which physiotherapists sought to understand and integrate such client values into the clinical decision-making process. Investigating how and the extent to which participants delved into understanding and integrating client values may inform our understandings of why participants felt they failed to engage the client in their interpretations of negative experiences or unsuccessful collaborations or client interactions.

Negative or unsuccessful client interactions were interpreted as having been influenced by the *client* and *previous experiences*. For example, when a client indicated he/she did not wish to participate in exercise as part of his or her care plan, one physiotherapist described having refocused the intervention on something not related to exercise. This physiotherapist explained that one could not force a client to do something they wish not to. Therefore, the physiotherapist chose to refocus the intervention on client safety and conducted a walkthrough of the client's home to assess elements of the home that would pose a fall risk, for example, scatter rugs. Previously failed or unsuccessful attempts to engage clients in exercise and/or self-management was interpreted as having influenced physiotherapists' choices to not advocate for additional home visits and to not put forth as much effort to engage a client who was not immediately ready or evidently motivated to participate in the offered physiotherapy intervention. The client and previous experiences influenced the physiotherapist's approach to promoting self-management which could be interpreted as similar to behaviours described in nursing literature, by Schoot, Proot, Legius, ter Meulen, and de Witte:⁶ detaching and directing. Schoot and colleagues described detaching as withdrawing from a client in an effort to fulfill a professional responsibility.⁶ Detaching occurred when conditions, such as the service model policy were barriers to enacting the proper strategy. Directing described behaviours that opposed or disregarded clients' values in pursuit of implementing evidence-based practice. For example, a nurse asked a family member purchase a medical device different from the one requested by the client, because the nurse perceived client's choice was unsafe and

inappropriate for his needs. In the case of our physiotherapist participants who withdrew from promoting exercise or chose to not advocate for further services allowed them to maintain a professional responsibility to the service organization by not wasting home health care dollars where services were not needed or wanted. A physiotherapists' decision to withdraw from promoting exercise may represent a movement away from engaging in evidence-based practice—where exercise may be considered an important means to managing physical dysfunction associated with, for example osteoporosis. Our physiotherapist participants avoided directing clients to engage in exercise when they were not interested, which could be interpreted as having respect or regard for client's values and/or autonomy.

Respecting client values is an important tenet of client-centered care. A previous study demonstrated that health care practitioners have different views on self-management, which can impact the type of care provided.⁷ Edwards² explained that physiotherapists must be able to draw from a biomedical perspective to identify a client's physical dysfunction and/or pathology, in addition to drawing on a sociocultural perspective (i.e., client values, physical and social environments) to understand the client's perspective of living with their chronic disease or diseases. This dialectical approach to clinical reasoning goes beyond expected essential competencies for expertise and collaboration, and client-centered practice behaviours to integrate client values into the decision-making and intervention planning processes.^{8,9}

Physiotherapists' experiences of promoting chronic disease self-management were interpreted as making connections. This phenomenological investigation provided a contextual example that suggests community physiotherapists could be further supported by their service organization and professional development opportunities to enact expertise and collaboration to engage in client-centered practice behaviours.

Physiotherapists could be supported through educational opportunities to learn how to gain a deeper understanding of client values, so that physiotherapists may integrate client's values into the construction of a chronic disease self-management promotion strategy.

6.3.2 Second key insight: Understanding the influence of clients' values, beliefs and behaviours on exercise and self-care

Physiotherapists from Study 2 described clients' values, beliefs, and behaviours both impeded and facilitated making connections to promote chronic disease self-management. Rural-residing older adults were interviewed in Study 1 to co-construct a contextual example of older adults' values, beliefs, and behaviours in relation to exercise and self-care activities. This contextual example provided insight concerning our understanding of why older adults may or may not choose to engage in exercise as a means to self-care. Furthermore, this contextual example provides insights into the importance of making therapeutic exercise programs enjoyable and familiar for older adults who may benefit from exercise as a means to self-care within their strategy for chronic disease self-management.

Findings from Study 1 demonstrated that independence, a sense of community, and being with others were shared, important and defining group values, beliefs, and behaviours. These findings resonated with what one study described as defining features of older adults across rural Canada.¹⁰ These shared values, beliefs and behaviours in Study 1 were found to have influenced older adult participants' self-care and exercise behaviours. Older adult participants valued *independence* as functional capacity and self-reliance or not needing help from others. Older adult participants described a strong sense of community through their stated value and belief in the importance of helping others or giving back to the community. Similarly, findings from Miller and Iris demonstrated that their older adult participants described 'being healthy' as including functional independence, and social contribution, in addition to self-care, management of illness, positive outlook, and personal growth.¹¹ Beyond being healthy and self-care, older adult participants' shared values, beliefs, and behaviours were shown to have influenced older adults' participation in exercise. *Being with others* described a social influence that was source of enjoyment, motivation, and safety. Social influences are known to have important, positive effects on exercise.¹² Findings from a study on physiotherapy-prescribed exercise demonstrated that older adults were more likely to participate in therapeutic exercise, if they lived with a partner.¹³ Additionally, older adult participants

from Study 1 described being with others as a source of safety, which could inform physiotherapists attempting to help older adults to cope with a fear of falling or re-injury: commonly cited barriers to exercise participation among older adults.¹⁴⁻¹⁹

Being with others could also be described as a source of confidence or self-efficacy (as in Social Cognitive Theory), where being with others was also reported by the older adults as a source of enjoyment and motivation. Social Cognitive Theory explains that confidence or self-efficacy is modified by learning from peers through modeling behaviour (known as vicarious experience) or peer encouragement to go for a walk or to the gym (known as social persuasion) and pleasurable experience (known as physiological state).²⁰ Understanding confidence is important when designing therapeutic exercise programs.¹⁴ Highlighting the link between confidence, being with others, and enjoyment begins to explain how this study provides a contextual example of the importance of making therapeutic exercise programs enjoyable and familiar for older adults.

6.3.3 Third key insight: Influence of the service model

In Ontario, community physiotherapy is accessible to residents who cannot access outpatient services or have recently undergone joint arthroplasty. In every region of the province, home care clients are designated a care coordinator who coordinates referrals and approves treatment plans (e.g., additional visits). Clients in Ontario receive an average of four to six visits each.²¹ Time per visit, number of visits per client, and reason for referral, dictated by the service model, were described as barriers to enacting chronic disease self-management support among rural-residing older adults. Specifically, physiotherapist participants described lack of time, and insufficient number of visits to properly educate clients and family about chronic disease self-management. This pursuit was described as being further complicated by the fact that physiotherapists were primarily referred to the home to treat acute care needs, and not to address the possible contributing factors related to chronic disease self-management or lack thereof. In order to indirectly address chronic disease self-management, physiotherapist participants described having left clients with educational material related to their chronic disease and/or connected them with appropriate community services and additional health

professionals. Where physiotherapists are inhibited or unable to enact promotion of chronic disease self-management, the public's understanding of the role of physiotherapy in chronic disease self-management may also be impacted. Consider the findings from Study 1, where no older adult described being supported by a physiotherapist to participate in exercise or other self-care activities to manage their chronic disease. Only one participant spoke of the influence of a family physician that encouraged her to exercise to improve her back health and prevent future low back pain.

A qualitative analysis of physiotherapists engaging in health promotion in acute care and outpatient clinical settings in urban America described time constraints and lack of reimbursement impeded their ability to engage clients.⁵ Another study concluded that although physiotherapists saw clients in rural and urban settings for the same numbers of visits, those in the rural settings required longer visits.²² Researchers concluded that those in the rural settings demonstrated more complex and/or long-term chronic care needs when compared to those sampled from the urban setting. Furthermore, Adams, Michel, DeFrates & Corbet²² proposed higher per episode reimbursement for rural versus urban home care clients, where rural clients have poorer health status, require longer visits, and farther travel distances.

Given instances where older adults in rural areas may have poorer health statuses,²³ and require further travel distance, community physiotherapists risk not being able to properly address each of the client's health care needs in an effort to work within the confines of the service model. In Study 2, physiotherapists described not having enough time to properly address care needs concerning chronic disease self-management. This concern was compounded by the fact that physiotherapists described not receiving referrals for chronic disease self-management, even though the client's primary reason for referral (e.g., fracture) may be associated with their chronic disease (e.g., osteoporosis). The conflict between professional and personal responsibilities to enact client-centered home care with older adults has been described in the nursing literature.⁶ Nurses who placed their professional values for evidence-based practice ahead of clients' values or demands were described as having detached themselves from the client's needs in order to adhere to protocols, work schemes, and care plans dictated by the home care organization. These

nurses described frustration and ethical distress in light of these competing responsibilities, noting the home care service organization as a barrier to their ability to enact the client-centered care plan. Physiotherapists in acute care and outpatient urban settings have described time constraints and lack of reimbursement as barriers to engaging older adults in health promotion.⁵ Similar to the findings in Study 2, we heard physiotherapist participants described having to prioritize the primary reason for physiotherapy referral ahead of or withdraw from promoting chronic disease self-management. Changing the service model to increase reimbursement for rural home visits might be one approach to afford physiotherapists sufficient time to enact physiotherapy practice roles and client-centered practice in a more holistic manner.

6.4 Implications of Key Insights

6.4.1 Implications for practice

Study 1 provided a contextual example of older adult participants' shared values, beliefs, and behaviours with respect to exercise and self-care. The implications for practice constructed from these ethnographic findings are twofold: Firstly, this example highlighted the intersecting influences of a group's sociocultural and physical environment on what participants perceived and enacted as exercise and self-care. These intersecting influences demonstrated the importance of asking questions about a client's values, beliefs, behaviours with respect to exercise and self-care and of their sociocultural and physical environments. Secondly, Study 1 demonstrated the importance of integrating enjoyable and personally familiar activities when promoting exercise for chronic disease self-management.

Physiotherapists who strive to understand their client's values, beliefs, and behaviours within their particular sociocultural context may glean valuable information that could improve physiotherapist-client rapport and enhance the physiotherapists' understanding of the influence of a client's values, beliefs, and behaviours or their willingness to engage in exercise as a means to self-care. Promoting exercise as a means to chronic disease self-management is an important part of physiotherapy practice in Canada. Physiotherapists are expected to demonstrate competency in collaborative, client-centered health

promotion and self-management support through education, consultations, and therapeutic exercise.⁸ Client-centered health promotion^{8,24} implies that ongoing collaborative dialogue and decision-making between the physiotherapist, client, family members, and other health care practitioners concerns the client's active participation in their own care, and enhances client- and family-centered treatment goals and values.⁸ Previous studies have demonstrated clients are more likely to comply with physiotherapy-prescribed exercises and to highly value physiotherapists who listened, provided positive feedback, and demonstrated respect for client's health practice choices.^{25,26} Furthermore, earlier work in physiotherapy literature advocates for the importance of understanding clients' beliefs and values in order to maximize or ensure patient compliance with physiotherapy-prescribed therapeutic exercise in both short and long-term interventions.²⁷ Therefore, examining older adults' values, beliefs, and behaviours related to exercise as self-care, can provide important insights for efficacy of therapeutic exercise interventions prescribed by physiotherapists.²⁷ Moving beyond asking questions about older adult clients' values, beliefs, and behaviours, Bjornsdottir, Arnadottir, and Halldorsdottir²⁸ concluded that physiotherapists also need to be keenly aware of the impact of social and physical environment influences when promoting exercise as a means to self-care—in other words look at the client's chronic illness or self-care needs within the greater sociocultural and physical contexts. Taking the time to discern client's values, beliefs, and behaviours and the client's perspective of living with the chronic illness within the context of their sociocultural and physical environments may enable physiotherapists to understand client's participation in exercise as a means to self-care.

Older adult participants described exercise as a broad concept that included a variety of types of movement, activities of daily living, and sports. Thus physiotherapists may encounter clients with a vague understanding of exercise and therapeutic intensity and therefore who may easily benefit from education about exercise guidelines and physiological training principles. However, this ethnographic example also proposes the importance of taking the time to understand and incorporate knowledge of what their older clients enjoy and have done previously when encouraging exercise participation for self-care or prescribing therapeutic exercise. Particularly, older adult participants preferred engaging in activities that were enjoyable and had been previously experienced.

Perceived enjoyment has been described as a significant motivator for physical activity participation among older adults.²⁹ The Physical Activity Enjoyment Scale is a valid and reliable outcome measure that physiotherapists could employ to measure and monitor this construct.^{30,31} Older adult participants in Study 1 described *being with others* as having both motivated themselves to persist in the activity, and made the activity enjoyable. The relationship between being with others and motivation can be described as a source of self-efficacy, where Social Cognitive Theory describes self-efficacy as one's belief in their ability to participate in a behaviour. Social Cognitive theory (SCT) describes mastery experience as yet another important source of self-efficacy. Specifically, a person's experience with an activity or a similar activity informs their perception of their ability to perform that activity.³² In this ethnographic example older adult participants described preferring to participate in activities they had done in their youth. Furthermore, research informed by SCT hypothesizes that older adults are more likely motivated to be physically active if they "value physical activity as a meaningful behaviour."^{33 (p.83)} Occupational therapy researchers have advocated for integrating meaningful activity when interpreting physical activity guidelines with clients.³⁴ This approach was supported by another occupational therapy study that demonstrated the link between client motivations and meaningful activity described by older women³⁵. This approach to promoting exercise as a means to self-care in physiotherapy practice may facilitate client adherence to therapeutic exercise and facilitate efforts to promote chronic disease self-management.

6.4.2 Implications for community care policy

The number of allowable visits and reasons for physiotherapy referrals are chosen by the care coordinator, based on their assessment of the client's needs. Care coordinators, in Ontario, are employees of local Community Care Access Centres, which are funded through the regional health authority, or Local Integrated Health Network (LIHN). Care coordinators may be trained as nurses, kinesiologists, physiotherapists, occupational therapists and so on, and their assessments are dictated by CCAC policy. For example, in Ontario the Community Care Access Centre assigns a care coordinator to new clients. The care coordinator completes a needs assessment, partly based on information from the

referral source. The care coordinator then distributes referrals for specific services to community care service organizations that employ health care practitioners. Care coordinators dictate the number of visits allowed for each practitioner. Care coordinators can use their discretion to approve health care practitioners' requests for extensions or further visits on a case-by-case basis. Care coordinators must integrate their understanding of the client, their needs assessment, CCAC budget for home care services, and the case made by the clinician.³⁶

Poorer health status and health service access is thought to contribute to a greater impact of chronic disease among older adults living in rural areas compared to urban centers.^{10, 23} Chronic disease care and helping rural-residing Canadians are longstanding government priorities at both the provincial and federal levels.^{37, 38} Although self-management is supported as the primary approach to dealing with the issue of chronic disease in Canada, Study 2 provided an example of community physiotherapists who have not experienced support in their efforts to promote chronic disease self-management among rural-residing older adults. Specifically, community physiotherapist participants were receiving referrals to treat acute care issues, instead of the contributing factors of an underlying chronic disease. This may have greater impact on public perception of physiotherapists' roles in chronic disease self-management. In Study 1, no older adults recalled being helped by physiotherapists in their pursuit to care for their chronic disease. Only one participant described being supported by a physician to participate in exercise to prevent exacerbation of her low back pain.

Physiotherapists described being constrained by time (length and number of allowable visits) which forced them to prioritize the acute care needs over the chronic disease self-management needs, and/or indirectly promote self-management through use of educational packages, or facilitating connections with local community services and/or additional health care practitioners. Presumably, if only the acute care needs are treated, these chronic disease exacerbations will recur, requiring ongoing need for re-referral of physiotherapy or access to additional health care services. This example suggests there may be merit in exploring if physiotherapists were afforded the opportunity to intervene and promote chronic disease self-management more efficiently whether there would be

less need for ongoing access of health care services. If physiotherapists had more time to work with clients perhaps they would have a greater chance at raising clients' awareness of the importance of exercise as a means to self-care that could be integrated into a chronic disease self-management strategy—thus enabling the client to maintain or improve their independence and their knowledge of when or their need to access health care services in the future. Self-management programs have been shown to reduce health care costs for this very reason.³⁹ Furthermore, self-management programs involving exercise experts are more likely to demonstrate success in promoting exercise as a self-care activity. Examples from nursing and interdisciplinary home care have demonstrated that policy makers need to create conditions that allow for sufficient time with the client to enact these roles—whether through increased number or length of allowed visits.

The purpose of this paper is not to develop a cost-effectiveness analysis of proposing increased reimbursement for rural visits versus continued treatment of acute care needs in a community care setting. Rather, the focus of this paper is to consider the role of physiotherapy in facilitating chronic disease self-management among older adults. This paper reviewed literature concerning clinicians who have experienced barriers to promoting self-management among rural clients and those papers supported the implication for change in policy. However, another approach to supporting clinicians concerns education for physiotherapists. Interviewing strategies that focus on client's values, beliefs, and behaviours may enable clinicians to counsel clients on how to make meaningful and enjoyable activity benefit their health.

6.4.3 Implications for education of physiotherapists

Implications for education derived from these key insights concerned understanding the client's perspectives and behaviours within the context of the client's social and physical environments. While this could be accomplished in more than one way, given the context of studies one and two, the implications for education will focus exclusively on the role of existing behaviour change theories and ethnography. Physiotherapists could learn how to assess client's behaviours within the context of behaviour change theories, as suggested by Brawley, Rejeski, and King⁴⁰ and Ettinger, Burns, Messier, Applegate, Rejeski, Morgan and colleagues.⁴¹ Specifically, Brawley and colleagues and Ettinger and

colleagues concluded that therapeutic exercise interventions are far more effective when behavioural or cognitive-behavioural strategies are incorporated.^{40, 41} This idea is further supported by the review of previous literature demonstrating that the most significant predictor of noncompliance was client's perceived barriers and lack of confidence. Furthermore, Sirur, Richardson, Wishart, and Hanna⁴² in comparing multiple behaviour change theories applied to health behaviours, concluded that SCT takes the most comprehensive approach to representing proposed influences on exercise behaviours; and the Southwest Community Care Access Center has launched the South West Self-Management Program, offering locally available group education programming for adults living with chronic diseases, and free workshops for clinicians willing to learn about how to enable clients to make choices and changes to their self-care behaviours. The curriculum is based on motivational interviewing techniques, which were formed based on behaviour change theories, including the Social Cognitive Theory. This approach presents an alternative to change in policy, and an implication for ongoing physiotherapist education. Another means to providing educational opportunities for clinicians is through ethnographical research that explores the sociocultural aspects of physiotherapy practice-related problems.

Focused ethnography was employed for Study 1 to construct a contextual example of older adults' values, beliefs, and behaviours concerning exercise as a means to self-care. Ethnography provides a means to gain an understanding of how members of a group make sense of their world by exploring their shared values, beliefs, and behaviours.⁴³ Given the purpose is to co-construct an understanding of values, beliefs, and behaviours, ethnography lends itself well to established theoretical frameworks, such as social cognitive theory. Ethnography, used as a research methodology, could enable physiotherapists to co-construct understandings of clients' perspectives in their local care settings. Ethnography enables us to understand shared cultural values, beliefs, and behaviours, which can be interpreted as determinants of health and therefore self-care activities. Physiotherapy practice can be strengthened through ethnographic research that enhances our understanding of the complexities of co-constructed meaning within client care, physiotherapist-client rapport development, and client values, which cannot be captured by clinical trials and other quantitative methodologies alone.⁴⁴⁻⁴⁶ Over the years,

calls to enrich understandings of clients' values to inform physiotherapy practice with qualitative and culturally sensitive research methodologies, such as ethnography, have largely gone unanswered.⁴⁶⁻⁴⁸ In a field that relies on one-on-one, client-therapist interaction and emphasizes the importance of a physiotherapists' interpersonal skills,^{49,}⁵⁰ physiotherapists and researchers looking to answer this call should turn to a methodology like ethnography which emphasizes individual and group perspectives, values, beliefs, and experiences. Engaging in such research in the future could potentially support physiotherapists in settings other than community care, and thus should be considered an important implication for physiotherapy education.

6.5 Future Research

The findings from these studies do not allow us to interpret the depth to which physiotherapist participants dug to understand client values, beliefs, and behaviours to either integrate into clinical decision making or to promote exercise as a means to chronic disease self-management. Future investigation should examine the depth of understanding physiotherapists seek concerning client's values, and whether physiotherapists have the skills to sufficiently develop and integrate such an understanding into the co-construction of more meaningful self-management promotion strategies. Self-management promotion strategies that address both client's needs, and physiotherapists' responsibilities to his/her service organizations and professional roles as experts in promoting self-management programs and collaboration with clients, families, and other health service providers. Sirur and colleagues proposed future research in physiotherapy should look at creating meaningful, context-specific therapeutic exercise interventions that support self-management using Social Cognitive Theory as a framework.⁴² Future investigations could examine clinical experiences mapped onto theoretical frameworks to identify opportunities for improvement and/or consistency in approach. Such a reference could illuminate important considerations for physiotherapy practice in community care settings.

6.6 Conclusion

Community physiotherapists' experiences in promoting chronic disease self-management reflect accepted expert and collaborator roles within the context of patient-centered physiotherapy practice. However, the constraints of the service model, the client and past experiences may limit their efforts to promote exercise as a means to self-management. While changes to community care policy could enable clinicians to focus more time into understanding their clients' interests and care needs, Study 1 provides us an example of the importance of understanding our clients values, beliefs, and behaviours as they relate to exercise as a means to self-care. Community physiotherapists can help clients explore the connection between exercise intensity and specificity in relation to their chronic care needs. Furthermore, community physiotherapists may positively influence clients' perceptions of participating in exercise for self-care if they integrate activities the client finds enjoyable and familiar.

6.7 References

1. Ulbrich SL. Nursing practice theory of exercise as self-care. *J Nurs Scholarship* [Internet]. 1999 [cited 13 March 2013];31(1):65-70.
2. Edwards I, Jones M, Carr J, Braunack-Mayer A, Jensen GM. Clinical reasoning strategies in physical therapy. *Phys Ther* [Internet]. 2004 [cited 16 August 2013];84(4):312-30.
3. Glasgow RE, Funnell MM, Bonomi AE, Davis C, Beckham V, Wagner EH. Self-management aspects of the improving chronic illness care breakthrough series: Implementation with diabetes and heart failure teams. *Ann Behav Med* [Internet]. 2002 [cited 14 July 2013];24(2):80-7.
4. Lorig K. Chronic disease self-management: A model for tertiary prevention. *Am Behav Sci* [Internet]. 1996 [cited 16 August 2013](6):676-83.
5. Healey WE, Broers BK, Nelson J, Huber G. Physical therapists' health promotion activities for older adults. *J Geriatr Phys Ther* [Internet]. 2012 2012;35(1):35-48. Available from: <http://search.ebscohost.com/login.aspx?direct=true&db=cin20&AN=2011459886&site=ehost-live>

6. Schoot T, Proot I, Legius M, ter Meulen R, de Witte L. Client-centered home care: Balancing between competing responsibilities. *Clin Nurs Res* [Internet]. 2006 11;15(4):231-57. Available from:
<http://search.ebscohost.com/login.aspx?direct=true&db=cin20&AN=2009315232&site=ehost-live>
7. Kralik D, Koch T, Price K, Howard N. Chronic illness self-management: Taking action to create order. *J Clin Nurs*. 2004;13(2):171-83.
8. National Physiotherapy Advisory Group. Essential competency profile for physiotherapists in Canada. 2009 Available from:
<http://www.physiotherapyeducation.ca/Resources/Essential%20Comp%20PT%20Profile%202009.pdf>
9. MacDonald CA, Houghton P, Cox PD, Bartlett DJ. Consensus on physical therapy professional behaviours. *Physiother Can*. 2001;53(3):212.
10. Keating N, Swindle J, Fletcher S. Aging in rural Canada: A retrospective and review. *Can J Aging* [Internet]. 2011 [cited 13 March 2013];30(3):323-38.
11. Miller PA, McKibbin KA, Haynes RB. A quantitative analysis of research publications in physical therapy journals. *Physical Therapy*. 2003;83(2):123-31.
12. Carron AV, Hausenblas HA, Mack D. Social influence and exercise: A meta-analysis. *J Sport Exerc Psychol* [Internet]. 1996 [cited 31 March 2013];18(1):1-16.
13. Hill AM, Hoffmann T, McPhail S, Beer C, Hill KD, Brauer SG, Haines TP. Factors associated with older patients' engagement in exercise after hospital discharge. *Arch Phys Med Rehabil* [Internet]. 2011 [cited 24 March 2013];92(9):1395-403.
14. Lee LL, Arthur A, Avis M. Using self-efficacy theory to develop interventions that help older people overcome psychological barriers to physical activity: A discussion paper. *Int J Nurs Stud* [Internet]. 2008 [cited 24 March 2013];45(11):1690-9.
15. Lees FD, Clark PG, Nigg CR, Newman P. Barriers to exercise behavior among older adults: A focus-group study. *J Aging Phys Act* [Internet]. 2005 [cited 24 March 2013];13(1):23-33.

16. Costello E, Kafchinski M, Vrazel J, Sullivan P. Motivators, barriers, and beliefs regarding physical activity in an older adult population. *J Geriatr Phys Ther* [Internet]. 2011 [cited 24 March 2013];34(3):138-47.
17. Schutzer KA, Graves BS. Barriers and motivations to exercise in older adults. *Prev Med* [Internet]. 2004 [cited 24 March 2013];39(5):1056-61.
18. Mathews AE, Laditka SB, Laditka JN, Wilcox S, Corwin SJ, Liu R, Friedman DB, Hunter R, Tseng W, Logsdon RG. Older adults' perceived physical activity enablers and barriers: A multicultural perspective. *J Aging Phys Act* [Internet]. 2010 [cited 24 March 2013];18(2):119-40.
19. Forkan R, Pumper B, Smyth N, Wirkkala H, Ciol MA, Shumway-Cook A. Exercise adherence following physical therapy intervention in older adults with impaired balance. *Phys Ther* [Internet]. 2006 [cited 24 March 2013];86(3):401-10.
20. Bandura A, Adams NE, Beyer J. Cognitive processes mediating behavioral change. *J Pers Soc Psychol*. 1977;35(3):125-39.
21. Jackson J. Personal communication with South West Community Care Access Centre Case Manager. Graham L, editor. London, Ontario: ; 2012.
22. Adams CE, Michel Y, DeFrates D, Corbett CF. Effect of locale on health status and direct care time of rural versus urban home health patients. *J Nurs Adm* [Internet]. 2001 05;31(5):244-51. Available from:
<http://search.ebscohost.com/login.aspx?direct=true&db=cin20&AN=2001110260&site=ehost-live>
23. Romanow RJ. Building on values: The future of health care in Canada. [Internet]Saskatoon, SK: The National Library of Canada; 2002. Report No.: ISBN: 0-662-33043-9 Available from:
http://www.hc-sc.gc.ca/english/pdf/romanow/pdfs/HCC_Final_Report.pdf
24. Jensen GM, Gwyer J, Hack LM, Shepard KF. Chapter 9: Expert practice in physical therapy. In: *Expertise in physical therapy practice*. Boston, MA: Butterworth-Heinemann; 1999; p. 175-206.

25. Thomlinson E, McDonagh MK, Crooks KB, Lees M. Health beliefs of rural Canadians: Implications for practice. *Aust J Rural Health* [Internet]. 2004 [cited 26 March 2013];12(6):258-63.
26. Sluijs EM, Kok GJ, Van der Zee J, Turk DC, Riolo L. Correlates of exercise compliance in physical therapy. *Phys Ther* [Internet]. 1993 [cited 30 March 2013];73(11):771-86.
27. Sluijs EM, Knibbe JJ. Patient compliance with exercise: Different theoretical approaches to short-term and long-term compliance. *Patient Educ Couns* [Internet]. 1991 [cited 30 March 2013];17(3):191-204.
28. Bjornsdottir G, Arnadottir SA, Halldorsdottir S. Facilitators of and barriers to physical activity in retirement communities: Experiences of older women in urban areas. *Phys Ther* [Internet]. 2012 [cited 24 March 2013];92(4):551-62.
29. Dacey M, Baltzell A, Zaichkowsky L. Older adults' intrinsic and extrinsic motivation toward physical activity. *Am J Health Behav* [Internet]. 2008 [cited 13 March 2013];32(6):570-82.
30. Mullen SP, Olson EA, Phillips SM, Szabo AN, Wójcicki TR, Mailey EL, Gothe NP, Fanning JT, Kramer AF, McAuley E. Measuring enjoyment of physical activity in older adults: Invariance of the physical activity enjoyment scale (paces) across groups and time. *Int J Behav Nutr Phys Act* [Internet]. 2011 [cited 13 March 2013];8
31. Kendzierski D, DeCarlo KJ. Physical activity enjoyment scale: Two validation studies. *J Sport Exerc Psychol*. 1991;13(1):50-64.
32. Bandura A. Health promotion from the perspective of social cognitive theory. *Psychol Health*. 1998;13(4):623-49.
33. O'Brien Cousins S. Seniors say the "darndest" things about exercise: Quotable quotes that stimulate applied gerontology. *J Appl Gerontol*. 2003;22(3):359-78.
34. Handcock P, Tattersall K. Occupational therapists beware: Physical activity guidelines can mislead. *BAOT* [Internet]. 2012 [cited 26 March 2013];75(2):111-3.
35. Wagstaff S. Supports and barriers for exercise participation for well elders: Implications for occupational therapy. *Phys Occup Ther Geriatr* [Internet]. 2005 [cited 26 March 2013];24(2):19-33.

36. Ladoucer D. South West Community Care Access Center, Senior Director of Client Services. Graham L, editor. London, ON: Graham, L.; 2013. 1 p.
37. Ontario Ministry of Health and Long Term Care. Preventing and managing chronic disease: Ontario's framework. 2007 Available from:
<http://www.health.gov.on.ca/english/providers/program/cdpm/index.html#1>
38. Unit for Population Health and Chronic Disease Prevention on Behalf of Working Group Members. Nova Scotia chronic disease prevention strategy. Halifax, NS: Dalhousie University; 2003 Available from: <http://www.gov.ns.ca/hpp/cdip/cd-prevention-strategy.asp>
39. Richardson J, Letts L, Chan D, Stratford P, Hand C, Price D, Hilts L, Coman L, Edwards M, Baptiste S, Law M. Rehabilitation in a primary care setting for persons with chronic illness: A randomized controlled trial. *Prim Health Care Res Dev* [Internet]. 2010 Oct;11(4):382-95.
40. Brawley LR, Rejeski WJ, King AC. Promoting physical activity for older adults: The challenges for changing behavior. *Am J Prev Med* [Internet]. 2003 [cited 24 March 2013];25(3 SUPPL. 2):172-83.
41. Ettinger Jr. WH, Burns R, Messier SP, Applegate W, Rejeski WJ, Morgan T, Shumaker S, Berry MJ, O'Toole M, Monu J, Craven T. A randomized trial comparing aerobic exercise and resistance exercise with a health education program in older adults with knee osteoarthritis: The fitness arthritis and seniors trial (FAST). *J Am Med Assoc* [Internet]. 1997 [cited 31 March 2013];277(1):25-31.
42. Sirur R, Richardson J, Wishart L, Hanna S. The role of theory in increasing adherence to prescribed practice. *Physiother Can* [Internet]. 2009 [cited 13 March 2013];61(2):68-77.
43. Hesse-Biber SN, Leavy P. Ethnography In: Hesse-Biber SN, Leavy P, editors. *The practice of qualitative research*. [Internet]. Thousand Oaks: SAGE Publications; 2006 p. 229-78.
44. Smith S. Ethnographic inquiry in physiotherapy research. 2. the role of self in qualitative research. *Physiotherapy*. 1996 06;82(6):349-52.
45. Smith S. Ethnographic inquiry in physiotherapy research. 1. illuminating the working culture of the physiotherapy assistant. *Physiotherapy*. 1996 06;82(6):342-8.

46. Johnson R, Waterfield J. Making words count: The value of qualitative research. *Physiother Res Int.* 2004 09;9(3):121-31.
47. Norris M, Allotey P. Culture and physiotherapy. *Diversity Health Soc Care.* 2008 06;5(2):151-9.
48. Schmoll BJ. Ethnographic inquiry in clinical settings. *Phys Ther.* 1987;67(12):1895-7.
49. Pierson FM, Fairchild SL. Chapter 1: Preparation for patient care activities In: *Principles and Techniques of Patient Care.* 4th ed. St. Louis, Missouri: Saunders Elsevier; 2008; p. 1-28.
50. O'Sullivan SB, Schmitz TJ. Chapter 11: Examination of functional status and activity level In: *Physical Rehabilitation.* 5th ed. Philadelphia, PA: F.A. Davis Company; 2007; p. 373.

Appendices

Appendix A Study 1 Informal Discussion and Recruitment Guide for Gatekeepers

Understanding the context:

1. Are health promotion and exercise services or programs available in Mahone Bay?
2. Are any of these programs available for or specific to the needs of older adults?
3. Is there anything about life in Mahone Bay that you feel might influence older adults' beliefs, attitudes and values that might shape how they view and practice exercise as a resource of everyday health?

Recruiting participants:

It was imperative that the primary researcher maintained contact with the gatekeepers through on going discussion to ensure that the gatekeepers understood their roles in the recruitment process, the type of participants sought (i.e., a diverse group of community-dwelling adults, aged 65+), how to avoid coercion, and how to follow ethical guidelines.

1. In seeking out potential participants, you must ensure that each potential participant is aware of what is involved in study participation. To accomplish this task, please review the following summary with potential participants.

"Laura Graham, a PhD Student at the University of Western Ontario, is investigating the concept of exercise as it is perceived and enacted by older adults in rural Nova Scotia. If you choose to participate, you will be asked to engage in two one-on-one audio-taped interviews with Laura for about 1 to 1 ½ hours to answer questions about your own values, beliefs, and attitudes related to what you perceive as exercise."

2. Participants may complete the interviews over more than 2 sessions, if they feel fatigued or unable to continue. Please note that participants who do not consent to being audio-taped will not be included in the study. If the person agrees to be interviewed proceed with the following questions.

"Are you currently 65 years of age or older?"

"Do you live in Mahone Bay?"

"Do you live in your own home, a family-member's home, or senior's housing? Probe to ensure that they do not live in a facilitated care or nursing home."

3. Provided the individual responds "yes" to the preceding questions, you should ask for their permission to be contacted by the primary researcher (Laura J Graham) about participation in the study. It is important to note that the participant has the right to decide whether or not they choose to participate and whether they or not they choose to be contacted to participate. No form of coercion may be used. Specifically, this means that potential participants should not be led to believe that they are obligated to participate or to repay a favour of any kind. They are not to be led to believe or told that disagreeing to participate will anger the gatekeeper or the primary researcher. If they meet the inclusion criteria, as provided above, and give you permission to be contacted by the primary researcher, please obtain their contact information (e.g., e-mail, phone number or address) and send it along to the primary researcher.

Appendix B Study 1 Initial Interview Guide

The initial interview will be conducted in a conversation-like manner. Upon receiving informed consent and completed demographic questionnaire, the interview will be mediated by the following questions:

1. *"What is your daily life like here in Mahone Bay?"*
2. *"What do you do to take care of yourself?"*
3. *"What does it mean to you to exercise?"*
4. *"In what ways has your involvement in what you see as exercise changed as you got older? In what ways has it stayed the same over time?"*
5. *"In what ways has your perception of what exercise is for you changed as you got older? In what ways has it stayed the same over time?"*
6. *"What activities are you involved with in the community (e.g., Church, Mahone Bay Centre, Seniors Project, Time-Banking, Legion, Paint Mahone Bay, Classic Boat Festival, Scarecrow Festival, etc.)?"*
7. *"What is your role or how are you involved with programs in the community?"*
8. *"What types of help are you receiving from friends, family, neighbours, or community members?"*
9. *"What types of help are you giving to your friends, family, neighbours, or community members?"*

Appendix C Study 1 Follow Up Interview Guide

The following is an example of what would be asked of the participant in the follow-up interview:

1. *Last time we met this is what we talked about... [Summary of conversation]...based on what you have told me, I came up with these themes that I think represent what you were saying [overview themes with participant]. Does this resonate with what you were trying to say?*
2. *Would you please elaborate on the point you made about [insert point here]?*
3. *Is there anything else you would like to add about exercise and what it means to you in your daily life?*

Appendix D Study 1 Western University Research Ethics Board Approval Letter



Use of Human Participants - Ethics Approval Notice

Principal Investigator: Dr. Denise Connelly
Review Number: 18438E
Review Level: Delegated
Approved Local Adult Participants: 12
Approved Local Minor Participants: 0
Protocol Title: The experience of community physiotherapists in promoting self-management of chronic disease among rural community-dwelling older adults.
Department & Institution: Physical Therapy, University of Western Ontario
Sponsor: Physiotherapy Foundation of Canada

Ethics Approval Date: October 20, 2011 **Expiry Date:** December 31, 2012
Documents Reviewed & Approved & Documents Received for Information:

Document Name	Comments	Version Date
UWO Protocol		
Letter of Information & Consent	Version 1	2011/10/03
Other	Interview Outline	
Advertisement	Poster	
Other	Consent to be Contacted Form	

This is to notify you that The University of Western Ontario Research Ethics Board for Health Sciences Research Involving Human Subjects (HSREB) which is organized and operates according to the Tri-Council Policy Statement: Ethical Conduct of Research Involving Humans and the Health Canada/ICH Good Clinical Practice Practices: Consolidated Guidelines; and the applicable laws and regulations of Ontario has reviewed and granted approval to the above referenced revision(s) or amendment(s) on the approval date noted above. The membership of this REB also complies with the membership requirements for REB's as defined in Division 5 of the Food and Drug Regulations.

The ethics approval for this study shall remain valid until the expiry date noted above assuming timely and acceptable responses to the HSREB's periodic requests for surveillance and monitoring information. If you require an updated approval notice prior to that time you must request it using the UWO Updated Approval Request Form.

Members of the HSREB who are named as investigators in research studies, or declare a conflict of interest, do not participate in discussion related to, nor vote on, such studies when they are presented to the HSREB.

The Chair of the HSREB is Dr. Joseph Gilbert. The UWO HSREB is registered with the U.S. Department of Health & Human Services under the IRB registration number IRB 0000940.

Signature 

Ethics Officer to Contact for Further Information



This is an official document. Please retain the original in your files.

The University of Western Ontario
 Office of Research Ethics
 Support Services Building Room 5150 • London, Ontario • CANADA - N6G 1G9
 PH: 519-661-3036 • F: 519-850-2466 • ethics@uwo.ca • www.uwo.ca/research/ethics

Appendix E Study 1 Letter of Information and Consent Form



You are invited to participate in a research study:

A focused ethnographic study: Understanding the perspectives and experiences of rural community-dwelling older adults in Nova Scotia related to exercise self-care

Why are we conducting this study?

To inform the practice of health care professionals this study will seek to gain a better understanding of the concept of 'exercise self-care' as it is understood by older adults over the age of 65 years, living in Mahone Bay, Nova Scotia. Completion of this study is a degree requirement for the academic supervisor's doctoral student, primary researcher and doctoral student, Laura Graham.

Who can participate in this study?

You can participate in this study if you are 65 years of age or older, and are a resident of Mahone Bay. You may participate regardless of whether you live on your own or in senior's housing, but not an assisted living or nursing home.

What will happen during your participation in this study?

Should you wish to participate you will be asked to engage in two audio-taped interviews conducted by primary researcher, Laura Graham. These interviews will address the following.

Initial interview. The first interview will be similar to having an informal conversation led by the researcher where you will be asked questions like "what does exercise mean to you?" or "what do you do to take care of yourself and your own health?" The researcher will develop themes from the information collected.

Follow-up interview. The second interview will allow the researcher to present their initial findings to you to ensure that what they have understood is what you were trying to say. Your input from this interview will influence the final presentation of the results.

These interviews will take place in a location you choose. It could be your home, the Mahone Bay Centre, or elsewhere. You are asked to meet for two sessions of approximately one to one and a half hours within the span of 4 months (May-Aug 2009). However, each interview can be completed over more than one session, if necessary. Participants will be compensated with one time-banking dollar.

Are there good things and bad things about this research?

There will be no direct benefits to research participants. The outcomes of this study have the potential to benefit the elderly population by developing a body of knowledge that can inform the practices of physiotherapists and health promoters.

There are no known harms associated with your participation in this study. However, there may be harms that we do not yet know about. If you do not feel comfortable answering any of the questions posed by the researcher, you may decline to do so without explanation. The researcher will provide a list of all available services should you express needing assistance with a particular health or legal problem discussing personal experiences with the researcher. For example, if you were to tell the researcher about a personal incident of abuse, the primary researcher will make her concern known to you and provide you with the list of resources to contact someone for help. Should the researcher witness an incident of abuse or any other criminal act it is her duty, by provincial law, to report the participant's name to Nova Scotia Adult Protection Services (Office of the Legislative Counsel, 1989). In an instance such as this confidentiality cannot be guaranteed.

Who will know what I did during my participation in this study?

To respect confidentiality, participant information will be kept in a locked filing cabinet and all electronic equipment will be kept on a password-protected computer accessible only to the primary and co-researchers. Audio-recordings will be transcribed and any identifying information removed. Demographic information (e.g., age) of all participants (about 20 people) will be grouped, averaged, and any identifying information removed. Under the same security measures, information will be held off-site, at the University of Western Ontario for up to 5 years to allow for analysis and write up of the study results. No information that discloses your identity will be released or published. All published information will be presented without names.

Representatives of The University of Western Ontario Health Sciences Research Ethics Board may contact you or require access to your study-related records to monitor the conduct of the research.

Can I decide if I want to be in this study?

Participation is voluntary. You may refuse to participate, refuse to answer any questions or withdraw from the study at any time. If you choose to participate and later decide to change your mind, you can say no and end your participation at any time. You have the right to withdraw your information pertaining to the interviews or contacts or both at any time. Although your information will be withdrawn, the experience of meeting and talking with you will have an impact on how the researcher views and interprets future findings or themes.

If you have any further questions about the study, please contact the primary researcher, Laura Graham at [REDACTED] or by e-mail at [REDACTED]. If you have any questions about your rights as a research participant or the conduct of the study you may contact The Office of Research Ethics at (519) 661-[REDACTED] or by e-mail at [REDACTED].

CONSENT FORM

I have read the Letter of information, have had the nature of the study explained to me and I agree to participate. All questions have been answered to my satisfaction. I do not waive any legal rights by signing this consent form.

A copy of this Letter of Information and Consent will be provided to you once it is signed and both sides are initialed.

Participant's Name (print): _____

Participant's Signature: _____

Date: _____

Researcher's Name (print): _____

Researcher's Signature: _____

Date: _____

I consent to being re-contacted for future studies concerning 'the impact of community-based programs on health-related behaviour change' or another study concerning 'home-based rehabilitation programs for older adults residing in rural communities' to be conducted by the primary researcher. Please circle one of the following options and sign.

YES or NO Signature: _____

Appendix F Study 2 Interview Guide

Consent

1. *"Do you understand everything in the Letter of Information and Consent?"*
2. *"Do you have any questions related to the Letter of Information and Consent?"*
3. *"May we proceed?"*

Demographic questions

1. *How many years have you been practicing in the community (home care) sector?*
2. *Have you always practiced in the same area of the province? If not, where else have you practiced and in what clinical settings?*
3. *Approximately what percentage of your caseload comprises individuals over the age of 65?*

What is your understanding of Chronic Disease Self-Management?

1. *When you think about 'promoting self-management of chronic disease' as part of practicing physiotherapy, what does that bring to mind for you?*
2. *How do your clients describe 'self-management of chronic disease', I mean what do you think they think it means from what they talk about?*
3. *Where did you get your training in how to promote CDSM?*
4. *What kind of theory or philosophy informs or drives your practice?*
5. *Are you familiar with Motivational Interviewing? TTM? CDSMP Lorig?*

Fundamental Question

"I understand that you are currently working as a community (home care) physiotherapist and that rural community-dwelling older adults comprise at least half of your caseload. Tell me about your experience in promoting self-management of chronic disease among this population."

Probes

- *"What was your experience with some of your clients like?"*
- *"How do you or do you not promote chronic disease self-management among this population?"*
- *Do you refer clients to community programs for health promotion and chronic disease self-management?*
- *"How do you feel about your experience with client(s) in promoting chronic disease self-management?"*
- *"How has this affected your practice"*
- *How is the effect different when the outcome was a positive one? A negative one?*
- *Describe a specific event or a particular experience of promoting self-care with an older adult*
- *Focus on an example that stands out perhaps because it is vivid or was your first time*
- *Can you describe your feelings, mood, emotions during or resulting from this experience?*

Appendix G Study 2 Western University Research Ethics Board Approval Letter



Use of Human Participants - Ethics Approval Notice

Principal Investigator: Dr. Denise Connelly
Review Number: 18436E
Review Level: Delegated
Approved Local Adult Participants: 12
Approved Local Minor Participants: 0
Protocol Title: The experience of community physiotherapists in promoting self-management of chronic disease among rural community-dwelling older adults.
Department & Institution: Physical Therapy, University of Western Ontario
Sponsor: Physiotherapy Foundation of Canada

Ethics Approval Date: October 20, 2011 **Expiry Date:** December 31, 2012
Documents Reviewed & Approved & Documents Received for Information:

Document Name	Comments	Version Date
UWO Protocol		
Letter of Information & Consent	Version 1	2011/10/03
Other	Interview Outline	
Advertisement	Poster	
Other	Consent to be Contacted Form	

This is to notify you that The University of Western Ontario Research Ethics Board for Health Sciences Research Involving Human Subjects (HSREB) which is organized and operates according to the Tri-Council Policy Statement: Ethical Conduct of Research Involving Humans and the Health Canada/ICH Good Clinical Practice Practices: Consolidated Guidelines; and the applicable laws and regulations of Ontario has reviewed and granted approval to the above referenced revision(s) or amendment(s) on the approval date noted above. The membership of this REB also complies with the membership requirements for REB's as defined in Division 5 of the Food and Drug Regulations.

The ethics approval for this study shall remain valid until the expiry date noted above assuming timely and acceptable responses to the HSREB's periodic requests for surveillance and monitoring information. If you require an updated approval notice prior to that time you must request it using the UWO Updated Approval Request Form.

Members of the HSREB who are named as investigators in research studies, or declare a conflict of interest, do not participate in discussion related to, nor vote on, such studies when they are presented to the HSREB.

The Chair of the HSREB is Dr. Joseph Gilbert. The UWO HSREB is registered with the U.S. Department of Health & Human Services under the IRB registration number IRB 0000940.

Signature 

Ethics Officer to Contact for Further Information



This is an official document. Please retain the original in your files.

The University of Western Ontario
 Office of Research Ethics
 Support Services Building Room 5150 • London, Ontario • CANADA - N6G 1G9
 PH: 519-661-3036 • F: 519-850-2466 • ethics@uwo.ca • www.uwo.ca/research/ethics

Appendix H Study 2 VHA Research Ethics Board Approval Letter



January 10, 2012

Laura J. Graham, MPT, PhD(Candidate)
 School of Physical Therapy
 University of Western Ontario



Dear: Laura Graham,

This letter is to confirm that VHA's Research Ethics Committee has reviewed and has provided conditional approval of the Research Project: Promoting Chronic Disease Self-Management Among Older Adults. This approval is conditional upon the following stipulation: all recruitment and consent document must be updated to clearly state that no financial compensation will be paid to volunteers who participate in the study.

If this condition is met, the above named research project is approved with for a one year period, commencing January 10th, 2012. If there are any further amendments to the project during the approval year, they must be submitted to the Chair in writing for approval by VHA's Research and Ethics Committee prior to their implementation.

We will require a progress report at the end of six months following the initiation of the project and a final report at the completion of the project. These reports are to be submitted to the Chair of the Research and Ethics Committee.

If you have any questions related to the project they should be directed to the Chair, Research and Ethics Committee.

Sincerely



Sandra McKay, PhD
 Chair, Research Ethics Committee
 Coordinator, Research & Program Evaluation



Appendix I Study 2 Letter of Information and Consent Form

LETTER OF INFORMATION

You are invited to participate in a research study about the experience of community physiotherapists in promoting self-management of chronic disease among rural community-dwelling older adults.

Who is conducting the study?

Denise Connelly, PT, PhD: Supervisor, University of Western Ontario (UWO)

Contact Information: [REDACTED]

Laura J Graham, MPT, PhD(candidate): Primary Researcher, UWO

Contact Information: [REDACTED]

Why are we conducting this study?

To understand the experience of community therapists in promoting self-management of chronic disease among their elderly clients.

To support future research examining how to support community physiotherapists in promoting self-management of chronic disease among this population.

Who can participate in this study?

Physiotherapists who are currently registered with the College of Physiotherapists of Ontario; Participants must be currently practicing in the home care sector and have at least 50% of their caseload consisting of rural community-dwelling clients over age 65.

What will happen if you choose to participate?

At a mutually agreed upon time and place, you will be asked to engage in a 60-90 minute, audio-taped interview (in person) with the primary researcher, Laura Graham. The focus of the interview will be on your experience in promoting self-management of chronic disease among older adults. Examples of possible questions may include, but not limited to the following.

"Tell me about an example that portrays your experience in promoting self-management of chronic disease among older adults."

"What was your experience with your client like?"

"How has this affected your practice?"

Are there any benefits or harms to participating in this study?

There will be no direct benefits to research participants. You will not receive financial compensation for your participation in this study. The outcomes of this study have the potential to inform physiotherapy practice in promoting self-management of chronic disease. There are no known harms associated with your participation in this study. However, there may be harms that we do not yet know about. If you do not feel comfortable answering any of the questions posed by the researcher, you may decline to do so without explanation.

Who will know what I did or said during my participation in this study?

To respect confidentiality, participant information will be kept in a locked filing cabinet and all electronic equipment will be kept on a password-protected computer accessible only to the primary and co-researchers. Audio-recordings will be transcribed and any identifying information removed. Demographic information (e.g., number of years practicing) of all 12 participants will be grouped, averaged, and any identifying information removed. Under the same security measures, information will be held at The University of Western Ontario for up to 5 years to allow for analysis and write up of the study results. No information that discloses your identity will be released or published. All published information will be presented without names.

Representatives of The University of Western Ontario Health Sciences Research Ethics Board and the VHA Rehab Solutions Ethics Board may contact you or require access to your study-related records to monitor the conduct of the research.

Can I decide if I want to participate in this study?

Participation in this study is voluntary. You may refuse to participate, refuse to answer any questions or withdraw from the study at any time with no effect to your future employment. If you choose to participate and later decide to change your mind, you may say no and end your participation at any time.

You have the right to withdraw your interview data at any time up to one month after your final interview. By the time one month has passed after your final interview, data analysis will already have occurred, and your interview data will not be able to be withdrawn. Although your information will be withdrawn, the experience of meeting and talking with you will have an impact on how the research views and interprets future findings or themes.

If you have any further questions about the study, please do not hesitate to contact the primary researcher, Laura Graham, by phone or e-mail: [REDACTED]. If you have any questions about your rights as a research participant or the conduct of the study you may contact The Office of Research Ethics by phone at [REDACTED].

A copy of this Letter of Information and Consent will be provided to you once it is signed and initialed as indicated on each side of the Letter and at the bottom of this page.

CONSENT FORM

Title of Research: The experience of community physiotherapists in promoting self-management of chronic disease among rural community-dwelling older adults.

I have read the Participant Letter of Information and Consent (pages 1 through 3), have had the nature of the study explained to me and I agree to participate. All questions have been answered to my satisfaction. I do not waive any legal rights by signing this consent form.

Name: _____

-Please Print-

Participant Signature: _____ **Date: ---** _____

Witness Name: _____ **Witness Signature:** _____

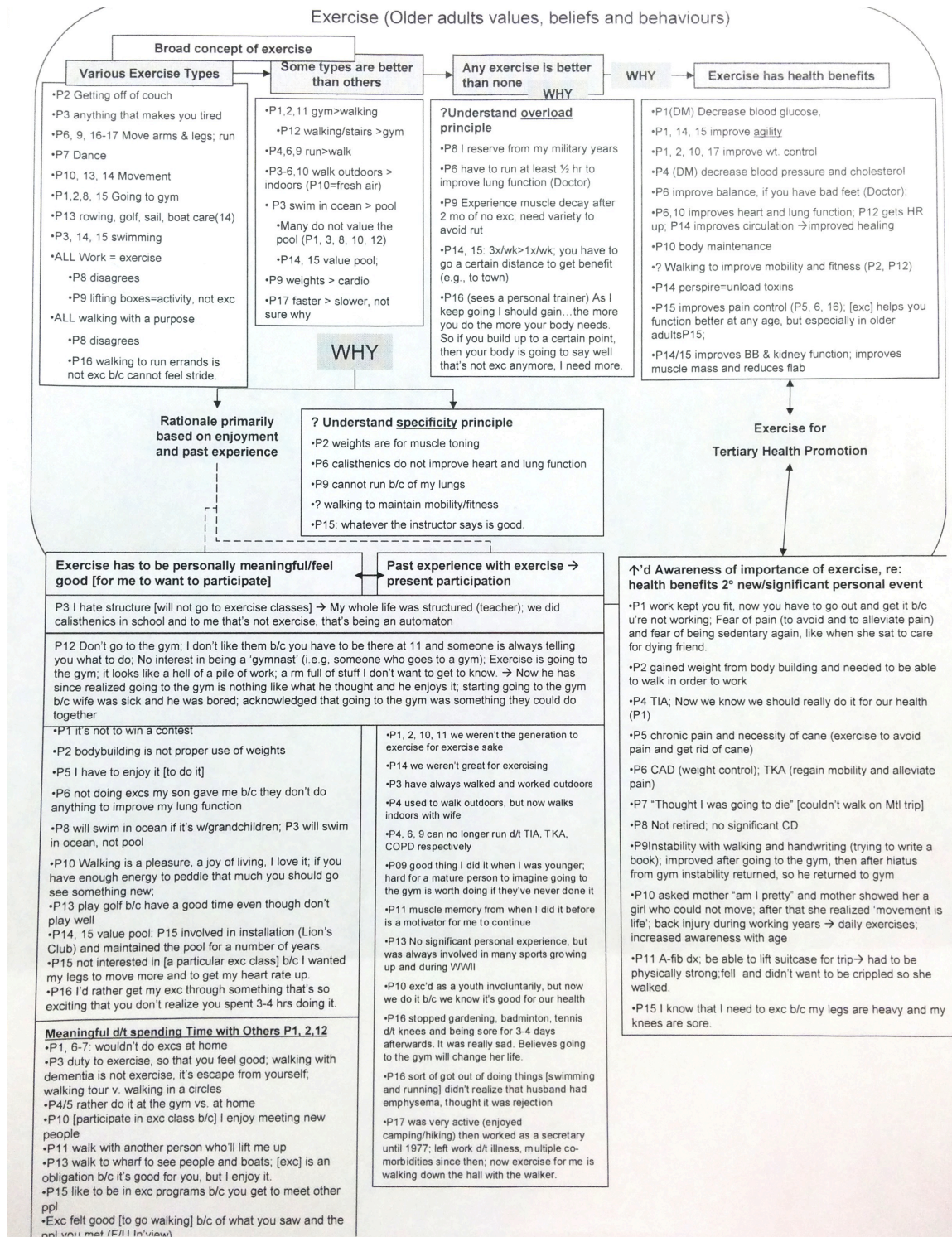
-Please Print-

Person Obtaining Consent: _____

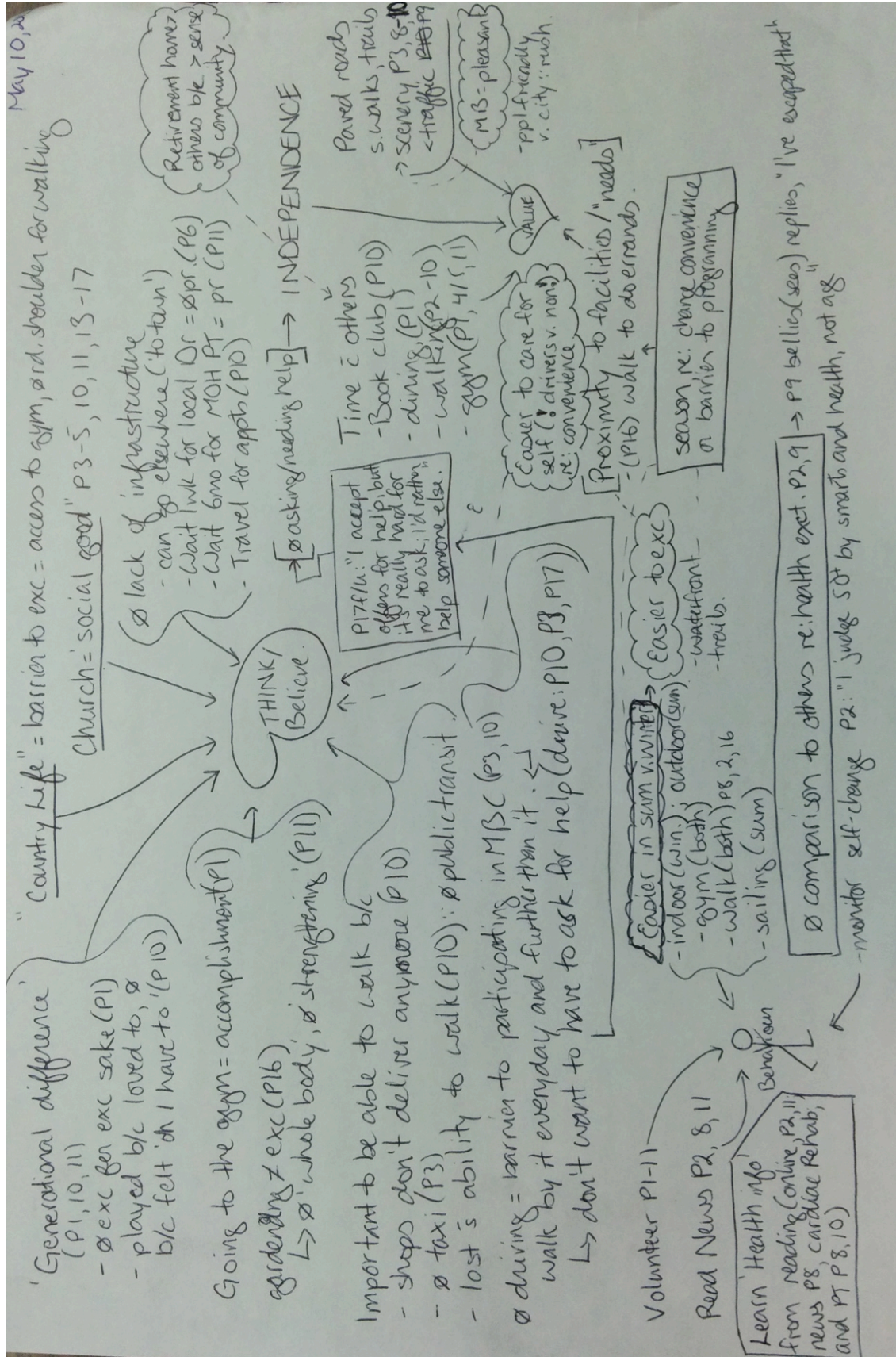
Person Obtaining Consent (Signature): _____ **Date:** _____

Please fax to: Dr. Denise Connelly at [REDACTED]

Appendix J Study 1 Theme Development for Exercise



Appendix K Study 1 Theme Development for Beliefs and Behaviours



Appendix L Study 2 Sample Transcript with Preliminary Coding of Text Segments (Participant 2)

LG: Okay, great. Alright, so from the main question is that I understand that you're working in home care and you have a lot of thinking of the fact that your case load comprises of older adults, **I wonder if you could tell me about your experience in promoting self management of chronic disease among this population.**

I: Well, let me see. I think that the biggest, one of the bigger areas that we are confronted with is this whole issue around smoking because of the area we are working in there's hypochondriac of smokers, chronic smokers so I think part of what I do in any of the people I'm dealing with is try to look at how I can help with there smoking sensation or smoking reduction. That would be, I think that would be one of the chronic diseases that I would, like COPD that I'd be involved in. I guess you want to know how I do it.

LG: Sure, are you able to tell me about what your experience with your clients is like?

I: Absolutely, they are a hard bunch to deal with because a lot of the times we are dealing with people who smoking which is, for example, which is causing respiratory difficulties, smoking is a large part of their lifestyle and their community lifestyle. So they're really a hard bunch to try and change anything for. So we try to do, even for our own, for my own safety in the respiratory care if I know somebody is a smoker and a heavy smoker, the request is always made, you know, you know when I'm coming, I don't want you to smoke at least a half an hour before I get there. I want the windows open so at least I'm not going to suffer from what you're doing from your habit and hoping that as part of all of that try to educate the, the problem that they are creating for their own health with the smoking. So that would be, I think they're not an easy group for that condition and not an easy group to try and change because a lot of these people are living very remotely, you know, they're not living, I'm seeing people not in town, they're living out on a back road somewhere so they're interaction with others is quite limited so they are on their own a lot and not getting reinforcement from their own community compared to the people who might live in an, oh let's say an apartment block, where there are people that might support a smoking cessation approach.

14-4-7 11:01 PM

Comment [1]:

Confronted with this whole issue around smoking; hypochondriac of smokers, chronic smokers.

Part of what I do...is try to look at how I can help with their smoking cessation or smoking reduction.

Chronic disease...COPD that I'd be involved in

14-4-7 11:01 PM

Comment [2]:

They are a hard bunch to deal with Smoking... causing respiratory difficulties Smoking is a large part of their lifestyle and community lifestyle

They're a really hard bunch to try and change anything for

For my own safety in the respiratory care...the request is made...I don't want you to smoke at least a half an hour before I get there.

I'm not going to suffer from what you're doing from your habit and hoping that as part of all of that try to educate the, the problem that they are creating from their own health with the smoking

Not an easy group to try and change because a lot of these people are living very remotely...out on a back road somewhere so they're interaction with others is quite limited

They are on their own a lot and not getting reinforcement from their own community compared to the people who might live in an...apartment block, where there are people that might support a smoking cessation approach.

Appendix M Study 2 Sample Case Construction for Preliminary Themes (Participant 2)

Theme Development, Participant 2, Study 2

All text below are transcribed words from Participant 2, unless otherwise indicated by LG, which indicated the researcher

Referring to the influence of the CLIENT:

Participant 2: So I work on in an aboriginal community so I would say most of my clients who are elderly have chronic disease and mainly diabetes, heart disease and stroke are the big ones for me anyways. (pause) And it's, a lot of it has, the disease is often related to their lifestyle throughout their life, right? They've led some potentially some rather abusive lifestyles (laughs) and they aren't living that lifestyle anymore which is sort of the result of that over the years. So they've never taken care of themselves before and I don't think they have the skills at this point either. They often don't ask for things or don't know there are services available that can provide them with some assistance in managing their disease or symptoms

Participant 2: ...self-care is not and doesn't seem to be a priority and I don't know if that's my population I treat or if it's across the board in elderly people, you know, they're so old now so why change their habits now or what's the point in changing now, they've already got the disease and impairments and dysfunctions so is there any point but I struggle with that a lot with my clients in trying to help them find a reason to take care of themselves and manage their behaviour to try so they end up with a better quality of life.

You know, this is what they have at this point in their lives and they're elderly and so why now? Especially if it's something that you haven't taken care of, you have not done throughout your life and now you have a chronic disease and now people are trying to educate you and tell you things you should do or change. Why right? I've been okay so far, sure I have this disease whatever it may be but I'm okay with that and I'm sure people start to deal with, you know, the idea of how much longer they have to live and what that's going to look like and maybe they want to do things they like until they die and not worry as much about the things that they should be doing because now there are things they want to be doing.

Participant 2: It's always interesting because I mean they might just throw you a curve ball right? You have no idea that something meant a little or so much in somebody else's life because we come in there with our own ideas of what's important especially in our profession and, because you know it's important to exercise and it's important to eat well and it's important to take care of your body but that may not be it at all, right? So we have to, I guess that's it it's just the surprises that they come with and then trying to work your way through the physical activities and recommendations and how that will help them achieve their goals and work around what's a priority for them.

Participant 2: I guess one, it's not off the wall, but I had an older adult with osteoarthritis and had one knee done and had not a great, you know, a little bit atypical in the recovery a little bit tougher, a little bit more pain, the pain issues were more than normal, didn't get the ideal amount of range of motion back and so the other knee is on,

Laura Jean Graham 14-4-23 6:05 PM

Comment [1]: ...work in aboriginal community...most...clients who are elderly have chronic disease and mainly diabetes, heart disease and stroke... Disease often related to lifestyle They've potentially led abusive lifestyles over the years They've never taken care of themselves They don't have the skills at this point [to take care of themselves] either They don't ask for help or don't know there are [CDSM] services available...they will almost accidentally come across services for themselves

They won't seek out these services for themselves, so there's a lot of education I provide, a lot of referrals...I say...there's this you can do..., there's services too for you.

Lots of education ...a big part that I work with...is self-care is not and doesn't seem to be a big priority and I don't know if that's my population I treat or if it's across the board in elderly people...they're old now so why change their habits now or what's the point in changing now, they've already got the disease and impairments and dysfunctions, so is there any point,...I struggle with that a lot...to help them find a reason to take care of themselves...so they end up with a better quality of life.

Laura Jean Graham 14-4-23 6:05 PM

Comment [2]: It's something...you have not done throughout your life...now you have a chronic disease and now people are trying to educate you and tell you things you should change. Why ...? ...been okay so far...I'm okay with [having a chronic disease] People start to deal with...the idea of how much longer they have to live and what that's going to look like ...maybe they want to do things they like until they die and not worry as much about the things they should be doing...

Laura Jean Graham 14-4-23 6:05 PM

Comment [3]: They might throw you a curve ball Something meant a little or so much in somebody else's life because we come in...with our own ideas of what's important...exercise...eat well...take care of your body, but that might not be it at all.

Work[ing] your way through the physical activities and recommendations...help them achieve their goals and work around what's a priority to them.

you know in the future essentially but he's been a little thwarted by that just because the recovery from the first one hasn't been superb not that, you know, other people have done wonderfully well and he's sort of disappointed with his own progress but he wants to get back to work, he's like 67 years old and he's in really good shape considering but it's just this OA that's a problem for him and he is a little bit overweight, and he wants to hunt, so two things that are fairly physically demanding and those are his priorities, you know and other people would say I want to be able to play with my grandkids or play golf, or just something that sort of more leisure and for him it was, he still works full-time and he hunts deer and he does a lot of hunting in our community so that's a priority and I think okay, that's not where I think I might be when I'm 67 but, yes for some reason that goal for him was still really important in his life.

Because he was really motivated he actually, he'd walk for exercise and he would actually go somewhere and do that. We do have a couple of places in the community, and he lived across the arena so he would go to the arena and they allow people to go for free and walk the surface because it's a little bit spongy I guess, it's not like a cement in the mall or something like that so he would actively go and work on his walking tolerance himself because that was something that was necessary for his work so he was his motivation, so we'd get him to do that so he had a location, it was free to do which was a big deal because he was off work, so yeah it was, and that one was fairly easy actually.

Participant 2: A lot of them would say that if they were managing their disease then they would be doing what everybody told them to do. They often, I find it really interesting, a lot of my older clients when I say, you know, I work part time in a clinic setting as well as in the community and even the older clients if they're ambulatory they come in and I say what do you want to do, what do you want to achieve, so they'll usually come up with that answer and then I'll go through what I'm proposing to help achieve that goal and I'll say does that sound okay to you and are you willing to give that a try and they say well you're the boss so (laughs) I don't know how many times I've gotten the boss things and I keep throwing it back at them saying no actually you're the boss, I'm here to help you but you tell me what's right and what's wrong for you. So I don't know where that comes from if that, it that's like an older generation thing because I find that the younger clients that we're seeing now are very informed and very, you know, they want laser or acupuncture or they want this or they want that but the older population seems to be deferring to us the health care provider as the boss so I don't know if they get the sense that we're always telling them what to do?

LG: So you were talking about when talking to the clients you said that they are talking about their goals and what they want to do you say they come to this answer, can you describe what you mean by this answer?

Participant 2: Oh, they come to, they are able to express what their goals are, they do not have trouble answering my questions or what they want to do with therapy they come up with their own goals fairly easily, it's when I, after that then I come up with an

Laura Jean Graham 14-4-23 6:05 PM

Comment [4]: An experience were PT was surprised to learn the patient's goals: An older adult with OA and a TKA with an atypical recovery (more pain, less ROM) and his goals are fairly physically demanding...works full time and hunts deer

Laura Jean Graham 14-4-23 6:05 PM

Comment [5]: Because he was really motivated...he'd walk for exercise...and work on his walking tolerance himself because that was something that was necessary for work...he had a location [to walk] it was free to do which was a big deal because he was off work

Laura Jean Graham 14-4-23 6:05 PM

Comment [6]: What would clients say about CDSM
[clients] would say...they would be doing what everybody told them to do.
I say what do you want to do, what do you want to achieve, so they'll usually come up with that answer and then I'll go through what I'm proposing to help achieve that goal and I'll say does that sound okay to you and are you willing to give that a try and they say well you're the boss so ... I don't know how many times I've gotten the boss things and I keep throwing it back at them saying no actually you're the boss, I'm here to help you but you tell me what's right and what's wrong for you.

I find that the younger clients...are very informed and...they want laser or acupuncture or they want this or...that, but the older population seems to be deferring to us the health care provider as the boss

REFLEXIVITY NOTE: generational differences in perceptions of health care professionals 'the white coat'; older adults don't recognize themselves as being in control of their own health care or as experts on themselves?

idea of what we can do, you know your physio program will be, you know, we'll talk about this and that and I'll say is that okay with you is that sound okay, this number of visits, should I come at this time, all those kinds of things and they kind of just defer to me and say if you say so boss.

Yeah, because they generally don't want to ask people for help, right, even their families, even their family members that might live with them, they might live with their daughter and their kids and they really don't want ask the family members to help them do things so they want to be able to do things themselves.

Participant 2: I'm not sure if they, I think, I mean some of the clients I see definitely do because they, you know, will almost be, you know, promoting, like one of my clients wanted to walk for exercise in her house where she's got the space for it but I'm asking her to only do it if there's somebody home so that if she ever fell or got too tired to get back to where her chair was so that there would be somebody there for her. Sometimes she'll let me know that she did and if I ask her was somebody home, she'll say, oh, no but, you know, so some people work really hard at that because they want to be able to do those things independently and even the activities you know, taking care of themselves in terms of exercising they want to do independently and not when someone's around so yeah, some of the clients definitely make that connection.

LG: Okay, to me it sort of sounds like your saying they have a task and exercise they want to complete, they should be doing it with another person present in order to do it safely but the person chooses to maybe do that exercise without someone there because they want to be able to do it on their own?

Participant 2: Yeah, I wonder if that's the motivation for that. You know, to show themselves that they can do it with nobody else there and they can do it, I'm not sure.

LG: And how does that relate back to their chronic disease?

Participant 2: Just in terms of managing for, and managing and staying physically fit enough to do their ADLs and maybe getting out to the car, they may be on, they want to be able to get out and do their grocery on their own to a certain degree so we have a service that will pick them up and take them out to Wal-Mart and the grocery store and then come home. They want to be able to do walking tolerance to be able to do that instead of having to stay at home and wait for someone else to do the grocery shopping, you know (pause).

MAKING CONNECTIONS

Participant 2: Education would be around I guess the risks of like from a physio perspective particularly the risk of developing other impairments related to their disease if they don't manage their disease right now, so sure they're okay where their disease is

Laura Jean Graham 14-4-23 6:05 PM

Comment [7]: Re: answer
-program elements
-number of visits
-appt times

Laura Jean Graham 14-4-23 6:05 PM

Comment [8]: they generally don't want to ask people for help [goal is to take care of themselves]... don't want [to] ask the family members to help them fo things

Laura Jean Graham 14-4-23 6:05 PM

Comment [9]: so some people work really hard at that because they want to be able to do those things independently and even the activities you know, taking care of themselves in terms of exercising they want to do independently and not when someone's around

Laura Jean Graham 14-4-23 6:05 PM

Comment [10]: [being able to do it on their own is] the motivation for [engaging in risky behavior—walking without supervision, risk of falls]

Laura Jean Graham 14-4-23 6:05 PM

Comment [11]: Relation to chronic disease?
Staying physically fit to do ADLs, get in/out of car, groceries
-want to be able to do walking tolerance

REFLEXIVITY NOTE: nothing relates to specific symptoms, 'impairments' are viewed/rationalized as 'lack of participation' or 'change in activity' re: ICF

at now but why manage the disease? Well the disease can progress and they can have further complications from it so that would be a good piece of the education.

I suppose also the other way right, like the benefits of managing is not just that they're going to prevent bad things from happening but they actually might feel better if you manage these things. Looking at the benefits and the risks of management.

There are, I mean, the physical activity portion and also I guess educating on what's available in the community. In our own community on the reserve but also nearby communities that we have access to them that provide different community services and health care services to our population so educational on access to other community services, fall prevention programs, that sort of thing.

So I think what I generally focus on especially in the elderly who have, who may have poor tolerance is how to get it in small bits, right, so that it's not an overwhelming concept for people because if you're at this point in your life and physical activity hasn't been a part of your life then it's really hard to develop a new habit like that right? So I try when providing education is say that they can do it in 10 minute bits and that's enough to get started that they don't need to do an hour of physical activity to make it count that that 10 minute bits all add up to what would make a health care professional happy and what would add up to benefits for them so that's one point and I try in the education piece for that I think I try really hard to teach them, or I guess educate them on what's available so that they can look at all the different options and they can try and find something that they enjoy or that they're already doing but turning it into more of an exercise so if they walk they're laneway and they potentially have a long laneway to go and get their mail so I'll say well that's great, instead of just getting the mail and doing the lane way once, can you did it twice so just sort of teaching them to add on to what they're already doing to create that physical activity session for themselves. (pause) I think the other thing that people, especially people who are elderly that I guess a lot of education can do more good then harm that they'll be, whether it's my knees because I have arthritis, but you know, doing the right activity they might actually help reduce their pain, you know, they've got that fear of making something worse because that's been their experience in the past so teaching them about moderation again I guess is a big part of that.

For one thing that's been really popular for some of the women and because it's a smaller community you find that a lot of the group things, lots of people will know each other so if you can get them into something where they might know someone then that will carry on because they feel the need to participate in that because there's that social draw as well.

something that I keep coming back to with them is finding, helping them find the motivation to want to manage their disease right, so if we talk about what's the risk? If you had a stroke let's say then what would happen, what would mean for you and your lifestyle or your wife or your spouse and how you manage or how you might manage in that situation, what do you want for your life at this point and so trying to find what's

Laura Jean Graham 14-4-23 6:05 PM
Comment [12]: [educating patients on] the benefits of managing to prevent bad thing and to feel better

Looking at the benefits and risks of management

Laura Jean Graham 14-4-23 6:05 PM
Comment [13]: Types of management participant is referring to:
 -physical activity
 -available community services (e.g., fall prevention programs) and health care services

Laura Jean Graham 14-4-23 6:05 PM
Comment [14]: Case example: older adult with COPD

...[client] who may have poor tolerance...how to get [physical activity] in small bits
 [if] physical activity hasn't been a part of your life then it's hard to develop a new habit
 ...say that they can do it in 10 minute bits and that's enough to get started... that that 10 minute bits all add up to what would make a health care professional happy

important to them because you know, if you walk in there and you say "you have to do this, this and this because this" you know, you will be less likely to have a stroke and less likely to have all of the functional problems and limitations that go with that and that might not be a priority for them. Looking for, helping them, you know, realize or at least verbalize to you what the priority is and then working in the education and the strategies to achieve that goal, like working towards that.

I think it, I think it has made me much more aware, I mean we talk about client-centered care but we still always come in to the interactions with preconceived ideas, like our professional ideas about what's important right, because that's the whole point that we exist, I guess if people want to get better but I guess our idea of better and their idea of better can be completely different so I think I really go into my interactions especially with older people, just with a little bit more open minded and just really expecting to, expecting that their ideas or their goals are going to be, not unexpected but just I guess of a wider range than other people's. I think maybe because I'm at a different point in my life than them as well, so I know that I can't really, they're likely not to have the same motivators as me and I may not be able to come up with the kind of things that I want to come up with because of where we are in our lives so I just, I think I have much more open mind now and I'm often even surprised less, you know, the longer that I work with them the less things surprise you I guess. Not that you've heard before but you know it might be completely different from what you expect, that's all.

Some people who we have like a foot care referral so if they talk about what they can and can't do for themselves and whether they're on certain services especially if they're diabetic or wound care. [For example] I had a woman who was in, she was diabetic and had ulcers on her heels and she was in a wheelchair, I don't know where she got this wheelchair, you know it was one of those hospital wingback wheelchairs but she was restricted by the doctor to be completely non-weight bearing except for transferring and this has gone on for six weeks already so referrals for appropriate equipment to manage so that she could manage her ulcers appropriately without developing new ones sitting in that wheelchair so referrals are to other health care providers or health care services, support services as well, so if they are having a hard time with getting their housework done and sort of managing their pain level that we can provide services for doing housework for them and not wearing themselves out with that and doing more active, structured active exercises rather than that stuff.

SERVICE MODEL

Participant 2: I have a strong interest in health promotion and secondary prevention. I think it's always been there but I think particularly working in a community with the diseases that we see and then how significant the impact of those diseases can get you almost get tired of the band aid solutions because as physios we'll help fix things, but where are we, we can always help to promote that secondary prevention and I think it's a big part of what we should be doing and probably what a lot of us are doing but not a lot of what we got taught to do so much and I think that's shifting because now there is, you know, and I think our profession wants to see us more in those positions and I

agree with that, we've got the skills to do it and the knowledge, a really good knowledge base to be providing that education to people.

LEARNING BY DOING (LACK OF FORMAL EDUCATION)

Participant 2: Yeah, it's almost like we come across that once we are working a little bit, I don't know, it seems that way to me. We didn't have, in my program, I think I'm 7-years graduated now, so it wasn't a strong focus when I was in school and it probably differs depending on what program but we did spend a lot of time on it but I'm finding myself spending a lot of time on doing it now that I'm working.

PREVIOUS EXPERIENCES

Participant 2: I don't think I would have, I think that we've talked a lot about motivation since then and that being a factor and so and it was in my first year of working in the community too so you learn a lot from a lot of your interactions but yeah I think that I realize how important that is, that discussion with clients is and sort of figuring them out, learning about them and it's not just about all the objective stuff or all the stuff that's on your assessments that you have to fill out but you have to learn and taking your time with them.

Laura Jean Graham 14-4-23 6:05 PM

Comment [15]: Helping them find the motivation to want to manage their disease right...the risks (e.g., of CVA)...what would happen [to] lifestyle or wife...what do you want for your life at this point...trying to find what's important to them

If you walk in there and say you have to do this, this and this because ...you will be less likely to have a stroke and less likely to have all of the functional problems and limitations that go with that and that might not be a priority for them

...Helping them realize or ...verbalize...the priority...and then working in the education and the strategies to achieve that goal...

Laura Jean Graham 14-4-23 6:05 PM

Comment [16]: How has your experience with older adults affected your practice?

...made me much more aware
...we still always come into the interactions with preconceived ideas, ...professional ideas about what's important
our idea of better and their idea of better can be completely different so I think I really go into my interactions ... with a little bit more open minded and ...expecting that their ideas or their goals are going to be, not unexpected but just I guess of a wider range than other people's

Laura Jean Graham 14-4-23 6:05 PM

Comment [17]: Re: providing referrals:
-foot care for woman with DM
-diabetic or wound care
-equipment (w/c referral)
-other health care providers
-support services (if having a hard time getting their housework done)

Laura Jean Graham 14-4-23 6:05 PM

Comment [18]: I have a strong interest in health promotion and secondary prevention

Working in a community with the diseases that we see and then how significant the impact of those disease can get you...tired of the band-aid solutions

As physios we'll help fix things...we can always help to promote...secondary prevention and I think it's a big part of what we should be doing and probably what a lot of us are doing but not a lot of what we got taught to do so much and I think that's shifting because now there is, you know, and I think our profession wants to see us more in those positions and I agree with that, we've got the skills to do it and the knowledge, a really good knowledge base to providing that education to people

Laura Jean Graham 14-4-23 6:05 PM

Comment [19]: We didn't have [education on health promotion] in my program, [health promotion] wasn't a strong focus when I was in school...I'm finding myself spending a lot of time on doing [health promotion] now that I'm working

Appendix N Study 2 Sample Theme Development with Definition and Participant Citations (select pages only)

Main Overarching Theme: Making Connections

Definition:

Promoting chronic disease self-management meant working with the client to help them understand the connections between managing their disease, and their behaviours, community resources and social support. Physiotherapists **drew the link** between physiotherapy and chronic disease self-management. Physiotherapists **connected** symptom onset with activity, by educating clients about disease processes and when to seek help; **linked** clients with community programs/services; **referred** to additional health care professionals; **collaborated** with clients, clients' family members, and health care team for intervention and discharge planning; **connected** client with context of their social and physical environments (i.e., adopted a holistic approach); **related** with the client on a personal level to build rapport.

Quotes that summarizes all sub-themes:

Participant 5: ... obviously my education from Western is pretty recent so **a lot of the things that I kind of practice on a daily basis comes from just my education from schooling** but definitely like resources that I would give to a client for example would just be like, **it's limited in terms of the rural setting whereas there are more resources within London** so just different community places they can be going to for support **like the MS Society** and also just **giving them general knowledge about their condition** so, you know, information that's in the medical literature, **the internet is a huge resource I know for myself as well as for my clients**, they are recently tech savvy so that kind of thing and then just, yeah like tools in terms of like giving them exercises and things like that using an exercise data base and that kind of thing as well.

... there is information in terms of you know **what types of exercises are beneficial for what type of patient population or pathology** we are looking at but also, you know there is **information in terms of what different community societies** and that kind of things, what types of resources they offer and what patient population they kind of look at so it's kind of information about all that, everything.

Participant 6: I'm just trying to think here. **I think just my role of going in is to make sure people are basically have an understanding of how they can be a little bit more safe and progress themselves a little bit in a home environment so I am kind of limited what I can do over the course of six weeks or so, so I** try and give them as much information as I can, I ask them if there is anything they would like to know or if there is anything else I can arrange for them, I can't really think of a time where I've been asked, that's usually when someone is coming into the community rehab team and then I let them take over because they are more specialized with that kind of recovery,...

Laura Jean Graham 14-4-23 6:36 PM
Comment [1]: Limited by service delivery model

Making Connections: Sub-themes

Physiotherapy and Chronic disease self-management

Summary: Physiotherapists educated clients about the role of physiotherapists in relation to the client's chronic disease, goals, and self-management. Some declared the importance of promoting the role of community physiotherapy in relation to facilitating chronic disease self-management.

Participant 1: I think the **big thing for the older adults in this area is for them to know that physiotherapists can be part of helping them manage their chronic condition** whether it's musculoskeletal or neurological or respiratory or whatever. For people to be aware that really **we could be the go to profession that should be engaged in helping people get somewhere with their diseases.**

Actually to be a little cynical, **I would question whether some of the physiotherapists that work in a hospital environment recognize what their role could be in management of chronic disease.** I'm being very cynical there because I don't think that most therapists that work in the hospital know what physiotherapists do out in the community which is something that needs to be promoted a bit more as well. **But I think those of us in the community are seeing more and more where our role can be in the whole picture.** I mean we're part of the whole patient rather than I think what happens in the hospital setting where people are seen as their piece of anatomy that they're being dealt with not the whole person and as a home care therapist you get to see the whole picture and when you went in thinking you were going to treat one thing you come out having an impact on multiple other systems on that patient because you have to deal with the whole person in that community and I don't think that happens in an institution. There I've done my preach.

When you live in a small community that happens easily. People, I live in [a small community] which is a fairly small town and I will often have people socially come to me and say, you know, you were helping so and so my neighbour and my brother is having trouble, do you think it's something that a physiotherapist can help? And you know they're offering me some of their family information and I can help give them direction on how they can access a physiotherapist and it may or may not be me but, you know, at least that helps people identify our role because I think a lot of people don't even know what the role of a physio could be in something like diabetes or what the role could be in COPD, they can see us in some of the neurological conditions but not some of the other medical conditions, you know, chronic heart disease, they don't necessarily see where a physiotherapist could be of help. So that might be part of what we as physiotherapists need to say is that we could help, we could help some people with self management with chronic conditions.

Participant 3: So just introducing myself and who I am and that we had received a reference from the CCAC as to why I was needed, **like why physiotherapy is needed in there and then explaining to the client that I am going to be in there to assess her today to set up some goals to see what her problems are and to understand it a little further in detail and see what she would like me to help her out with, to set up a goal with her and go from there.** And so once she says sure and then we sit down and then we start talking and then I start like I give the client **an opportunity to talk and explain about her condition and let her know what I know from the CCAC** and then ask her to elaborate on the problems

14-4-23 6:36 PM

Comment [2]: ...I would like to be able to educate them on when they could call for help again...

...to let them know that it's okay to call for help if things aren't going well and who they should call.

Often times that doesn't happen... they can't reach me directly [to call for help]...I can facilitate the system to identify to a case manager that someone in the community is in trouble and ...get them back on the home care program...that's a way of helping them self manage is to **know who to call for help when they need it**

...I live in [place name]...a fairly small town and I will...have people socially come to me and say, ... you were helping so and so my neighbour and my brother is having trouble, do you think it's something that a physiotherapist can help?...I can give them direction on how to access a physiotherapist...at least that **helps people identify our role because I think a lot of people don't even know what the role of a physio could be in something like diabetes or...COPD,** they can see us in some of the neurological conditions but not some of the other medical conditions...chronic heart disease[for example]

...So that might be part of what we as **physiotherapists need to say is that we could help, we could help some people with self-management with chronic disease**

a little bit more or if there is anything that is missing in there to fill me in and there they go, they get started with what their problems are and what it has been like and, you know, I probe them to go into details with their problems and try to capture different areas of it as well and then go from there.

first of all they don't understand what physiotherapy can do. They equate physiotherapy through exercise and exhaustion so the minute they hear that the physiotherapist is coming in, they are scared like they are going to go through pain or they are going to go through some exhaustion so education has been a major part of my practice like helping them understand what physiotherapy entails, **it's not just exercises, it's for pain management strategies, it's for swelling management strategies or depending on different conditions or respiratory management, how physiotherapy could help with that and how it could help with the cardiovascular conditions and depending on what chronic disease they are going through, what the prognosis of the chronic disease is and what role physiotherapy would help would play in helping them manage their conditions in a better way.** §

[self-management as part of PT practice] **It's promoting physiotherapy, not just among clients but among other health fields is also very important because the nursing staff, the personal support workers, the case managers here at the CCAC for them to understand what physiotherapy entails, it's been a challenge which is what we've been talking about at our company is how are going to be promoting physiotherapy because there has been a lot of conflict between physios and occupational therapists, there is a very thin line dividing our fields and that has been one of the greatest challenges,** that is one thing that comes to my mind is promoting physiotherapy to these people who need to really understand how we as physios could be of major help to people and what we choose specific to physio that would make a difference because there are so many things that have been happening in the community you don't want to know, exercises that have been given by the personal support workers, nurses that have been giving exercises to the client not understanding what they can and they can't do so that's been a big challenge out here in the community that we are facing right now as physios so that is the one thing that really comes into my mind and that why I was really, really interested in participating in your research to see what you guys, any research that helps promote physio in the community among these people I'm all for it.

Participant 5: I definitely had a client out of town and she was experiencing low back pain and I wasn't the first physio to see her. She had numerous home physios prior to me and she was having the low back pain and so, you know, we did a thorough assessment and **I gave her a lot of information based on why I think physio would help but what the benefits of physio are and kind of educated her on why I'm giving her certain exercises, what areas we are working and why it is important to strengthen those areas in order to decrease her pain**

Laura Jean Graham 14-4-23 6:36 PM

Comment [3]: Major part of practice is helping clients understand what physiotherapy is.

It's not just exercise

Laura Jean Graham 14-4-23 6:36 PM

Comment [4]: Physiotherapy is for pain and swelling management; cardiovascular conditions; and depending on what chronic disease they are going through, the prognosis and the physiotherapy role is in helping the client manage their condition

Physiotherapists' Role and Clients' care expectations

Explaining the physiotherapist's role and the expectations of the client regarding number of visits, client's role in physiotherapy, and outcome of participating in a home exercise program.

Participant 5: I think it has to do a lot with like what I was explaining earlier with my initial visit like what the expectations for each other right off the bat so there are no surprises so normally I do explain that first that they, you know, these exercises are going to need to be done numerous times a day every day for you to see, you know, somewhat of a difference and I explain that right away by saying if you're only doing the exercises once a week or whenever I come to see you then it's probably not going to make a difference for you and its probably going to take a really long time to improve so they are aware of that right away

Participant 6: you don't want to be wasting your time with something and I think that's how you look, you look at people I talked about where if they have low back pain, **even if you explain what it's supposed to do, if [the exercise] doesn't do what you explain, they're going to be frustrated with that if they're not getting the results that they want.**

Disease Symptoms and Prognosis, when to go for help

When to go for help

Participant 1: I would be thinking I would like to be able to educate them on when they could call for help again, you know, okay you're pretty good right now, you're doing well, you've got yourself on the right track but you need to know that if this, this, this happens, you need to call for me because I can make a difference, I can help you so sometimes leaving my patients when I think I've achieved some of those goals to let them know that it's okay to call for help if things aren't going well and who they should they call? Because often times that doesn't happen. They, you do go in to see them eventually but the question is, when did this start to happen? When did this change happen? Well I don't know about a year ago. But I saw you two years ago and how come you didn't call for help? Because I leave my card with them, they can't reach me directly, like they can leave a message for me, I can facilitate the system to identify to a case manager that someone in the community is in trouble and you know get them back on the home care program so to me that's a way of helping them self manage is to know who to call for help when they need it and it may or may not be the physiotherapist, it may be an update with your dietician or something but to teach them how to, how to identify when they need help and who they're to go to.

Disease process: risks, benefits

Participant 2: Education would be around I guess the risks of like from a physio perspective particularly the risk of developing other impairments related to their disease if they don't manage their disease right now, so sure they're okay where their disease is at now but why manage the disease? Well the disease can progress and they can have further complications from it so that would be a good piece of the education. ...I suppose also the other way right, like the benefits of managing is not just that they're going to prevent bad things from happening but they actually might feel better if you manage these things. **Looking at the benefits and the risks of management.**

Laura Jean Graham 14-4-23 6:36 PM

Comment [5]: Explains local effects, functional effects (walking), and avoiding re-injury.

Laura Jean Graham 14-4-23 6:43 PM

Comment [6]: [educating patients on] the benefits of managing to prevent bad thing and to feel better

Looking at the benefits and risks of management

Curriculum Vitae

Name: Laura J Graham

Post-secondary Education and Degrees:

The University of Western Ontario
London, Ontario, Canada
2008-2014 PhD (expected spring 2014)

The University of Western Ontario
London, Ontario, Canada
2009-2011 Master of Physical Therapy

Acadia University
Wolfville, Nova Scotia, Canada
2004-2008 Bachelor of Kinesiology with Honours

Honours and Awards:

Ontario Graduate Scholarship
2010-2011, 2011-2012

Health Professional Student Research Award
Canadian Institute of Health Research 2009

Related Work Experience:

Research Assistant 2008-2013
The University of Western Ontario

Research Assistant 2012-Present
St. Joseph's Health Care, London, Ontario

Physiotherapist 2011-Present
St. Joseph's Health Care, London, Ontario

Publications:

Graham, L., Connelly, D. "Any movement at all is exercise": A focused ethnography of rural community-dwelling older adults' perceptions and experiences of exercise as self-care. *Phys Ther.* 2013; 65(4);333-341.