

**Chronic Disease Self-Management: An Evolutionary Concept Analysis**

by

**Lori Hughes**

**BSN, University of Victoria, 1992**

**A Project Submitted in Partial Fulfillment of the  
Requirements for the Degree of**

**MASTER OF NURSING**

**in the School of Nursing, Faculty of Human and Social Development  
University of Victoria**

Lori Hughes, 2010

University of Victoria

Self-Management:

an evolutionary concept analysis

by Lori Hughes

BSN, University of Victoria, 1992

Supervisory Committee:

Dr. Laurene Sheilds, (School of Nursing)  
Associate Professor, Supervisor  
Associate Dean-Academic, Faculty of Human and Social Development

Dr. Anita Molzahn, (Faculty of Nursing, University of Alberta)  
Professor and Dean, Committee Member

Dr. Lynne Young, (School of Nursing)  
Associate Professor, External Examiner

### **Abstract**

This paper presents a concept analysis examining chronic disease self-management in aging adults from a system level perspective. Using Rodgers and Knafl's evolutionary methodology, literature from nursing and other disciplines was selected. Three sets of paired attributes; knowledge/education, relationship/partnership, self-monitoring/self-care and one umbrella attribute; action skills were identified. The results revealed that variability exists in how self-management is understood and applied amongst the disciplines, and that a knowledge gap exists within the nursing literature in relation to aging adults and self-management at the system level. However, relative to the literature from other disciplines, nursing has devoted more attention to the development of theory focusing on self-management, and two system level theoretical frameworks were identified that may support analysis of the attributes presented here.

## Acknowledgement

For all who supported me throughout this journey, thank you.

I would particularly like to thank the members of my project committee. Dr. Laurene Shields, your insight, knowledge, and direction were indispensable in guiding me through to the completion of my project. Dr. Anita Molzahn, you provided the exact counsel required to help me clarify the initial path of my project. Dr. Lynne Young, the discerning feedback you provided offered accuracy just when I needed it.

For my friends who have been supportive over these last years, your thoughtfulness has been an exceptional gift.

I would like to thank my parents, especially my mother, who has an amazing amount of Finnish 'sisu', and has offered me immeasurable support. I would also thank my sisters, nephews and niece: each of you has inspired me by presenting a variety of ways to experience life.

Above all, I would like to acknowledge a deep appreciation to my husband Bryan. You provided room in our daily life, and offered ongoing love and support for me to continue on this journey. For all of this and more, thank you.

## Table of Contents

Supervisory Committee	ii
Abstract	iii
Acknowledgement	iv
Table of Contents	v
Chapter 1: Introduction	1
Current Practice Context	4
Additional Considerations	7
Purpose of the Project	8
Chapter 2: Concept Analysis	10
Overview of Concept Analysis Methodology	10
Methodology	11
Data Capture Process and Identification of Attributes	16
Chapter 3: Findings	21
Attributes of Self-Management in mid-life and older Adults	21
Knowledge / Education	21
Relationship / Partnership	23
Self Monitoring / Self Care	25
Action Skills	27
Contextual Features: Antecedents and Consequences	30
Antecedents: clients, care providers and system levels	30
Consequences: clients, care providers and system levels	34

Contexts	36
Surrogate Terms and Related Terms	37
Exemplar(s)	38
Chapter 4	44
Discussion	42
Nursing Implications	47
Conclusions	52
References	53
Appendices	63
Appendix A – Expanded Chronic Care Model	63
Appendix B - Data Analysis Tool	64
Appendix C – Data Analysis - Data Collection sheets – by discipline	65
Appendix D - Self Management – Attributes Model	66

## Chapter 1

### *Introduction*

In British Columbia (BC) people aged 65 and older comprise one of every seven within the total population, a proportion projected to increase over the next twenty five years to that of one out of every four people (British Columbia, 2006). Half of all adults are now living with one or more chronic conditions, and this increases to over 68 percent amongst those 65 and older (Broemeling, Watson, & Black, 2005). Chronic health conditions are variable and complex, as was recognized over twenty years ago at Stanford University by Dr. Kate Lorig, who led the development of a Chronic Disease Self-Management (CDSM) program for people living with arthritis (Centre on Aging, 2008). In the years since the inception of the CDSM program, optimization of chronic care of older adults within our increasingly complex health care system has become a growing priority for care providers, organizations, educational institutions and governments (British Columbia, 2007; Broemeling et al., 2005; Center on Aging, 2008; Crowley, 2005; Hebert, 2002; Thorne, 2002; World Health Organization, 2007).

The concept of self-management, as aligned with chronic conditions, has permeated our thinking to such an extent that it is now considered within the design and delivery of health services (Alp, Kanat, & Yurtkuran, 2007; Brody, Roch-Levecq, Kaplan, Moutier & Brown, 2006; Costantini, Beanlands, McCay, Cattran, Hladunewich, & Francis, 2008; Lorig, Ritter, & Plant, 2005; Vég, Rosenqvist, & Sarkadi, 2006). In British Columbia (BC) the Expanded Chronic Care Model (ECCM) (see Appendix A) is an example of a system wide framework that recognizes the need for integration of multiple contexts in health care delivery, including primary care teams, of which self-

management is a component (Barr et al., 2003; British Columbia 2006; British Columbia, 2007; Taylor, 2002). Additionally, there has been a steady increase in the literature including commentary about clinical practice and research focused on the application and effectiveness of self- management (British Columbia, 2007; Finfgeld-Connett, 2005; Kralik et al., 2004; McCabe, 2008; McGowan, 2005; Nagelkerk, Reick, & Meengs, 2006; Rogers, 2003; Wilson, Kendall, & Fiona, 2005).

Human resource shortages in health care have partially influenced changes in legislation expanding nursing's scope of practice, as well as those of other care providers (Canadian Medical Association, 2007; Canadian Nurses Association, 2002; Health Professions Act, 2009). This legislated change supports a broader strategy that is moving towards the use of integrated care teams, such as the prepared, proactive practice team within the ECCM, of which client self-management is a component (British Columbia, 2007). Further to this diffusion of self-management are concerns expressed within the nursing literature regarding the ethical implications and moral work associated with asking clients to self manage their health care (Redman, 2007; Townsend, Wyke, & Hunt, 2006). These concerns include access to adequate resources, prior preparation in the skills necessary to self management, harm potential related to assumed competencies and responsibilities when transferring medical care, as well as a lack of standardization leading to inappropriate inclusion or exclusion of clients who may benefit (Redman, 2007).

One response to these professional and practice issues is noted in the establishment of self-management standards, an example of which is the American standardization of diabetes self-management education (Funnell et al., 2008). These

client focused standards were developed through a nurse led interdisciplinary collaboration with the aim to “...support informed decision-making, self-care behaviors, problem-solving and active collaboration with the health care team and to improve clinical outcomes, health status, and quality of life...”(Funnell et al., 2008, p.97).

Standardization in processes such as this closes an evaluation and research gap identified in a previous systematic review regarding self-management education (Funnell et al., 2008; Warsi, Wang, LaValley, Avorn, & Solomon, 2004). Another response that addresses the research gap is noted in the establishment of centers and alliances dedicated to self-care and self-management research (Alliance for Self Care Research, 2009; Case Western Reserve University, 2009; University of Wisconsin-Milwaukee, 2009).

Additionally, the incidence of chronic health conditions and associated outcomes on quality of life in the older population has influenced a growing interest in elder friendly environments and aging research (NICHE, 2009; Parke & Brand, 2004). Clients have also expressed a desire for involvement beyond what has historically existed from the “...medical management model centered on prescriptive regimens and compliance...to a collaborative self-management model...” recognizing social and contextual experiences (Bandura, 2005; BCNAR, 2009; British Columbia, 2009; Clark et al., 2008; Finfgeld-Connett, 2005; Kralik, Koch, Price, & Howard, 2004). However, in addition to associated terms such as self-care, the term ‘collaborative self-management’ and the concept of self-management in general, are open to interpretation from influences such as discipline, client circumstances, and economic constraints. On the one hand collaboration imparts a meaning of partnership between clients and care providers, and

on the other hand, self-management suggests a solitary pursuit with attendant accountability for outcomes (Northrup, 2002; Thorne, 2002).

### *Current Practice Context*

Self-management is supported in the literature for those living with chronic conditions as an approach towards the attainment and sustainment of optimal health in various settings (Farrell, Wicks, & Martin, 2004; Kralik, Koch, Price & Howard, 2004). In respect to this approach, the organization I work within has begun to offer regular workshops on chronic disease self-management for staff. I attended one of the workshops, recognizing that the sponsorship of this education by decision makers represented spread of self-management, as a standardized approach to care. In addition, I wanted to identify for myself, care providers and sectors that are interested in learning about this concept, what the content consists of, and the general level of interest in this workshop.

Practitioners from the community, residential care, sub-acute and Acute Care for the Elderly (ACE) units attended the workshop, the majority of who were nurses. Content included an overview of B.C.'s Expanded Chronic Care Model, a review of the Baby Boomer trajectory in aging and the rising incidence of chronic health conditions. This was followed by an introduction to self-management, including an overview of how to partner with clients through the development of action plans, followed by group work on a case study. The session concluded with an invitation by the workshop leader to begin applying the knowledge and skills in practice. As I was leaving this workshop I witnessed a conversation between two nurses who were actively questioning why self-

management was being promoted within the organization. One nurse asked of the other, ‘what is the intent of all this attention on self-management’. This nurse asked an interesting and pertinent question given that they were being provided with this workshop to influence and support their practice. Additionally, this question opens up for discussion questions impacting nursing practice and knowledge development, such as how decisions are arrived at to sponsor client self-management in general, and how might the provision of chronic care and knowledge development be approached within an interdisciplinary team environment that is increasingly expected to be client centered, safety conscious and eliminate waste (Canadian Patient Safety Institute, 2009).

I work across various contexts in my organization, and thus I am aware of the significant changes arising from the provincial level, which are impacting health care services design. These changes are similar to transformations that have occurred in the United Kingdom and Veteran’s Affairs in the United States (Charlton & Andras, 2005; Kizer, 1999). Originating at the system level, these reforms involve integration and alignment of services across sectors, a focus on client safety, quality improvement, transparency in care provision, and accountability through disclosure of harm (Iedema et al., 2008; Kizer, 1999; Newman & Vidler, 2006). Foundational to this service redesign from the community to acute care settings is the transformation of nursing and allied health providers, into integrated, interdisciplinary care teams informed by evidence and best practices (iCare, 2009; in-BC, 2009; PHC, 2009).

Prior experience from Veteran’s Affairs in the United States indicates that reforms such as this can also result in unintended outcomes for clients (Berlowitz, Young, Brandeis, Kader, & Anderson, 2009). As well, there is a growing expectation for

client representation at the development and provider levels of service design (Patients for Patient Safety, 2006). At the national and international levels, the involvement of clients, as consumers, is evident in the rise of advocacy groups such as Patients for Patient Safety (WHO, 2009). And, in BC the provincial health services is sponsoring a similar initiative within primary health care called 'Patients as Partners' (Impact BC, 2009). In the U.K, the involvement of clients is referred to as the 'expert patient' program. In BC, client involvement is referred to as the 'productive interactions and relationships' component within the ECCM (see Appendix A), which typically occurs at the point-of-contact level (British Columbia, 2007).

With respect to self-management and diffusion, it is noted that this term '...often means different things to different people – and sometimes different things at different times even to the same people...' (McGowan, 2005, p.1). From the formal application of existing evidence and on-going research that began over twenty years ago with Lorig's original CDSM program for people diagnosed with arthritis, self-management is now a component of system level planning (Bandura, 2005; British Columbia, 2007; Lorig et al., 2006). With respect to nursing, these emerging changes are of interest as holistic approaches to client and family care are foundational for practice, research, and ethics (Hartrick Doane & Varcoe, 2005; Hartrick Doane & Varcoe, 2007; Peter, 2004). Indeed, nursing's current body of knowledge and scope of practice positions nurses to continue as leaders in all aspects of these emerging changes, which includes expertise in client and family relationships, and in the support of preventable outcomes related to living with chronic health conditions.

### *Additional Considerations*

The diffusion of knowledge into practice is supported by the application of three types of decisions which are: individual choice, consensus or collective choice amongst a group, and directive choice by a few individuals based upon authority or power (Rogers, 2003). The process of diffusion is also influenced by communication, the passage of time, and social systems (Rogers, 2003). The diffusion of self-management associated with these three decision points carries implications for nursing in relation to professional practice and knowledge development. For example, in the evolving environment of interdisciplinary teams self-management might be understood differently by the various team members. The impact of variation in understanding will become evident in how self-management related decisions are arrived at, which interventions are applied, and which indicators are established for evaluation. A confounding influence is that a common definition of self-management has yet to be established and, thus, variable interpretations exist (Kralik et al., 2004; McGowan, 2005). This absence of an established definition is an indication that understandings of self-management are, and have been, in transition (Rodgers & Knafl, 2000). Within the literature, this state of transition is evident by the number of related terms associated with self-management such as self-care, self-monitoring, self-care management, self-managers, patient directed monitoring, and self-regulation (Farrell, Wicks & Martin, 2004; Group, Haas, Fairweather, Ganger, & Attwood, 2005; Nagelkerk et al., 2006; Schoenberg, Stoller, Kart, Perzynski & Chapleski, 2004; Sisk, Hebert, Horowitz, McLaughlin, Wang, & Chassin, 2006; Wilde & Garvin, 2007).

Self-management has become significant enough to influence policy directed at the point-of-care. Valuable resources from a system level are being directed towards client self-management, as illustrated through the adoption of the ECCM within BC (British Columbia, 2007). Establishing a clearer conceptual understanding of self-management will support nursing research, clinical leadership, and is needed to inform decision makers in the provision of evidence based chronic care. Adopting a collective or consensus approach to diffusion of evidence based knowledge, such as for client self-management and professional practice, can contribute towards an understanding that is representative, and supportive from both a discipline specific and interdisciplinary focus. And, in regard to diffusion requiring individual choice, within the client and nurse relationship, daily decisions in care involve shared negotiation and the use of best practices, processes that require various forms of collaboration. A review of the literature focusing on client self-management using Rodgers and Knafl's evolutionary framework for concept analysis is an appropriate approach to begin this examination of self-management (Rodgers & Knafl, 2000; Wilde & Garvin, 2007).

### *Purpose of the Project*

Nursing has demonstrated leadership in the development, provision, evaluation and spread of evidence informed practices and programs related to chronic health care, and one aspect of this expertise includes client self-management (Lorig et al., 2001; Taylor, 2002). In the context of care delivery through interdisciplinary teams, nursing brings forward established leadership and recognized expertise in the creation of effective programs associated with client care (Jessup et al., 2006; Johansson, Adamson, Lins &

Wredling, 2004). This leadership expertise includes skills in the development of collaborative teams, optimal client care, outcomes, and research. An emerging change is a shift towards partnership, or egalitarian collaboration, with clients, families and other care providers in care decisions (iCare, 2009; Koch, Jenkin & Kralik, 2004). Although familiar to nursing, this change in partnering with clients and families as co-participants shifts health care planning, and therefore service provision, from a hierarchical medically driven base towards a process of shared decision making and accountability across an integrated team structure (Hartrick Doane & Varcoe, 2005).

Indeed, nursing has been developing a body of informed knowledge involving clients and families that aligns with this move towards partnership for years (Lorig et al., 2006; Tomey & Alligood, 2002). As these changes in team structures progress, it is important to build upon research identifying nursing quality indicators sensitive to client safety and optimal outcomes (Gallagher & Rowell, 2003; Ingersoll, McIntosh, & Williams, 2000; Savitz, Jones & Bernard, 2005). In respect to knowledge development and these changes at the system level, the ECCM framework supports various population health groups including older adults, and a central feature foundation to professional nursing practice includes ‘productive interactions and relationships’ between clients and care providers (British Columbia, 2007). How self-management is understood, and therefore applied, is a relevant consideration (McGowan, 2005).

I suggest that within this context, self-management is still evolving and remains open to interpretation by various stakeholders. Indeed, this state of change presents an opportunity to continue developing knowledge in the interests of clients, families, and in support of informed nursing practice. For example, several key influences important for

nursing to consider at this time in relation to self-management include: the move towards integrated care teams, the focus on client-centered care, the adoption of frameworks such as the Expanded Chronic Care Model (ECCM), expectations of evidence-informed care from various stakeholders, and the necessitate to evaluate processes and outcomes. In respect to these influences, a concept analysis of chronic disease self-management in mid-life and older adults will provide support and direction for nursing practice, research, and interdisciplinary care delivery.

## **Chapter 2**

### *Overview of Concept Analysis Methodology*

The intent of this project was to conduct a concept analysis drawing from professional literature focusing on chronic disease self-management in mid-life and older adult populations. Rodgers and Knafl's (2000) evolutionary methodology is the framework I used in this analysis. This method includes identification of a concept, determination of the setting and sample size, data collection, data analysis, identification of an exemplar, and concludes with a discussion regarding the implications from the findings. The objective of this analysis was to support concept clarification by identifying key words used in relation to a concept, in this instance self-management. In addition, similar and varying usages of the concept were identified. This analysis was supported by reviewing literature from nursing and other disciplines (Rodgers & Knafl, 2000). However, it is important to first establish a need for analysis of any concept, and one strategy is to determine this need is by assessing if the concept has been spreading over time. Spread, or diffusion, of a concept, is one indicator that the concept has a

practical use, and that it is significance. The results of an analysis using this methodology provide direction for further investigation.

### *Methodology*

I started by conducting an exploratory search in CINAHL and Medline using the word 'self-management'. This initial search produced returns reaching into the thousands. Based upon this information, I inferred that a narrowing of the time period would provide further insight into the degree of interest, or spread of innovation, and therefore the value of self-management within professional practice and research over time (Rodgers & Knafl, 2000; Rogers, 2003). Therefore, in the follow-up to this first step of the inquiry another search by five year segments ranging from 1978 to 2008 was completed. This approach validated my question as the results revealed an accelerated increase in published articles, particularly during the last five years, that included a reference to self-management (Clark et al., 2008; Davidson, Paull, Rees, Daly, & Cockburn, 2005; Kralik et al., 2004; Koch, Jenkin, & Kralik, 2003; Lorig et al., 2006; McGowan, 2002; Redman, 2007; Tanner, 2004).

Highlights from this search included a search conducted in the CINAHL database using the term 'self-management', resulting in 20 published articles prior to the end of December 1986; however in the five years between January 2004 and December 2008 a total of 1439 articles were published. A similar search conducted in the MEDLINE database resulted in 165 articles published prior to December 1986, and for the five years between January 2004 and December 2008 a total of 1967 articles were published. For

both data-bases, searching between the years 1987 to 2003 resulted in returns demonstrating steady increases in publications referencing self-management.

I began, defining my sample and setting, with the decision to manage the large number of available articles by omitting popular sources of literature, and by focusing on professional publications from nursing and other disciplines. I further defined this sampling approach with the decision to select articles published as research in order to provide analysis from an evidence informed perspective. Rodgers and Knafl suggest a baseline of 30 articles for each discipline, or one-fifth of the total sampling available. I decided that if additional articles were needed, these would be supplemented by a random selection from non-research based professional literature.

A test search using the term 'self-management' with and without a hyphen produced similar results. The criteria for the literature search included the following: selection by the term self-management, publication between the years January 2004 to December 2008, and health care professional authorship inclusive of nursing and non-nursing sources. In addition, articles were screened adding either the advanced search terms of adults and older adults or through hand selection if this option was not available. Exclusion criteria during the search included children and adolescence, and consumer literature. The publication language selected was English. All searches were conducted using a Boolean search mode.

A data collection template following guidelines as outlined by Rodgers and Knafl (2000) was created using a table format in Microsoft Office Word 2003 (see Appendix B). The databases selected included CINAHL, Medline, Ageline, and Telemedicine Information Exchange. These databases offer a comprehensive assortment of material

from a wide selection of professional journals that are peer reviewed. CINAHL and Medline are interdisciplinary, and Ageline offers a number of journals targeting the health of older adults. Telemedicine Information Exchange was a database chosen out of curiosity as it represents the emerging field of e-health and offers another lens with which to view the dissemination of knowledge. A total of six searches were conducted, of which, searches one to four used the search term 'self-management'.

The first literature search was conducted using CINAHL, selecting for full text articles. The search mode used was inclusive of all genders; the publication type was research, with a journal subset of core nursing. Results from this search numbered 36 articles. A visual search omitted several of these studies that were specific to children and adolescent populations leaving 22 articles that met the criteria for analysis. Of note, in CINAHL within the parameters available for selection under research, several specific types of research articles were available for selection including clinical trial, research instruments, and systematic review. A decision was made to search with the term 'research' thereby opting for a general return in the results.

The second literature search was conducted in MEDLINE selecting for full text articles. This database has sixteen selections under research including: clinical trial, clinical trial phases 1 to 4, random controlled trials, and meta-analysis. The search mode used was inclusive of all genders, therefore a decision was made to select for all publication types and screen for appropriate articles by hand. This resulted in 102 articles. The search was then refined with an advanced search selecting for adults between 45 and 65 years old, the most representative population sample relative to the

CINAHL search. The final results with this advanced search narrowed the returns to 29 articles, of which a total of 18 articles were selected for review.

The third literature search was conducted in the Ageline database selecting for linked full text articles. This search resulted in 22 articles; 4 articles were selected for the nursing group analysis, and 8 were selected for the non-nursing group analysis.

The fourth literature search was conducted in the Telemedicine Information Exchange database. The publication dates selected were from January 1<sup>st</sup> 2004 to December 31<sup>st</sup>, 2008. This search resulted in 47 articles, however 23 of these included publications from 2003, which is outside of the parameters for this analysis. Several of the articles were technically focused regarding the logistics of telemedicine, networks, and a few were focused on children. Many of the articles were abstracts available for purchase. Following a scan of the articles listed none were selected for inclusion in the analysis.

A fifth literature search was conducted approximately half-way through the nursing literature review and data collection phase to explore if there were any articles published in nursing journals that considered self-management within a larger system context. This search was conducted in CINAHL with full text, under nursing journal subset, using the search term 'self-management and systems level'. The search mode used was to 'find all my search terms', inclusive of all genders and publication types. Three articles were successfully located, however these focused on children, public health or career ladders. As a result none of the returns were chosen for analysis.

A sixth search using the term 'self-care' was conducted in the CINAHL database following the analysis process. This search was conducted out of curiosity as 'self-care'

was the most common surrogate or related term noted during the review. This search demonstrated an overlap in the articles retrieved. No additional articles from this search were selected for review.

In order to provide a balanced representation of all non-nursing disciplines during the selection process, the first author of each article was identified as representing a profession. However, I discovered that the parameters for selection of potential articles amongst the databases varied slightly. As a result of this variation, the selection process for the non-nursing literature needed to be completed by hand as the profession of the lead author was not always apparent. Although this screening process took a little longer, a variable and representative sampling for the non-nursing grouping resulted. Still, amongst the entire non-nursing group of articles available as research I discovered that medicine was the dominant profession represented.

Preparation for review was first approached by placing the selected articles into two groups; one group included 25 nursing articles; the other group included 27 non-nursing articles. The articles were selected based upon the quality of the work, with an emphasis to select for articles that were research based. Each group of articles, arranged in a random order, was then numbered consecutively in the top right corner. The nursing group were numbered from 1 to 25 and reviewed first. During this review, several reference and classical articles were added as these offered a deeper understanding on how authors and researchers are approaching self management knowledge synthesis and understanding. These additional articles brought the total number reviewed to 28 for the nursing group. The non-nursing articles were numbered 29 to 55, and included primary authors from the following disciplines: anthropology, chiropractic, dietary, kinesiology,

medicine, naturopathy, pharmacy, physiotherapy, social work, sociology, psychiatry, and psychology. Amongst the authors in the non-nursing literature, nurses were represented in two articles. During this review, additional referenced material was not selected as there were no notable examples directed to the concept of self-management. However, a decision was made to include a single meta-analysis that was retrieved during the Medline search; this article was the only meta-analysis located using the search term self-management.

In summary, 28 nursing articles and 28 non-nursing articles were included for analysis. All of the articles were read by the author consecutively as numbered. A single data sheet was used for each article (see Appendix B). Data collection was organized by assigning complementary numbers to a single data sheet at the time an article was reviewed. All the data sheets were collated, clipped, and secured with the original article groupings.

#### *Data Capture Process and Identification of Attributes*

Each article was reviewed at least once. I began this process by collating the assigned article number onto the data collection sheet, and by noting the specifics of the article. The review process was iterative whereby various passages were read and re-read, key words were highlighted using a transparent marker, and notes were placed in the margins of the articles and in the journal. This process continued until I reached a point in a review where each category of data, as presented, was coded within the article. The highlighted information and notes were then transcribed onto the data collection sheet

which was clipped to the article. I continued in this manner until all the articles were reviewed.

As I began the analysis of the identified data components, I realized a need for a second data collection form in order to collate the data from each article. I developed a second data collection sheet that included the selected categories outlined by Rodgers and Knafl (2000) and then began the analysis process by listing each article consecutively, by discipline, and according to the appropriate category onto this second sheet (see Appendix C). I continued working through all the data collection sheets entering additional comments and proceeding along a similar iterative review as completed earlier for the articles.

Once this review and coding was completed, I further realized that analysis would require another step in order to draw out themes and patterns. This also helped to clarify several instances where it was difficult to determine if an example represented an attribute or an antecedent. I am familiar with the value of using concept mapping for individual and group planning purposes and decided to use this tool as the next step. As a form of association that helps to 'fit things together' concept mapping is more directed than brain-storming. Essentially, concept mapping assists in the identification and interpretation of central ideas and associations within existing material in a non-linear visual format on a single page. The resulting data can be arranged in clusters, and associations can be made throughout this data using lines, arrows, and feedback loops. This process eventually draws out themes and gaps and moves data into meaningful and usable information (University of Victoria, 2009).

I proceeded with the concept mapping process, as suggested by the University of Victoria website, by first selecting a single page for each category and placing the category word in the center of the page. This approach is also part of the standard procedure in evolutionary analysis whereby themes are identified by examining each category separately (Rodgers & Knafl, 2000). For example, with the category of attributes I proceeded to transfer words from each of the second data collection sheets, using a different coloured ink for nursing and interdisciplinary sources. I then began arranging the data words around the word 'attributes' and continued this process working from the general to more specific arrangements by drawing lines connecting similar words into groups. I repeated this process using a pencil, linking larger groupings of words and continuing to connect groups by re-drawing lines until I reached a consensus that the category of 'attributes' was complete and representative of the all data collected and distilled to this point.

As the concept mapping process firmed up, themes began to surface. I noticed how several words were common throughout the analysis and had an affinity to cluster and converge. Indeed, as I moved through the methodology and cycles of analysis, a point of consensus was reached and word alignments formed. It occurred to me how these associations amongst the words had a certain 'ying and yang'<sup>1</sup> quality, and how these word clusters could be distilled into pairs. Initially I thought of these word pairings as having intrinsic and extrinsic characteristics, where the first word could be understood as having a quality internal to an individual's experience and, the second word in the

---

<sup>1</sup> My use of the term 'ying and yang' illustrates the pairings of complementary attributes that highlight a close association in meaning; referred to here as 'internal/external' qualities.

pairing having an association to a broader, system level context. I have since revised this terminology, changing the descriptions for these attributes pairing to that of internal and external. This change reflects an understanding of Rodgers and Knafl (2000) regarding the significance of concepts, where "...the importance attached to a particular concept or conceptual problem provides a strong incentive internal to a discipline... factors, referred to as external... lie beyond the boundaries of the particular discipline..." to develop the concept (Rodgers & Knafl, p. 82).

Internal incentives as described here are influences central to a discipline and within professional scope and influence. External incentives may also have some affinity towards influence within professional scope; however, these incentives typically originate from the wider system, and therefore arise independently outside professional boundaries. As I worked through this process, these paired associations were consistently noted. In respect to the evolutionary process, I identified these word clusters and alignments as representing the attributes and related components of self-management. The attributes and associated components for self-management identified include: knowledge/education (components include literacy, technical skills and resources), relationship/partnership (components include communication and collaboration), and self-monitoring/self-care (components include ability, confidence, resources, and technical skills). Present in the data were a clustering of action-directed words routinely associated within a defined behaviour. These words include: problem solving, decision making, goal setting, relationship management, collaboration, communication, and resource utilization. These action words are frequently skill-based, invariably linked together in part or whole, and are considered here for the purposes of analysis as a single umbrella attribute.

I will explain here how I conceptualize the significance of the association within the paired words for each attribute, using knowledge/education as an example. To begin, all of these pairings represent the internal alignment with practitioners and clients, and the external alignment with the wider health care context and life. The first word in the pair aligns with internal qualities and the second word with external qualities. For example, in the pairing of knowledge/education, knowledge can be understood as existing within a clinical practitioner or client and includes the ability to read, draw up a syringe, and know where to source resources like community services, whereas education is an attribute that is located in a community context, often through formal education or in the case of health care, from a health care provider or group clinic. In terms of the components associated with knowledge/education, education in our culture often requires literacy, the ability to perform manual or skilled tasks, and involves access to internal resources such as confidence, and external resources such as adequate finances and support services.

This internal/external complementary relationship is reflected in the remaining attributes of relationship/partnership and self-monitoring/self-care. In respect to the umbrella attribute of action terms such as problem-solving, decision making, goal setting, action plans, checking results, and continuing on, these words are closely aligned and interdependent. Therefore, in view of the purpose of this paper, it made sense to keep these in view, as there is a significant relationship with these action skills to the concept of self-management (Lorig et al., 2006). However, during analysis it seemed that these words did not arise as independent attributes and I therefore made the decision to use the single term of action words in order to maintain a presence of significance.

Finally, I found that within the selected articles and in a supplementary review of several classical articles, an ‘ideal’ exemplar of self-management could not be located. In view of this, I chose examples from within the selected articles, and these examples collectively provide insight into the significance, use and application of self-management from the nursing, interdisciplinary groups, and client perspective. Although client based sources were omitted from this analysis, both the nursing and non-nursing material provided several interesting examples.

### **Chapter 3 Findings**

#### *Attributes of Self-Management in mid-life and older Adults*

The attributes of self-management that I identified through analysis include knowledge/education, relationship/partnership, self-monitoring/self-care, and action skills. An explanation of these attributes follows, and includes select examples from within the examined literature that serve to illustrate some of the findings I came across. Examination of the antecedents, consequences, the identification of surrogate terms, and a clustering of representative exemplars of self-management follow. In order to support the analysis process, I created a visual model of the attributes embedded within time and across various contexts (see Appendix D).

#### **Knowledge/Education**

A consistent finding was the broad similarities that exist across disciplines in association with knowledge/education. From the nursing and non-nursing literature, it was evident that self-management required some investment in education directed to self-

care. The means of how knowledge/education was attained and provided varied within the literature. In some instances, it was designed towards group activities, in other situations it was a didactic approach provided in a one-to-one encounter (Baird & Sands, 2006; Yip et al., 2007). A number of non-nursing articles identified nurses as the idea providers of self-management education for identified populations (Rolita & Freedman, 2008; Sisk et al., 2006). The majority of examples were specific to a particular disease population such as those living with diabetes or asthma (Paasche-Orlow et al., 2005; Vég et al., 2006). A few articles presented the question of how education might be transferable to chronic conditions in general (Dansky et al., 2008; Farrell et al., 2004; Goudreau et al., 2008; Jessup et al., 2006).

An example of the knowledge/education attribute is found in the significance associated with printed material, and consequent use, for individual or group sessions (Alp, Kanat, & Yurtkuran, 2007; Chodosh et al., 2005; Deakin, Cade, Williams & Greenwood, 2006; DeCoster & George, 2005; Farrell, Wicks & Martin, 2004; Finfgeld-Connett, 2005; Paasche-Orlow et al., 2005; Steinke, 2005). Illustrations of this attribute include research conducted by Goudreau et al. (2008) on the use of a standardized self-management educational book distributed to clients accessing primary health care services. They found that client satisfaction was enhanced by focused care planning, which included provision of standardized material on diabetes. This also contributed towards the optimization of client outcomes. In another context, Nagelkerk, Reick, and Meengs (2006) conducted three focus groups targeting adults living with diabetes in rural settings. Significant barriers to the application of self-management in this context were identified including knowledge gaps related to individual care plan use supporting diet

and glycemic control. The participants in this study expressed feelings of frustration and helplessness. They stated that they were impacted by a lack of clarity regarding what they needed to know about self-care management.

Another example of a study on the implementation of an asthma education initiative, with hospitalized adults in an acute care context, was conducted by Paasche-Orlow et al. (2005). They concluded that the assessment of individual health literacy, followed by tailored teaching, could enhance use in client self-management. And, as noted by Deakin, Cade, Williams, and Greenwood (2006), the application of cost-effective group based educational sessions for diabetes self-management resulted in improved outcomes. These group sessions were evaluated alongside the content and practice method provided by the standard, individual, clinic visits. The use and application of standardization of educational materials, care planning support that involves clients, health literacy assessment, tailored teaching, and group education in rural and primary care settings are key findings evident in the literature exploring the use of the knowledge/educational attribute of self-management.

### **Relationship/Partnership**

The attribute of relationship/partnership was viewed as foundational to self-management. How relationship/partnership was pursued across the represented disciplines varied slightly. The nursing literature identified the significance of relationships with clients and often was inclusive of families (Davidson et al., 2005; Nagelkerk et al., 2006). The literature verified that nurses are willing to partner with clients in order to support self-management needs and wants, that is, to walk beside

clients in the process of self-management (Koch et al., 2004; Polzer, 2007). A few disciplines within the non-nursing literature, such as the social worker literature, also approached relationship/partnership in a way similar to that of nursing (DeCoster & George, 2005). However, a more defined expression of relationship/partnership was evident within the medical profession where clients, and occasionally family members such as spouses, were expected to adhere to medical directives or at least to be receptive to guidelines (Anarella, Roohan, Balistreri, & Gesten, 2004; Kripalani et al., 2006).

In regard to use of the attribute relationship/partnership, Goudreau et al. (2008) stated how partnership for clients involves mutual decision-making that includes a level of comfort in both the information discussed and in the care provider relationship. Jack, Airhihenbuwa, Namageyo-Funa, Owens, and Vinicor (2004) describe the use of collaborative partnerships between physicians and older adult clients in managing the complex needs of diabetes within the primary care setting. They concluded that care management that is transdisciplinary, and collaborative, supports the cognitive and associated social concerns, of older adults living with diabetes in the community. Koch, Jenkin and Kralik (2004) suggest that the optimal approach in support of older adults living with asthma involves the use of a participative partnership. In this example, the application of relationship/partnership was diverse and included interactions between clients, care providers, families, peers, communities, and spiritually associated groups.

Davidson, Paull, Rees, Daly, and Cockburn (2005) document the importance of relationships supported by community-based nurse specialists who facilitate the application of heart failure self-management through communication and social support with clients, families, and physicians. Harvey and Silverman (2007) conducted in-depth

interviews exploring the role spirituality and relationship to God played in the application of chronic illness self-management amongst older African American and White populations in Pennsylvania. The use and application of mutual decision-making, support, collaboration, participatory partnerships with care providers, and metaphysical practices in primary health care and community settings highlight these examples associated with the attribute of relationship/partnership within the selected literature.

### **Self-monitoring/Self-care**

Two of the more frequently cited attributes associated with self-management are self-monitoring and self-care. Wilde and Garvin's (2007) evolutionary concept analysis identified that self-monitoring and self-care are reciprocal, that is, self-care is dependent upon self-monitoring, and self-monitoring influences self-care. These authors explain that a fuzzy association exists between the use of the terms self-monitoring, self-care, and self-management. They also identified in their analysis that self-monitoring was expressed more frequently than self-care, and that the application of self-management often encompassed "...other aspects of self-care besides self-monitoring...", and that self-monitoring is essentially a self-care approach (Wilde & Garvin, 2007). A key finding of this analysis is that self-management is a broader term under which both self-monitoring and self-care occur.

A few examples of self-monitoring/self-care are highlighted as follows.

Hagedoorn, Keers, Links, Bouma, Ter Maaten, and Sandrman (2006) commented on the use of diabetes self-care behaviour in situations involving both the client and a partner such as a spouse. They observed how confident clients tended to view certain behaviours

in their partner as being over protective, versus those clients with less confidence who did not ascribe this quality with their partner. Wilson, Kendall, and Brooks (2005) conducted a grounded theory study focusing on nurses practicing in acute, community and secondary settings. The nurses in this study viewed self-management and self-care as being the same, and these researchers determined that the major difference identified in use of these two concepts was related to who provided the care. For example, self-care is understood as a description of client directed care, whereas self-management is understood to be care provided by nurses. An illustration of this is the decision-making and manual skill involved in the administration of insulin; it can be described as self-care behaviour when a client decides on the correct unit dosage, followed by self-injection, or as self-management when provided to a client, by a nurse.

Costantini, Beanlands, McCay, Catran, Hladunewich and Francis (2008) completed a qualitative, exploratory study involving people living with kidney disease in the community. Their findings suggest that for participants, the application of illness self-monitoring extended beyond managing, and included taking a holistic approach to self-care, for example, engaging in healthy eating, regular exercise, and hobbies. In another primary care based randomized effectiveness trial, Sisk et al. (2006) examined the value of physician evidence based guidelines. The findings from this trial suggest that teaching guidelines support the self-management amongst community-dwelling clients living with heart failure. These authors further concluded that nurse-led management of this population is an effective strategy, as nurses have a unique body of knowledge that supports the application of evidence informed, collaborative, client care. .

Vég, Rosenqvist, and Sarkadi (2006) distributed a questionnaire to explore the self-management profiles of clients living with diabetes in the community. They concluded that application of self-management involves a relationship between relapses in self-care, living with a chronic condition in the long term, a process of prioritization, and on-going learning. Key findings in this study include the following elements that are supportive of self-management: holistic considerations such as diet and exercise; the application of standardized evidence and, the intrinsic link between the application of self-monitoring and self-care. In this study, the researchers found that self-management is additionally influenced by the perceptions of what are appropriate professional and client-based roles and responsibilities, as well as prior experiences of self-management.

### **Action Skills**

Evident throughout the reviewed literature, action-directed skills associated with self-management and chronic conditions occur in a variety of contexts. Action skills interact in a variable, flexible, and holistic manner, and could be analyzed individually (Wilde & Garvin, 2007). However, defining concepts that have close associations in relation to self-management is a complex enterprise (Wilde & Garvin, 2007). And, to provide a platform for analysis in view of this over arching complexity within the broader intent of this paper, a decision was made to collate these skills under a single umbrella, or broad attribute of ‘action skills’. These skills involve closely aligned attributes that support the use of self-management, such as: problem solving, decision making, goal setting, relationship management, communication, and resource utilization (Clark et al., 2008; Costantini et al., 2008; Wilde & Garvin, 2007). Application examples include

following mutually defined exercise plans, monitoring of goals, medication dose selection and administration, the management of pain through relaxation, and prayer for empowerment and coping (Austrian, Kerns, & Carrington, 2005; Harvey & Silverman, 2007).

Sturt, Whitlock, and Hearnshaw (2006) developed a nursing intervention for diabetes self-management further establishing how the use of collaboration and goal setting is an effective foundational action skill in client self-management. This intervention was trialed in a community-based diabetes clinic and focused on client self-efficacy and the use of an on-going evaluation scale to support clients' goals. Selecting participants from a community-based rehabilitation clinic, Alps, Kanat, and Yurtkuran (2007) developed an osteoporosis self-management program. This program consisted of an educational strategy focused on how the use of physical, psychological, and social behaviours can improve outcomes. A key to success with this program, as noted by these authors, is for clients to assume a central and collaborative role with care providers in the development of tasks and goals such as taking enough calcium and vitamin D, managing emotions, and fall prevention (Alps et al., 2007).

Norris and Olson (2004) focusing within the primary health care setting, used the Chronic Care Model in the support of older clients living with diabetes. They highlight how a component of this framework includes the need for assessment, as well as individualization of care plans that are evidence based. They emphasize the value in this model as being supportive of client-centered actions which address existing gaps in prevention, long term outcomes, population health, and continuity in care such as

medication management, exercise, and approaches to bolster confidence (Norris & Olson, 2004).

Grey, Knafl, and McCorkle (2006) developed a researchable framework that considers client and family behaviours in the application of self-management. This framework is grounded in nursing practice and encompasses a system wide perspective. Interestingly, this framework is inclusive of elements contained within the Chronic Disease Self-management Model. The authors were motivated by an identified need for a foundational structure to expand upon nursing practice knowledge. Additionally, the authors desired to develop a framework that considered elements from the micro to the macro level. Of interest is that this framework identifies influences that have a relationship to the management of chronic conditions. These influences include individual, psychosocial, family, environment, and condition specific factors. Consideration was also given to action skills that target an individual's daily activities, such as taking a once daily medication, to wider, more integrated approaches involving lifestyle changes and social networks (Grey et al., 2006).

Koch, Jenkin, and Kralik (2004) identified three self-management models under which action skills can be organized and applied within the community setting. These are the medical, collaborative, and self-agency models. In the medical model, action skills tend to be physician directed, in the collaborative model, action skills are arrived at through collaboration and in the self agency model, clients are considered expert as they respond to their personal health issues on a daily basis based upon extensive experience. Chodosh et al. (2005) in a meta-analysis, offer a medical perspective within a primary care context, on the application of self-management programs for chronic conditions.

They determined the existing evidence base is limited in support of the essential components required for self-management programs, of which, action skills are part.

Findings about action skills are complex and include the use of educational strategies, collaboration on goal setting, tasks and assessment. Collaboration involves the physical, social and psychological needs of individuals as well as populations, and the Chronic Care Model is used for this purpose in primary health care. This umbrella attribute is an interesting outcome in light of the formal origins of self-management twenty years ago (Lorig & Holdman, 2003).

#### *Contextual Features: Antecedents and Consequences*

Contextual features are an array of elements that occur prior to, and as a result of, concept application. Derived from both emerging and current uses of a concept, contextual features reflect the influences of disciplinary inclination, cultural values, and social perspectives, as well as situational and time-related aspects associated with the concept (Rodgers & Knafl, 2000). Contextual features considered here are antecedents and consequences, with a commentary on the contexts, or practice settings, reflected in the selected literature. Antecedents are those elements or situations that come before an instance of self-management, whereas, consequences are the results or situations that follow an example of self-management (Rodgers & Knafl, 2000).

#### *Antecedents: client, care provider and system levels.*

A primary antecedent for self-management is the time frame, or moment, when clients and care providers recognize that a new health condition, or an existing health

issue, is not resolving (Clark et al., 2008; Koch, Jenkin & Kralik, 2004; McCabe, 2008; Norris & Olson, 2004; Yip et al., 2007). Costantini, et al. (2008) in an exploratory study examining the self-management experience for community dwelling clients diagnosed with kidney disease, developed a model to frame this process. Their model centralizes the role information has as the primary driver in an iterative process of discovery. The process of discovery includes renegotiation with life when a client realizes that kidney disease is forever. In addition, this process involves a search for evidence related to the diagnosis, learning to live with the illness, and self care (Costantini et al., 2008). The key feature in this model is that knowledge development on the part of the client is critical for self-management success. In another complementary example, Mancuso and Rincon (2006) discuss the impact that health literacy exerts upon asthma self-management within primary care practices. They determined that health literacy is a requirement for successful outcomes in self-management.

Self-efficacy is hypothesized to be influenced by previous experiences in health management, and is both an antecedent and a consequence of self-management (Lorig & Holman, 2003; Mancuso & Rincon, 2006). Self-efficacy refers to a client's degree of confidence in their ability to self-manage and is a foundational concept within Lorig's CDSM program (Lorig & Holman, 2003; Sturt, Whitlock, & Hearnshaw, 2006; Yip et al., 2007). Bandura (2005) explains the variability associated with self-efficacy amongst three groups of clients as follows: one group of clients has a high degree of self-efficacy (or confidence) and requires minimal support to reach their self-management goals; a second group of clients has self doubts about their abilities and requires more guidance and tailored support to reach their goals; the third group tends to feel hopeless in attaining

any self-management goals and develops confidence from accumulating progressive successes through structured programs. Farrell, Wicks, and Martin (2004) conducted a pilot study illustrating this relationship between support and self-efficacy in a rural population enrolled in a CDSM program. They examined the influence of a six-week program upon clients with varying degrees of confidence, measuring confidence when the program began (antecedent), and evaluated it once again when clients completed the program (consequence). The results showed an increase in confidence had occurred.

Other antecedents identified in the literature include the ability to collaborate and the influence professional perspective brings to bear upon self-management (Curtin, Sitter, Schatell & Chewning, 2004; Mancuso & Rincon, 2006; Nagelkerk et al., 2006; Rolita & Freedman, 2008). The need for nursing research on supportive strategies in self-management has been identified in the literature, examples of which include symptom management, reduction in complications, and support for mental health (McCabe, 2008). A meta-analysis from a physician's perspective concluded that beneficial fundamentals supporting outcomes in self-management programs have not been firmly established (Chodosh et al., 2005). In another example, it was concluded that the use of complementary and alternative treatments in the management of diabetes by community dwelling clients was hampered by conventional biomedical regimens (Schoenberg et al., 2004). These examples offer some insight into the influence that professional perspective exerts on how self-management is defined, what is considered relevant, and the value it provides for stakeholders.

System structures exert a preceding role upon self-management, including access to resources, availability of social networks, and support for cultural influences (Bond,

2006; Dansky et al., 2008; Hagedoorn et al., 2006; Jessup et al., 2006; Kripalani et al., 2006). Jessup et al. (2006) describe how a multidisciplinary collaborative study, which linked acute and community care programs, lead to improvements supportive of clients living with chronic obstructive pulmonary disease. Essentially, redesign of care delivery from a medical interventionist model to one where the client becomes a key stakeholder in “how” care delivery is provided enhanced client quality of life. Within this context, clients were supported by nurses through phone mentoring and symptom monitoring. In another example, DeCoster and George (2005) conducted a pilot study of a community based self-help group for people living with diabetes. Improvements in confidence, self-care, and health outcomes were findings from this study. And, focusing on the role social networks have in the self-management of health, Grey et al. (2006) developed a framework inclusive of family systems to guide research. System design prerequisites identified in the literature that support self-management include program support and availability, collaboration, and integration of purpose.

Antecedents, as outlined, can be understood within the client, professional, and system contexts. Client-related antecedents include recognition of a condition as long term, and the consequent seeking of knowledge, and the client’s level of health literacy. Professional antecedents include scope of practice, professional perspectives in the care and management of clients living with chronic conditions, and the availability of empirical evidence. System antecedents are complex and involve the availability of resources, networks, cultural influences, as well as integration across sectors such as acute and community care.

*Consequences: client, care providers and system levels.*

Client identified consequences included acceptance and adherence to treatment and lifestyle changes that resulted in improved quality of life (Apter et al., 2006; Baird & Sands, 2006; Davidson et al., 2005; DeCoster & George, 2005; Harvey & Silverman, 2007; Jessup et al., 2006; Nagelkerk et al., 2006; Steinke, 2005; Vég et al., 2006; Wilde & Garvin, 2007). Client-centered consequences in treatment and lifestyle consistently include various components associated with Lorig's self-management program such as improved confidence, skill mastery, and goal attainment (Alp et al., 2007; Clark et al., 2008; Costantini et al., 2008; Lorig et al., 2001; Wilson et al., 2005). For example, Nagelkerk et al. (2006) identified a number of effective strategies to address barriers in the management of diabetes in rural communities. These strategies include collaborative relationships, proactive learning, appropriate support, adequate resources, establishment of daily routines, and group support for informational and emotional concerns. DeCoster and George (2005) studied the effects of group support for clients living with diabetes in the community. The consequences included improved peer-to-peer support, problem solving skills, and overall wellness.

Care provider consequences included development of tools, programs, and evidence-informed practice. For example, Curtin, et al. (2004) conducted a cross sectional study measuring the knowledge of clients attending clinics for hemodialysis. An important finding from this study was the positive association between improved functioning and the use of a cooperative/participatory type of self-management, where the client and nurse shared responsibility. Further to this finding, it has also been determined that sharing of responsibility opens a space for clients to engage in aspects of

self-care they feel skilled in and to continue learning, thereby developing a greater level of competency in self-care (Nagelkerk et al., 2006). Schaffer and Yarandi (2007) provide another example of the consequences in tool development and evaluation. They created a questionnaire measuring asthma self-management knowledge in adults and concluded that such tools can effectively screen for clients needs within an emergency setting, support education, improve client outcomes, and resource utilization.

System level consequences of interest noted in the literature include improvements in population health, financial savings, and a decreased need for services such as emergency room visits (Bond, 2006; Brody, Roch-Levecq, Kaplan, Moutier & Brown, 2006; Koch et al., 2004; Kralik et al., 2004; McCabe, 2008; Schaffer & Yarandi, 2007; Wilde & Garvin, 2007). For example, Goudrea et al. (2008) describe how standardized educational material lead to increased client satisfaction, as well as economical benefits in an organization that provides a range of services including primary, acute, and home care. Another study concluded that when system design includes self-management support provided by a nurse specialist, improved health outcomes for clients living with heart failure in the community can be realized, in addition to decreased admissions to acute care and related services (Davidson et al., 2005).

Consequences considered within the client context include improvements in quality of life through education, peer support, action skill development, and lifestyle changes. Health professionals and system level consequences include development of tools and practice informed by research evidence, and effective management of finite

resources including improvements to system design that optimize nursing expertise, population health, and utilization of resources.

### *Contexts*

The practice areas and client settings where self-management occur include acute care, primary care, primary health care, various clinics encompassing support for general health concerns to specific disease processes, and community settings ranging from the urban, to rural, and spiritual. These contexts of practice described in the literature have been grouped, as illustrated in Table 1, by community, acute, and primary health care/primary care programs. Several articles were commentaries on theoretical modeling, literature reviews, and meta-analysis and constitute the remaining percent of the total articles reviewed. In total, 71% of the articles were research based. By groupings, within the nursing literature, 68% of all articles were research, and amongst the non-nursing literature, 78% of the articles were research based (see Table 1).

The results illustrate that self-management is concentrated within the community in services and programs located within primary health care and primary care. This distribution is representative of the original challenge Dr. Lorig began to address over twenty years ago, as she explored solutions to enhance quality of life for community-based clients living with arthritis. In addition the results show that the discipline of nursing, of which Dr. Lorig is a member, has directed more attention towards theory development and knowledge generation than the non-nursing group. This finding may be indicative of nursing's quest to further develop an evidence-based body of knowledge.

Table 1. Practice Areas and Client Settings in Literature Review

Articles (N = 56)	Community	Acute	Primary Health Care and Primary Care Programs	Theory / Literature reviews	Research Percentage of total Articles
Nursing	16% (9)	7% (4)	14% (8)	13% (7)	68% (19)
Non-nursing	20% (11)	5% (3)	21% (12)	4% (2)	78% (21)
Total	36% (20)	12% (7)	35% (20)	17% (9)	71% (40)

### *Surrogate and Related Terms*

Evident throughout the literature reviewed was the use of surrogate and related terms. I noted that self-care was used marginally more frequently in association with self-management, a use that also varied from one example to another (Nagelkerk et al., 2006; Wilde & Garvin, 2007). This finding, which may be influenced by the inclusion of research literature from other disciplines, differs from the concept analysis conducted by Wilde and Garvin (2007) where it was noted in analysis that self-monitoring was cited more frequently than self-care. A summary of the common terms used in both the nursing and non-nursing literature includes: self-care, self-monitoring, self-care-management, self-managers, patient directed monitoring, and self-regulation (Farrell, Wicks & Martin, 2004; Grouppe et al., 2005; Schoenberg et al., 2004; Sisk et al., 2006). Indeed, relative to the non-nursing literature, the nursing literature presented the terms self-care, self-care-management, and self-manager more frequently and within contexts that suggested these terms were being used in place of self-management (Curtin et al., 2004; Davidson et al., 2005; Farrell et al., 2004).

*Exemplar(s)*

Exemplars provide practical and naturally occurring illustrations of a concept in action (Rodgers & Knafl, 2000). During the selected literature review, and in a follow-up review of the classical material, a complete universal example of an exemplar could not be located. As noted by Rodgers and Knafl (2000) when an ideal exemplar is not available, the provision of several exemplars is an appropriate strategy towards clarification. Several illustrative quotes and observations located within the professional literature provided insight from the client perspective (Constantini et al., 2008; Nagelkerk et al., 2006; Polzer & Miles, 2007; Washburn et al., 2005; Wilson, Kendall, & Brooks, 2005). Outlined in Table 2 is a selection of exemplars from the nursing and non-nursing literature, including several examples from the client’s perspective.

Table 2. Examples of exemplars from the literature of nurses and non-nursing disciplines

Nursing Exemplars	
□	“... [Client] perception of symptoms, i.e. awareness, is a key to self-monitoring and self-management...” (Wilde and Garvin, 2007, p.345).
□	Activities include “...control of symptoms, [reduction in] complications, maintain psychological well-being, promote health...”, and that this includes “...taking medication, monitoring for signs and symptoms...and adverse responses to treatment...” (McCabe, 2008, p.37-39).
□	“... [clients arrange] their days around appointments and prescription medications...” where for others “...self-management involved being actively engaged in treatment related decisions...” and even “...wanting to be ‘the leader’ or ‘the driver’ in their illness...” (Costantini et al., 2008, p.151).
□	“...having...encouragement and assistance was instrumental...social support, and specifically spousal support, was important...a supportive team – healthcare providers, family and friends....and...secured resources necessary for self-management...(Nagelkerk et al., 2006, p. 155).
□	“...individualized care plans developed with their provider...” (Goudreau

et al., 2008, p.116).
<input type="checkbox"/> "...the client can become... an active contributor ... a key stakeholder in [care] delivery..." (Jessup et al., 2006, p.233).
<input type="checkbox"/> "...an opportune time to discuss changes in vital signs...reporting of unusual symptoms...specific suggestions for teaching and self-management..." including, activity guidelines, environmental issues, medication effects and plans (Steinke, 2005, p.43).
<input type="checkbox"/> "...a medical prescriptive approach to self-management is widespread, emphasizing adherence to directions given by health care professions. The 'self in self-management has been ignored, and the person has been objectified as the 'patient'..." (Koch, Jenkin, & Kralik, 2004).
<input type="checkbox"/> "...Lorig and colleagues developed a model..." these steps include, "...goal setting...alternative methods for reaching a goal...short term planning...implementation...evaluation and revision..." (Tanner, 2004, p.314).
Non-nursing Exemplars
<input type="checkbox"/> In diabetes care, "...checking blood sugar, exercising on a regular basis, making healthy food choices...self-efficacy..." (George, 2009, p.707).
<input type="checkbox"/> "...interventions included assessment, problem identification and goal setting...behavioural feedback methods...discussion of problem-solving strategies...adherence to lifestyle changes may be improved by nurse-led strategies to aid self-management and by appropriately delivered education..." (Beswick et al., 2005, p.546).
<input type="checkbox"/> "...interventions using tailored education can successfully overcome barriers related to inadequate health literacy and improve...skills..." (Paashe-Orlow et al., 2004, p.984).
<input type="checkbox"/> "...broad approaches... as developed by Lorig...focus on managing the disease...maintaining meaningful roles...coping with the emotional consequences of illness...using individual action planning to meet personal needs...programmes...suited to supporting the different ways to restore autonomy..." (Mars, Proot, Janssen, Van Eijk, & Kempen, 2007, p.492).
Client Exemplars
<input type="checkbox"/> "...I have to consider everything that I do...if there is an alternative way of doing things then I find it...Don't give up, but be prepared to change your lifestyle... don't rely on other people...take action in your own life...self management is about finding a system that works...I am always adapting, planning and prioritizing...thinking about ways to change my usual habits. I manage myself. You have got to have that control or you can sit down and let the world go by..." (Kralik et al., 2004, p.).
<input type="checkbox"/> "...I do think that you have to stay active. If you don't have physical activity and mental activity, you're going down hill and quickly..." (Clark et al., 2008, p.S315).

<p>□ "...Because you can get all out of shape and that's something good about the tests. When you see those numbers go up, you say "What am I doing"" We really have to be disciplined in ourselves... So when they bring it to your attention... You start thinking about it..." (Polzer, 2007, p.171).</p>
<p>□ "...I take care of myself...I have been active in trying to obtain knowledge in different ways...I believe that I myself and my behaviour play a major role...my role is to follow the doctor's and diabetes nurse's 'orders'...to try to eat and exercise as one should..." (Vég et al., 2006, p.48).</p>
<p>□ "...I think the biggest help for me has been my (practitioner)...in helping me figure out when I should test my blood and how often...things I should stay away from, things that I could eat and that has been a big help..." and "...They explained a lot of emotions in your life...and how it can cause your sugar to go up because you're upset...those things (explanations) I think are quiet beneficial..." (Nagelkerk et al., 2006, p.155).</p>
<p>□ "...I've never taken anything other than what the doctors here have given me. I'll take that back. I have tried a couple of vitamins, seems like somebody told me to take some potassium one time and some other kind of vitamin, some kind of acid...but it didn't seem to make any difference..." (Schoenberg et al., 2004, p. 1064).</p>
<p>□ "...If you accept the fact that you are important enough to bear the image of God and have the breath of God within you, that you have been given life as a gift from God, then it is your responsibility to do as much as you can to honor that gift and therefore take care of yourself..." (Polzer &amp; Miles, 2007, p. 181).</p>
<p>□ "...I pray a whole lot. I can walk the street and pray. And I ask for God's help...it has helped me spiritually to cope with my condition by not having to think about it often. I place everything in faith...I believe you need both God and medicine... (Harvey &amp; Silverman, 2007, pp. 214 -216).</p>

Collectively, these partial exemplars highlight the interactive relationship between client and nurse, where in certain instances a collaborative partnership exists, in other instances the client will defer to nursing expertise, and in some situations assume the lead role in care design and delivery. The influence of disciplinary perspective is illustrated in the critique of the medicalization of care and client objectification. Appropriate and timely supports are noted, which includes client specific care planning, education, and

development of self-monitoring and functional skills. Finally, the steps in Lorig's chronic disease self-management model are evident in the examples.

This brief sampling of exemplars indicates that a systematic approach is involved in client self-management. The value of education and support by nurses is included, which includes life style practices such as technical skill development, monitoring, assessment, education, and problem solving. Lorig's chronic disease self-management model is also noted in this sample and includes support for emotional, role, and self efficacy needs. These exemplars provide directed and specific examples of action skills, as well as reference to client specific attributes such as literacy and self efficacy.

The exemplars from a client's perspective vary from a position of affirmation in ability to manage health, to that of deference of responsibility and direction in care to health practitioners and God. All the examples suggest client's make their own decisions regarding self-management and are self-managing in all situations. Of interest is how many of the perspectives, behavioural skills, and strategies illustrated reflect Lorig's CDSM model, including the examples of deference for those clients' submitting to God's direction.

In summary, identified attributes of self-management in mid-life and older adults includes knowledge/education, relationship/partnership, self-monitoring/self-care, and action skills. Findings from examples within the nursing and non-nursing literature have identified nurses as experts in the provision of client knowledge/education through group and individual approaches. Relationship/partnership is foundational to self-management, and within the nursing literature this attribute is inclusive of clients and families as partners in care planning, whereas, the emphasis within the interdisciplinary literature is

directed to the individual, and occasionally a spouse, with an emphasis on adherence to guidelines. Self-monitoring and self-care are reciprocal concepts and although variability exists in terms of the understanding and application between these two concepts, the literature supports self-monitoring as a self-care approach. Action skills include problem solving, decision making, goal setting, communication, relationship management, and resource utilization, examples of which include mutually defined exercise plans, monitoring of goals, and the management of pain. Contextual influences occur at the client, care provider and system levels, and include antecedents, which are influences that come before, and consequences, which are situations that follow, an example of self-management. Self-management occurs in various settings and contexts including acute, primary, primary health, clinics, community, urban, rural, and spiritual. Surrogate terms for self-management include: self-care, self-monitoring, self-care-management, self-managers, patient directed monitoring, and self-regulation. Finally, the influence of disciplinary perspective is illustrated by a selection of exemplars present in the literature.

## **Chapter 4**

### *Discussion*

In this analysis the influence of time and context upon self-management was noted by the progressive significance given to chronic disease self-management by nursing, non-nursing, and government bodies over the last twenty years (British Columbia, 2007; Farrell et al., 2004; Grey et al., 2008; Kralik et al., 2004; Rodgers & Knafel, 2000). This effect is illustrated by the volume of literature published in the last

five years, a selection of which supported this comparative analysis, and resulted in the identification of three paired attributes groups, knowledge/education, relationship/partnership, self-monitoring/self-care, and the umbrella attribute of Action Skills.

In respect to these attributes, similarities within the literature tended to reflect the components associated with the umbrella attribute of Action Skills. The umbrella attributes contained under Action Skills represent foundational components within self-management, and are associated with the processes and skills within Lorig's CDSM program, such as problem solving, goal setting, and evaluation (Lorig & Holman, 2003). Although frequent and diffuse references to Action Skills are evident throughout the literature, the need for on-going research and evaluation in various contexts, populations and amongst health disciplines was consistently emphasized by various authors (Jessup et al., 2006; Koch et al., 2004; Nagelkerk, 2005). Indeed, nursing expertise is recognized in the support of self-management Action Skills within a broader CDSM program, in partnership with clients and the interdisciplinary team (Goudreau et al., 2008; Farrell et al., 2004; Jessup et al., 2006; Rolita & Freedman, 2008; Sisk et al., 2006).

Differences were also noted within the literature and these were influenced by variables such as conditions of practice, educational experience, and the role, scope and function of each discipline (Chodosh et al., 2005; Hartrick Doane & Varcoe, 2007; Health Professions Act, 2009; Koch et al., 2004; Rolita & Freedman, 2008). For example, under the attribute of knowledge/education, health literacy is mentioned as a foundational client-based ability that supports self-management (Apter et al., 2006; Billek-Sawhney & Reicherter, 2005; Kripalani et al., 2006; Mancuso & Rincon, 2006; Paasche-Orlow et al.,

2005). Health literacy is also acknowledged to be an indicator of broader system level influences that impact a client's ability for self-management, examples of which include poverty, disability, and marginalization (Anarella et al., 2004; Kripalani et al., 2006). In respect to these points, the concern of health literacy within the literature of other disciplines tended to be focused towards educational strategies independent of other health determinates such as age and socioeconomic status (Paasche-Orlow et al., 2005). Whereas, within the nursing literature, attention was inclusive of both individual and group communications, and variables such as social, cultural and contextual influences that involved assessment, teaching, and evaluation with clients and families (Baird & Sands, 2006; Davidson et al., 2005; Nagelkerk et al., 2006). Additionally, the term health literacy was identified more frequently within the non-nursing literature, particularly within the medical literature than it was within nursing sources (Apter et al., 2006; Billek-Sawhney & Reicherter, 2005; Clark et al., 2008).

Another variation I noted between the nursing and non-nursing literature was in relation to the attributes of relationship/partnership. For example, nursing addresses health issues with clients and families holistically throughout the chronic health experience, a journey where interactions consistently include family and social relationships (Farrell et al., 2004; Jessup et al., 2006). These relationships are considered essential to planning and care delivery within the nursing literature, and are often viewed as partnerships (Davidson et al., 2005; Grey et al., 2006). Physicians and other non-nursing care providers also identified the client relationship as important, a focus which in some instances included a spouse as part of the care plan. However, within the non-nursing literature the tendency was on 'relationship' rather than partnership; care was

directed towards a more defined concern such as adherence to a prescribed guideline, and processes and outcomes tended to be directed towards a single health issue in relation to client self-management (Billek-Sawhney & Richerter, 2005; Clark et al., 2008; Paasche-Orlow et al., 2005; Reid, Papaleontiou, Ong, Breckman, Wethington, & Pillemer, 2008).

The paired attribute, self-monitoring/self-care, was fairly neutral and consistently referenced throughout the literature of nurses and other disciplines. However, the application of these words in relation to self-management is fuzzy, and therefore a need exists to further develop these components through descriptive, interventional, and qualitative research (Wilde & Garvin, 2007). As mentioned previously, I noted that self-care was used more frequently in this analysis, whereas in Wilde and Garvin's (2007) evolutionary analysis, self-monitoring was used more frequently. On reflection, I wonder if this slight variation may be due to the broader inclusion of non-nursing sources of data for Wilde and Garvin's analysis. An evolutionary concept analysis of self-care may provide additional insight into this close association of terms.

In respect to context, this analysis highlighted how the community and primary care settings have remained central areas in the application of self-management, although emerging contexts are appearing such as acute care and renal dialysis. And, the eclectic sample of exemplars located in the literature collectively describe from the perspectives of nurses, other disciplines, and clients that self-management is impacted by system wide influences. These findings are interesting in view of how health care has been evolving over the last twenty years, where contextual design has been increasingly moving towards integration, that is, design is moving towards following clients through the system rather than on silos of care. This change is evident in the rise of frameworks

aligning multiple contexts that include self-management as a component of care delivery, of which the ECCM is an example (British Columbian, 2006; British Columbia, 2007; British Columbia, 2009). Design is also featured in legislated changes impacting the role, scope and function of health care providers (Health Professions Act, 2009). Indeed, within the literature examined in this analysis, nursing has been leading the way in the development of theoretical frameworks that could support system level knowledge development. Two notable examples of this include Grey, Knafl, and McCorkle's (2006) system level framework in self and family management, and Koch, Jenkin, and Kralik's (2004) three self-management models under which the application of action skills can be examined.

The results identified here suggest a number of areas for further consideration, exploration, and development (Rodgers & Knafl, 2000). One area for exploration, based upon volume of available data, was the gap created by the need to narrow the search to professional literature. A result of this approach to data selection was the omission of insight into self-management from other sources, such as grey literature and consumer literature. Another area for consideration is in regard to the attribute pairings, and how these relate to nursing's scope of practice, interdisciplinary practice and client centered care, and to the wider health care context. For example, evidence within the literature indicated how improvements in care process and client outcomes might be influenced through standardization (Billek-Sawhney & Reicherter, 2005; Goudreau et al., 2008; Paasche-Orlow et al., 2005). Standardization is an important consideration and carries implications associated for research and evaluation in the present context, for a concept that is yet to be clearly defined (McGowan, 2005).

### *Nursing Implications*

The diffusion of Lorig's CDSM is evident throughout the Western world, and is represented in British Columbia's adoption of the ECCM, a framework that is trying to address the complexity of care inherent within the current environment (Barr et al., 2003; British Columbia, 2006; British Columbia, 2007; Jessup et al., 2006; Lorig, Sobel, Stewart, Brown, Bandura, & Ritter, 1999). Solutions to complex health issues previously not amendable by medicine alone have been realized using the CDSM framework in applied research (Davidson et al., 2005; Lorig et al., 1999; Lorig & Holman, 2003; McGowan, 2005). And, occurring in this broader context are social influences requiring interdisciplinary team collaboration<sup>2</sup>, standardization of health care services, expectations of evidence based care, legislative changes impacting the scopes of practice for nurses and other care providers, and growing expectations from clients and families to participate as equal members of the health care team (Alliance for Self-Care Research, 2009; Alp et al., 2007; Beswick et al., 2005; British Columbia, 2009; DeCoster & George, 2005; Health Professions Act, 2009).

As noted, within this changing context, health care providers such as physicians have acknowledged the clear leadership and expertise nurses bring in support of self-management with clients (Beswick et al., 2005; Jessup et al., 2006; Wilde & Garvin, 2007). However, as the health care system evolves to support an aging population, and as the health care team becomes more integrated, I suggest that for nurses to remain as expert leaders in client self-management, generation of new knowledge will be necessary. Indeed, self-management is central to the current changes in progress, and advancing

---

<sup>2</sup> Interdisciplinary team collaboration includes nurses and other non-nursing care providers.

nursing knowledge of aging adults living with chronic conditions will require a greater depth of knowledge than currently exists (Grey et al., 2006; Kralik et al., 2004; Koch et al., 2004; McCabe, 2008; Northrup, 2002; Redman, 2007; Tanner, 2004). However, the literature also demonstrates that a clear definition for self-management does not exist and this lack of conceptual clarity confounds a collective understanding necessary to support clinical practice (McGowan, 2005). Lack of clarity inherently influences the spectrum of options available as to 'how' self-management is interpreted and applied in practice (Chodosh et al., 2005; Jack et al., 2004; Koch et al., 2004; McGowan, 2005; Norris & Olson, 2004; Rogers, 2003).

In consideration of these issues, the paired attributes identified here provide direction for future conceptual analysis of self-management (Rodgers & Knafel, 2000). Key areas in need of clarification include the variable use of surrogate and related terms aligned with self-management and the knowledge gaps that exist in the nursing literature directed to self-management at the system level (Grey et al., 2006; Jessup et al., 2006; Wilde & Garvin, 2007). As mentioned in the review of the nursing literature on self-management at the system level, only three articles were identified, and these articles focused on children, public health, and career ladders. These findings highlight gaps in knowledge within an increasingly complex health care system where attention is being directed to system wide integration, technology, legislation and other changes. Indeed, these results highlight a need for future inquiry related to self-management in aging adult populations.

Consideration of broader cultural and social influences that impact a client's ability to participate within a practice environment that utilizes this type of knowledge is

also important (Barr et al., 2003; Bond, 2006; Dansky et al., 2008; Glasgow et al., 2001; Impact BC, 2009). At a general level, there is a need to learn more about self-management, as it is currently being approached, from the perspectives of clients, families and communities (Koch et al., 2004). And, more specifically, it may be the case that self-management has a better ‘fit’ from the perspective of some clients than from the perspective of others (Kralik et al., 2004; Nagelkerk et al., 2006). Existing knowledge supports self-management as a component of care for individuals living with chronic conditions such as arthritis or diabetes (Polzer, 2007; Yip et al., 2007). However, in other instances chronic disease management, as framed by the CDSM, may be eclipsed by the impact of influences such as supports within extended families, communities, and cultures, as well as the marginalizing effects from poverty, mental health conditions, addictions, and constrained health resources (Clark et al., 2008; Nagelkerk et al., 2006; Polzer, 2007; Sisk et al., 2006).

In general, my understanding is that self-management is not well understood for clients transitioning in the decades from mid-life to old age, and that the impact of cultural influences and generational experiences upon care needs and outcomes is scant in the published literature. For example, although it is noted that health care needs increase with age, this knowledge of utilization patterns amongst the present and previous generations of aged adults is currently being used as a template to project the future needs of the Boomer generation (Crowley, 2005). People’s values, circumstances and abilities also vary in our diverse society, and it can be assumed that the existence of diversity is true both within and across generations. These gaps in knowledge are multifaceted, and

are open for further examination in terms of self-management as a component of care delivery.

Opportunities for knowledge development have been identified at the system level in this analysis. These opportunities include a need to learn more about the impact nurses have, upon client self-management, as members of interdisciplinary care teams across various sectors, as leaders influencing the health of populations, and as innovators in the establishment and conversion of meaningful data to inform policy decisions (British Columbia, 2006; Broemeling et al., 2005; Gallagher & Rowell, 2003; Grey et al., 2006; Koch et al., 2004; Lorig et al., 2005; McCabe, 2008; Nagelkerk et al., 2006; Sisk et al., 2006; Wilson et al., 2005; Yip et al., 2007). Knowledge development in-keeping with current views, may be pursued through system level concept analysis and research within frameworks such as BC's Expanded Care Model (see Appendix A). As presented in this analysis, knowledge has been generated through research and the clinical application of evidence informed knowledge within the Action Skills attribute located at the point-of-care between client and care provider (Costantini et al., 2008; Curtin et al., 2004; Farrell et al., 2004; Finfgeld-Connett, 2005; Lorig et al., 2005; Sisk et al., 2006). Furthermore, the two nursing frameworks identified in the literature are opportunities for research of the paired attributes. These frameworks include Grey, Knafl, and McCorkle's (2006) framework on family and environment, and Koch, Jenkin, and Kralik's (2004) three models under which action skills can be organized. Testing of these frameworks and models within the role and scope of nursing, as well as inclusion of the influences from other disciplines, could support clinical practice within the current evolving context of practice.

Nursing researchers have published clinical findings in support of self-management strategies that could be expanded upon through further analysis of the attributes; examples include the impact structured (and resourced) programs can exert upon outcomes, the need to link care and services across the wider health system, and the strength of collaborative relationships (Jessup et al., 2006; Costantini et al., 2008; Goudreau et al., 2008; Yip et al., 2007). These examples from the levels of theory (pre-research) to clinical application indicate the professional interest, foundational role, and consistent involvement that nursing has expressed towards development of evidence-based knowledge in client self-management. Such knowledge is useful in understanding and further developing the concept of self-management and its associated components, especially in view of the expanded roles and other changes that are now in place through legislation (Health Professions Act, 2009). Indeed, Leeman, Jackson and Sandelowski (2006) make the point that authors of research can support translation of findings by offering suggestions on implementation. This suggestion is an important consideration when exploring potential areas of inquiry and knowledge development, and the spread of evidence across multiple contexts that focus on the aging adult population as partners in care planning.

In summary, analysis suggests that nursing is regarded as a leader in client self-management. Changes in health care are presenting opportunities for expanded knowledge development of self-management in aging adults. Nursing has developed a solid foundation of theory that is ideally placed to explore self-management from a system level to specific sub-populations of adults living with chronic illness. The attributes identified in this paper offer direction for on-going concept development.

### *Conclusions*

In this analysis, through the use of the evolutionary approach, I explored self-management from a systems perspective. Approached through examination of literature from nursing and other disciplines, paired attributes reflecting the internal and external characteristics of self-management were identified, and these include knowledge/education, relationship/partnership, self-monitoring/self-care, and the umbrella attribute of Action Skills. It was evident that self-management has been evolving over the last twenty years, building upon a foundation established by Lorig and her colleagues. This knowledge has now diffused to the system level and is noted by adoption of frameworks for service delivery, such as the ECCM in BC. Furthermore, over this time, nurses have progressively refined a body of knowledge in client self-management that is supportive of interdisciplinary team work. Indeed, nurses are recognized as leaders in client self-management within the interdisciplinary team. This leadership is recognized by the contributions nurses have brought to light in theoretical and practical frameworks, through the development and support of clinical programs, and by the application of evidence informed knowledge that supports self-management care for populations living with chronic conditions.

## References

- Alliance for Self-Care Research (2009). Enhancing self-care. Retrieved August 3, 2009 from <http://www.ascr.ac.uk>
- Alp, A., Kanat, E., & Yurtkuran, M. (2007). Efficacy of a self-management program for osteoporotic subjects. *American Journal of Physical Medicine & Rehabilitation*, 86(8), 633-640. Retrieved December 16, 2008, from EBSCOhost database.
- Anarella, J., Roohan, P., Balistreri, E., & Gesten F. (2004). A survey of Medicaid recipients with asthma. *Chest*, 125(4), 1359-1367.
- Apter, A., Cheng, J., Small, D., Bennett, I., Albert, C., Fein, D., et al. (2006). Asthma numeracy skill and health literacy. *The Journal Of Asthma: Official Journal Of The Association For The Care Of Asthma*, 43(9), 705-710. Retrieved November 29, 2008, from MEDLINE database.
- Austrian, J., Kerns, R., & Reid, M. (2005). Perceived barriers to trying self-management approaches for chronic pain in older persons. *Journal of the American Geriatrics Society*, 53(5), 856-861. Retrieved November 30, 2008, from AgeLine database.
- Baird, C. L., & Sands, L. P. (2006). Effect of guided imagery with relaxation on health-related quality of life in older women with osteoarthritis. *Research in Nursing & Health*, 29(5), 442-451.
- Bandura, A. (2005). The primacy of self-regulation in health promotion. *Applied Psychology: An International Review*, 54(2), 245-254.
- Barr, V.J., Dotts, A., Marin-Link, B., Ravensdale, D., Robinson, S., & Undershill, L., (2003). The expanded chronic care model: An integration of concepts and strategies for population health promotion and the chronic care model. *Hospital Quarterly*, 7(1), 73-82.
- BCNAR (2009). British Columbia network for aging research. About us. Retrieved March 1, 2009 from <http://www.aginghealthresearch.ca/about.html>
- Berlowitz, D.R., Young, G.J., Brandeis, G.H., Kader, B., & Anderson, J.J. (2009) Health care reorganization and quality of care: Unintended effects on pressure ulcer prevention. *Medical Care*, 39(2), 138-146.
- Beswick, A.D., Rees, K., West, R.R., Taylor, F.C., Burke, M., Griebisch, I., et al., (2005). Improving uptake and adherence in cardiac rehabilitation: Literature review. *Journal of Advanced Nursing*, 49(5), 538-555.

- Billek-Sawhney, B., & Reicherter, E.A. (2005). Literacy and the older adult: Educational considerations for health professionals. *Topics in Geriatric Rehabilitation*, 21(4), 275-281.
- Bond, G.E. (2006). Lessons learned from the implementation of a web-based nursing intervention. *Computers, Informatics, Nursing* 24(2), 66-74.
- British Columbia, (2006). Aging well in British Columbia: Premiere's Council on Aging and Senior's Issues. November 2006. Retrieved February 2, 2007 from <http://www.hls.gov.bc.ca/seniors/>
- British Columbia (2007). The expanded chronic care model. Retrieved January 31, 2007 from [http://www.healthservices.gov.bc.ca/cdm/cdminbc/chronic\\_care\\_model.html](http://www.healthservices.gov.bc.ca/cdm/cdminbc/chronic_care_model.html)
- British Columbia (2009). Ministry of Health Services. British Columbia health authorities. Retrieved April 19, 2009 from <http://www.health.gov.bc.ca/socsec/>
- Brody, B., Roch-Levecq, A., Kaplan, R., Moutier, C., & Brown, S. (2006). Age-related macular degeneration: self-management and reduction of depressive symptoms in a randomized controlled study. *Journal of the American Geriatrics Society*, 54(10), 1557-1562. Retrieved November 30, 2008, from AgeLine database.
- Broemeling, A.M., Watson, D., & Black, C. (2005). *Chronic conditions and co-morbidity among residents of British Columbia*. The University of British Columbia: Centre for Health Services and Policy Research
- Canadian Medical Association (2007). Projections of physician supply in Canada. Retrieved March 1, 2009 from [http://www.cma.ca/multimedia/CMA/Content/Images/Policy\\_Advocacy/Policy\\_Research/Projections\\_paper.pdf](http://www.cma.ca/multimedia/CMA/Content/Images/Policy_Advocacy/Policy_Research/Projections_paper.pdf)
- Canadian Nurses Association (2002). Planning for the future: Nursing human resource projections. Retrieved March 1, 2009 from [http://www.cna-aiic.ca/CNA/documents/pdf/publications/Planning\\_for\\_the\\_future\\_June\\_2002\\_e.pdf](http://www.cna-aiic.ca/CNA/documents/pdf/publications/Planning_for_the_future_June_2002_e.pdf)
- Canadian Patient Safety Institute (2009). Strategic plan. Retrieved October 31, 2009 from <http://www.patientsafetyinstitute.ca/English/About/corporateDocuments/Documents/2008%20-%202013%20Strategic%20Plan.pdf>
- Case Western Reserve University (2009). Center for excellence for self-management

- advancement through research and translation. Retrieved August 3, 2009 from <http://fpb.case.edu/SMARTCenter>
- Centre on Aging. (2008). University of Victoria Centre on Aging: Chronic disease self-management program in British Columbia. Retrieved March 6, 2009 from <http://www.coag.uvic.ca/index.htm>
- Charlton, B.G., Andras, P. (2005). Modernizing UK health services: 'short-sharp-shock' reform, the NHS subsistence economy, and the spectre of health care famine. *Journal of Evaluation in Clinical Practice*, 11(2), 111-119.
- Chodosh, L., Morton, S.C., Mojica, W., Maglione, M., Suttorp, M.J., Hilton, L., et al. (2005). Meta-analysis: Chronic disease self-management programs for older adults. *Annals of Internal Medicine*, 143(6), 427-438.
- Clark, D. O., Frankel, R. M., Morgan, D. L., Ricketts, G., Bair, M. J., Nyland, K. A., et al. (2008). The meaning and significance of self-management among socioeconomically vulnerable older adults. *Journal of Gerontology*, 63B(5), S312-S319.
- CNA, 2009. Canadian Nurses Association. Practice environments and patient safety: Patient safety resource guide. Retrieved October 11, 2009 from [http://www.cna-nurses.ca/cna/practice/environment/safety/guide/default\\_e.aspx](http://www.cna-nurses.ca/cna/practice/environment/safety/guide/default_e.aspx)
- Costantini, L., Beanlands, H., McCay, E., Cattran, D., Hlandunewich, M., & Francis, D. (2008). The self-management experience of people with mild to moderate chronic kidney disease. *Nephrology Nursing Journal*, 35(2), 147-156.
- Crowley, B.L. (2005). We can't go on like this: What an ageing population, the consumer revolution and accelerating globalization mean for the future of health care. Atlantic Institute for Market Studies, 2005. Retrieved February 14, 2006 from <http://www.aims.ca>
- Curtin, R. B., Sitter, D., Schatell, D., & Chewning, B. A. (2004). Self-management, knowledge, and functioning and well-being of patients on hemodialysis. *Nephrology Nursing Journal*, 31(4), 378.
- Dansky, K., Vasey, J., & Bowles, K. (2008). Use of telehealth by older adults to manage heart failure. *Research in Gerontological Nursing*, 1(1), 25-32. Retrieved November 30, 2008, from AgeLine database.
- Davidson, P., Paull, G., Rees, D., Daly, J., & Cockburn, J. (2005). Activities of home-based heart failure nurse specialists: A modified narrative analysis. *American Journal of Critical Care*, 14(5), 426-433.
- Deakin, T., Cade, J., Williams, R., & Greenwood, D. (2006). Structured

- patient education: the diabetes X-PERT Programme makes a difference. *Diabetic Medicine: A Journal Of The British Diabetic Association*, 23(9), 944-954. Retrieved November 29, 2008, from MEDLINE database.
- DeCoster, V., & George, L. (2005). Empowerment approach for elders living with diabetes: a pilot study of a community-based self-help group – the Diabetes Club. *Educational Gerontology*, 31(), 699-713. Retrieved November 30, 2008, from AgeLine database.
- Farrell, K., Wicks, M.N., & Martin, J.C. (2004). Chronic disease self-management improved with enhanced self-efficacy. *Clinical Nursing Research*, 13(4), 289-308.
- Finfgeld-Connett, D. (2005). Self-management of alcohol problems among aging adults. *Journal of Gerontological Nursing*, 31(5), 51-58. Retrieved November 30, 2008, from AgeLine database.
- Funnell, M.M., Brown, T.L., Childs, B.P., Haas, L.B., Hosey, G.M., Jensen, B., et al. (2008). National standards for diabetes self-management education. *Diabetes Care*, 31(S1), S97-S104.
- Gallagher, R., & Rowell, P. (2003). Claiming the future of nursing through nursing-sensitive quality indicators. *Nursing Administration Quarterly*, 27(4), 273-284. <http://search.ebscohost.com.ezproxy.library.uvic.ca>
- Glasgow, R.E., Orleans, C.T., & Wagner, E. H. (2001). Does the chronic care model serve also as a template for improving prevention? *The Milbank Quarterly*, 79(4), 579- 612.
- Goudreau, K. A., Gieselman, J., Sutterer, W., Tarvin, L., Toothaker, A. W., Stell, S. R., et al. (2008). The economics of standardized patient education materials with veteran patients. *Nursing Economic\$,* 26(2), 111.
- Grey, M., Knafl, K., & McCorkle, R. (2006). A framework for the study of self and family management of chronic condition. *Nursing Outlook*, 54(5), 278-286.
- Group, E., Haas, M., Fairweather, A., Ganger, B., & Attwood, M. (2005). Recruiting seniors with chronic low back pain for a randomized controlled trial of a self-management program. *Journal of Manipulative and Physiological Therapeutics*, 28(2), 97-102.
- Hagedoorn, M., Keers, J., Links, T., Bouma, J., Ter Maaten, J., & Sanderman, R. (2006). Improving self-management in insulin-treated adults participating in diabetes education. The role of overprotection by the partner. *Diabetic Medicine: A Journal Of The British Diabetic Association*, 23(3), 271-277. Retrieved November 29, 2008, from MEDLINE database.

- Hartrick Doane, G., & Varcoe, C. (2005). *Family Nursing as Relational Inquiry. Developing Health-Promoting Practice* (pp. 214-258). Philadelphia: Lippincott Williams & Wilkins.
- Hartrick Doane, G., & Varcoe, C. (2007). Relational practice and nursing obligations. *Advances in Nursing Science*, 30(3), 192-205.
- Harvey, I., & Silverman, M. (2007). Role of spirituality in the self-management of chronic illness among older African and whites. *Journal of Cross-Cultural Gerontology*, 22(2), 205-220. Retrieved November 30, 2008, from AgeLine database.
- Health Professions Act (2009). Government of British Columbia. Retrieved April 19, 2009 from [http://www.bclaws.ca/Recon/document/freeside/--%20H%20--/Health%20Professions%20Act%20%20RSBC%201996%20%20c.%20183/00\\_96183\\_01.xml](http://www.bclaws.ca/Recon/document/freeside/--%20H%20--/Health%20Professions%20Act%20%20RSBC%201996%20%20c.%20183/00_96183_01.xml)
- Hebert, R. (2002). Research on aging: Proving evidence for rescuing the Canadian health care system. *Commission on the Future of Health Care in Canada*. Retrieved February 2, 2007 from <http://www.cihr-irsc.gc.ca>
- iCare (2009). Care Teams Improve Patients' Hospital Experience. Retrieved October 17, 2009 from [http://www2.news.gov.bc.ca/news\\_releases\\_2005-2009/2009HSERV0020-000267.pdf](http://www2.news.gov.bc.ca/news_releases_2005-2009/2009HSERV0020-000267.pdf)
- Iedema, R., Sorensen, R., Manias, E., Tuckett, A., Piper, D., Piper, D., et al. (2008). Patients and family members experiences of open disclosure following adverse events. *International Journal for Quality in Health Care*, 30(6), 421-432.
- in-BC (2009). Interprofessional Network of BC. Retrieved October 17, 2009 from <http://www.in-bc.ca/>
- Impact BC (2009). Patients as Partners. Retrieved October 17, 2009 from <http://www.impactbc.ca/PatientsasPartners/resourcesforregionalteams>
- Ingersoll, G., McIntosh, E., & Williams, M. (2000). Nurse-sensitive outcomes of advanced practice. *Journal of Advanced Nursing*, 32(5), 1272-1281. <http://search.ebscohost.com.ezproxy.library.uvic.ca>
- Jack, L., Airhihenbuwa, C., Namageyo-Funa, A., Owens, M., & Vinicor, F. (2004). Psychosocial aspects of diabetes care: using collaborative care to manage older adults with diabetes. *Geriatrics*, 59(5), 26-32. Retrieved November 30, 2008, from AgeLine database.

- Jessup, M., Courtney-Pratt, H., Robinson, A., Cameron-Tucker, H., Walters, H., Wood-Baker, R., et al. (2006). Cementing pathways home: enhancing quality of life for people with chronic obstructive pulmonary disease. *Ageing International*, 31(3), 232-240. Retrieved November 30, 2008, from AgeLine database.
- Johansson, U.B., Adamson, U., Lins, P.E., & Wredling, R. (2005). Patient management of long-term continuous subcutaneous insulin infusion. *Journal of Advanced Nursing* 51(2), 112-1118.
- Kizer, K.W. (1999). The "New VA": A national laboratory for health care quality management. *American Journal of Medicine*, 14(1). 3-20.
- Koch, T., Jenkin, P., & Kralik, D. (2004). Chronic illness self-management: Locating the 'self'. *Journal of Advanced Nursing*, 48(5), 484-492.
- Kralik, D., Koch, T., Price, K., & Howard, N. (2004). Chronic illness self-management: Taking action to create order. *Journal of Clinical Nursing*, 13, 259-267.
- Kripalani, S., Henderson, L., Chiu, E., Robertson, R., Kolm, P., & Jacobson, T. (2006). Predictors of medication self-management skill in low population. *Journal Of General Internal Medicine: Official Of The Society For Research And Education In Primary Care Internal Medicine*, 21(8), 852-856. Retrieved November 29, 2008, from MEDLINE database.
- Leeman, J.L., Jackson, B., & Sandelowski (2006). An evaluation of how well research reports facilitate the use of findings in practice. *Journal of Nursing Scholarship*, 38(2), 171-177.
- Lorig, K.R., Sobel, D.S., Stewart, A.L., Brown, B.W., Bandura, A., Ritter, P., et al. (1999). Evidence suggesting that a chronic disease self-management program can improve health status while reducing hospitalization: A randomized trial. *Medical Care*, 37(1), 5-14.
- Lorig, K.R., Sobel, D.S., Ritter, P. L., & Hobbs, M. (2001). Effect of a self-management program on patients with chronic disease. *Effective Clinical Practice*, 4(6), 256-262.
- Lorig, K., Ritter, P.L., & Plant, K. (2005). A disease-specific self-help program compared with a generalized chronic disease self-help program for arthritis patients. *Arthritis & Rheumatism*, 53(6), 950-957.
- Lorig, K.R., Holman, H.R. (2003). Self-management education: History, definition, outcomes, and mechanisms. *Annals of Behavioral Medicine*, 26, (1), 1-7.

- Lorig K., Holman H., Sobel D., Laurent D., González V., & Minor M. (2006). Living a healthy life with chronic conditions. 3rd ed. Boulder,CO: Bull Publishing
- Mancuso, C., & Rincon, M. (2006). Impact of health literacy on longitudinal asthma outcomes. *Journal Of General Internal Medicine: Official Journal Of The Society For Research And Education In Primary Care Internal Medicine*, 21(8), 813-817. Retrieved November 29, 2008, from MEDLINE database.
- Mars, G.M., Proot, I.M., Janssen, P.P., VanEijk, J.T., & Kempen, I.J. (2007). How do people with COPD or diabetes type 2 experience autonomy? An exploratory study. *Diability and Rehabilitation*, 29(6), 485-493.
- McCabe, P. (2008). Self-management of atrial fibrillation: a new frontier for nursing research. *Progress in Cardiovascular Nursing*, 23(1), 37-40. Retrieved November 30, 2008, from MEDLINE database.
- McGowan, P. (2002). More than just questions! Implementation and evaluation of an arthritis self-management program in aboriginal communities. In L.E. Young, & V. Hayes (Eds.), *Transforming Health Promotion Practice: Concepts, Issues, and Applications* (pp.297-310).Philadelphia, PA: F.A.Davis.
- McGowan, P. (2005). Self-management: A background paper. University of Victoria: Centre on Aging. Paper presented at the International Conference on Patient Self-Management September 12-14, 2005. Retrieved November 30, 2007 from [http://www.coag.uvic.ca/cdsmp/downloads/What\\_is\\_Self-Management.pdf](http://www.coag.uvic.ca/cdsmp/downloads/What_is_Self-Management.pdf)
- Nagelkerk, J., Reick, K., & Meengs, L, (2006). Perceived barriers and effective strategies to diabetes self-management. *Journal of Advanced Nursing*, 54(2), 151-158.
- Newman, J., & Vidler, E. (2006). Discriminating customers, responsible patients, empowered users: Consumerism and the modernisation of health care. *Journal of Social Policy*, 35(2), 193-209.
- NICHE (2009). Nurses improving care for health system elders. Retrieved August, 14, 2009 from <http://www.nicheprogram.org/about>
- Norris, S., & Olson, D. (2004). Implementing evidence-based diabetes care in geriatric populations: the chronic care model. *Geriatrics*, 59(6), 35-40. Retrieved November 30, 2008, from AgeLine database.
- Northrup, D.T. (2002). Self-care: Re-examining the myth.. In L.E. Young, & V. Hayes (Eds.), *Transforming Health Promotion Practice: Concepts, Issues, and Applications* (pp.127-135).Philadelphia, PA: F.A.Davis
- Paasche-Orlow, M. K., Rickert, K. A., Bilderback, A., Chanmugam, A., Hill, P., Rand, C. S., Brancati, F. L., et al. (2005). Tailored education may reduce health literacy

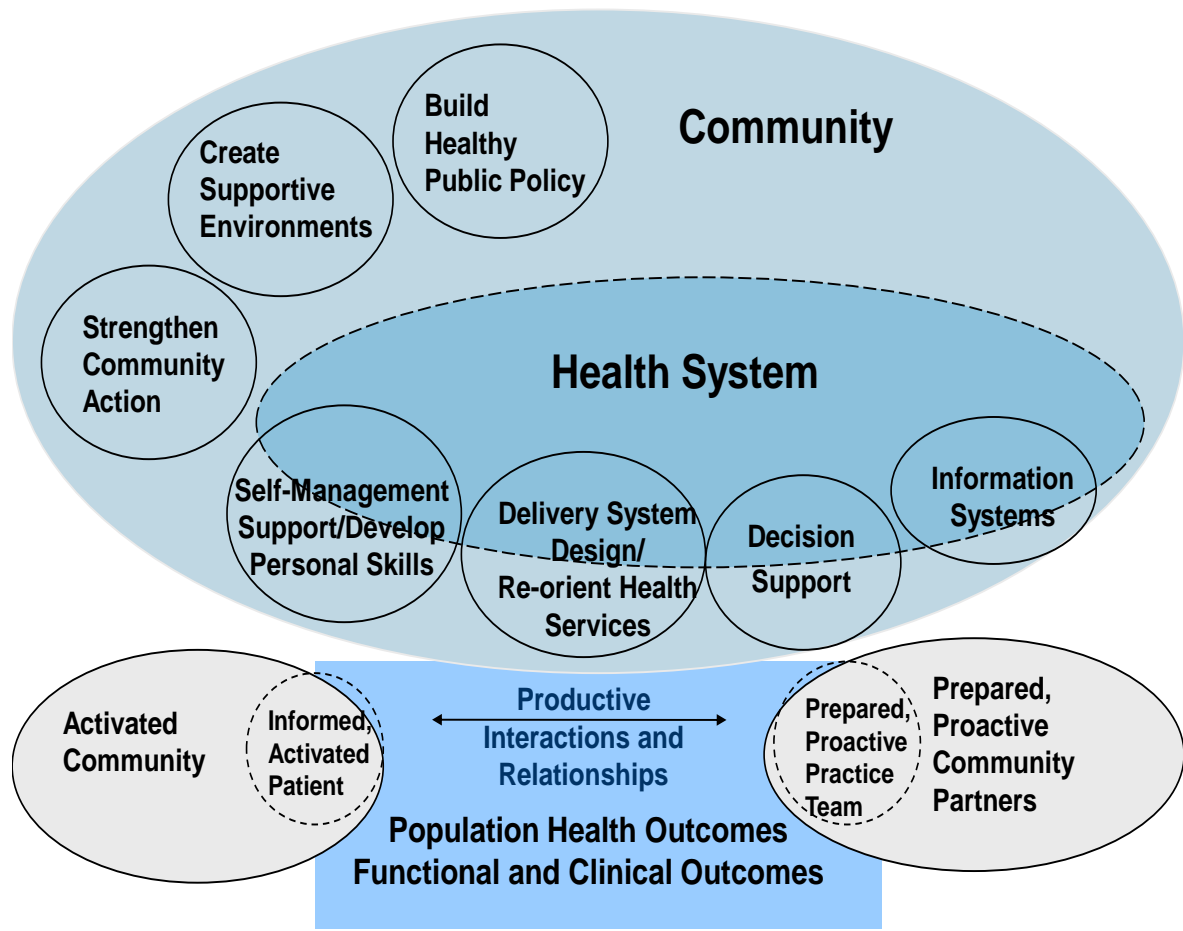
- Disparities in asthma self-management. *American Journal of Respiratory Critical Care Medicine*, 172, 980-986.
- Parke, B., & Brand, P. (2004). An elder friendly hospital: Translating a dream into reality. *Nursing Leadership*, 17(1), 62-77.
- Patients for Patient Safety (2006). Appendix N: Products from Vancouver workshop. Retrieved October 31, 2009 from [http://www.patientsafety.org/file\\_depot/0-10000000/20000-30000/24986/folder/62401/appendn.doc](http://www.patientsafety.org/file_depot/0-10000000/20000-30000/24986/folder/62401/appendn.doc)
- Peter, E. (2004). Home health care and ethics. In J. Storch, P. Rodney, & R. Starzomski (Eds.), *Toward a moral horizon: Nursing ethics for leadership and practice* (pp.248-261). Don Mills, ON: Pearson Education Canada.
- PHC (2009). Primary Health Care. Retrieved October 17, 2009 from [http://www.primaryhealthcarebc.ca/library/publications/year/2007/phc\\_charter.pdf](http://www.primaryhealthcarebc.ca/library/publications/year/2007/phc_charter.pdf)
- Polzer, R. L. (2007). African Americans and diabetes: Spiritual role of the health care provider in self-management. *Research in Nursing & Health*, 30(2), 164-174.
- Polzer, R.L., & Miles, M.S. (2007). Spirituality in African Americans with diabetes: Self-management through a relationship with God. *Qualitative Health Research*, 17(3), 176-188.
- Redman, B.K. (2007). Responsibility for control; Ethics of patient preparation for self-management of chronic disease. *Bioethics*, 21, (5), 243-250.
- Reid, M.C., Papaleontiou, M., Ong, A., Breckman, R., Wethington, E., & Pillemer, K. (2008). Self-management strategies to reduce pain and improve function among older adults in community settings: A review of the evidence. *Pain Medicine*, 9(4), 409-424.
- Rodgers, B.L., & Knafl, K.A. (2000). *Concept development in nursing: Foundations, techniques, and applications* (2<sup>nd</sup> ed). Philadelphia, PA: Saunders.
- Rogers, E.M. (2003). *Diffusion of innovations* (5<sup>th</sup> ed.). Free Press: New York.
- Rolita, L., & Freedman, M. (2008). Over-the-counter medication use in older adults. *Journal of Gerontological Nursing*, 34(4), 8-17. Retrieved November 30, 2008, from AgeLine database.
- Savitz, L.A., Jones, C.B., & Bernard, S. (2005). Advances in patient safety: From research to implementation. *Agency for Healthcare Research and Quality*, (4), 375-385. Retrieved October 25, 2009 from <http://www.ahrq.gov/QUAL/advances/>
- Schaffer, S., & Yarandi, H. (2007). Measuring asthma self-management

- Knowledge in adults. *Journal of the American Academy of Nurse Practitioners*, 19(10), 530-535. Retrieved November 29, 2008, from MEDLINE database.
- Schoenberg, N.E., Stoller, E.P., Kart, C.S., Perzynski, A., & Chapleski, E.E. (2004). Complementary and alternative medicine use among a multiethnic sample of older adults with diabetes. *The Journal of Alternative and Complementary Medicine*, 10(6), 1061-1066.
- Sisk, J.E., Hebert, P.L., Horowitz, C.R., McLaughlin, M.A., Wang, J.J., & Chassin, M.R. (2006). Effects of nurse management on the quality of heart failure care in minority communities. *Annals of Internal Medicine*, 145(4), 273-283.
- Steinke, E. (2005). Intimacy needs and chronic illness: strategies for sexual counseling and self-management. *Journal of Gerontological Nursing*, 31(5), 40-50. Retrieved November 30, 2008, from AgeLine database.
- Sturt, J., Whitlock, S., & Hearnshaw, H. (2006). Complex intervention development for diabetes self-management. *Journal of Advanced Nursing*, 54(3), 293-303.
- Tanner, E.K. (2004). Chronic illness demands for self-management in older adults. *Geriatric Nursing*, 25(5), 313-317.
- Taylor, S.G. (2002). Self-care deficit theory of nursing. In Tomey, A.M., & Alligood, M.R. (Eds.), *Nursing theorists and their work* (5<sup>th</sup> ed.) (pp. 189-211). St. Louis, Missouri: Mosby.
- Thorne, S.E. (2002). Health promoting interactions: Insights from the chronic illness experience. In L.E. Young, & V. Hayes (Eds.), *Transforming Health Promotion Practice: Concepts, Issues, and Applications* (pp.59-70).Philadelphia, PA: F.A.Davis.
- Tomey, A.M., & Alligood, M.R. (2002). *Nursing theorists and their work* (5<sup>th</sup> ed.). St. Louis, Missouri: Mosby.
- Townsend, A., Wyke, S., & Hunt, K. (2006). Self-managing and managing self: practical and moral dilemmas in accounts of living with chronic illness. *Chronic Illness*, 2, 185-194.
- University of Victoria (2009). Concept mapping. Retrieved June 15, 2009 from <http://www.coun.uvic.ca/learning/critical-thinking/concept-mapping.html>
- University of Wisconsin-Milwaukee (2009). Self-management science center. Retrieved August 3, 2009 from <http://www4.uwm.edu/nursing/research/smsc.cfm>
- Vég, A., Rosenqvist, U., & Sarkadi, A. (2006). Self-management profiles and metabolic outcomes in type 2 diabetes. *Journal of Advanced Nursing*, 56(1), 44-54.

- Warsi, A., Wang, P.S., LaValley, M.P., Avorn, J., & Solomon, D.H. (2008). Self-management education programs in chronic disease. *Archives of Internal Medicine*, 164, 1641-1649.
- Washburn, S. C., Hornberger, C. A., Klutman, A., & Skinner, L. (2005). Nurses' knowledge of heart failure education topics as reported in a small midwestern community hospital. *Journal of Cardiovascular Nursing*, 20(3), 215-220.
- Wilde, M.H., & Garvin, S. (2007). A concept analysis of self-monitoring. *Journal of Advanced Nursing*, 57(3), 339-350.
- Wilson, P.M., Kendall, S., & Brooks, F. (2005). Nurses' responses to expert patients: The rhetoric and reality of self-management in long-term conditions: A grounded theory study. *International Journal of Nursing Studies*, 43, 803-818.
- World Health Organization, (2009). Patients for Patient Safety. Retrieved October 11, 2009 from [http://www.who.int/patientsafety/patients\\_for\\_patient/en/](http://www.who.int/patientsafety/patients_for_patient/en/)
- World Health Organization, (2007). Facing the facts: The impact of chronic disease in Canada. Retrieved February 2, 2007 from [http://www.who.int/chp/chronic\\_disease\\_report/media/canada.pdf](http://www.who.int/chp/chronic_disease_report/media/canada.pdf)
- Yip, Y. B., Sit, J., Fung, K., Wong, D., Chong, S., Chung, L. H., et al. (2007). Effects of a self-management arthritis programme with an added exercise component for osteoarthritic knee: Randomized controlled trial. *Journal of Advanced Nursing*, 59(1), 20-28.

Appendix A

### British Columbia's Expanded Care Model



[http://www.healthservices.gov.bc.ca/cdm/cdminbc/chronic\\_care\\_model.html](http://www.healthservices.gov.bc.ca/cdm/cdminbc/chronic_care_model.html)

## Appendix B

<p>Journal: _____</p> <p>Authors name(s): _____</p> <p>Category of data: _____</p> <p>Date of study or publication: _____</p> <p>Setting and sample: _____</p>	<p>Key: Author/Discipline (circle)  <b>Nursing = A</b></p> <p><b>Medicine = B</b></p> <p><b>Interdisciplinary = C</b> _____  <i>Indicate by letter- PT, OT, RT, IT, MD, Pharm etc.</i></p> <p><b>Government = D</b></p> <p>Theoretical approaches:</p>
<p><b>Surrogate Terms:</b> <i>'other' terms.</i></p>	
<p><b>Related Concepts:</b></p>	
<p><b>Contextual:</b> <i>situation; temporal; sociocultural; disciplinary (variations)</i></p>	
<p><b>References:</b> <i>application of self management- actual situations described when self management is used.</i></p>	
<p><b>Attributes: Essential components</b></p>	
<p><b>Antecedents: Actions or necessary conditions prior to.</b></p>	
<p><b>Consequences: What happens after</b></p>	
<p><b>Notes:</b></p>	

## Appendix C

<b>Data Analysis of Article Data Collection sheets- by discipline</b>		
<b>Articles (by number):</b>		<b>Comments</b>
<b>Attributes</b>		
<b>Antecedents</b>		
<b>Consequences</b>		
<b>Contextual</b>		
<b>References</b>		
<b>Surrogate Terms</b>	<b>Related concepts</b>	<b>comments</b>

## Appendix D

## Self Management – Attributes Model

