Preoperative Education and its
Influence on Perception of Recovery
for Clients Awaiting
Total Hip and Total Knee Replacement Surgery

Shirley Coughlin, BMR, OT

Department of Graduate and Undergraduate
Studies in Education

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Faculty of Education, Brock University
St. Catharines, Ontario

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Abstract

The purpose of this study was to examine the manner in which an inviting approach to a preoperative teaching and learning educational experience influenced the perception and subsequent recovery of clients who were awaiting total hip and total knee replacement surgery. An in-depth review of the internal and external factors that shape client perceptions was undertaken in this study. In addition, this study also explored whether or not the Prehab Program was preparing clients physically, socially, and psychologically for surgery. Data for this qualitative case study research were collected through preoperative interviews with 4 participants awaiting total hip replacement surgery and 1 participant awaiting total knee replacement surgery. Four postoperative interviews were conducted with the participants who had received total hip replacement surgery. The occupational therapist and physical therapist who were the coleaders of the Prehab Program at the time of this study were also interviewed. The results of this study suggest that while individuals may receive similar educational experiences, their perceptions of the manner in which they benefited from these experiences varied. This is illustrated in the research findings, which concluded that while clients benefited physically from the inviting approach used during the practical teaching session, not all clients perceived the psychological benefits of this practice session, especially clients with preexisting high levels of anxiety. In addition to increasing the understanding of the internal as well as external factors that influence the perceptions of clients, this study has also served as an opportunity for reflection on practice for the Prehab therapists and other healthcare educators.
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# Table of Contents

Abstract .................................................................................................................. ii  
Acknowledgements ............................................................................................. iii  

CHAPTER ONE: THE PROBLEM ........................................................................... 1  
Background of the Problem ................................................................................. 1  
Statement of the Problem ................................................................................... 6  
The Purpose of the Study .................................................................................... 9  
Research Question ............................................................................................. 11  
Theoretical Framework ....................................................................................... 11  
Importance of the Study .................................................................................... 12  
Scope and Limitations of the Study ................................................................... 13  
Outline of the Remainder of the Thesis .............................................................. 14  

CHAPTER TWO: REVIEW OF THE LITERATURE ............................................. 16  
Designing the Prehab Program .......................................................................... 16  
Building Inviting Relationships with Clients ................................................... 23  
Creating Inviting Teaching and Learning Environments .................................. 41  
Streamlining Process ......................................................................................... 43  
Establishing Effective Policies .......................................................................... 45  
Summary ........................................................................................................... 46  

CHAPTER THREE: METHODOLOGY AND PROCEDURES .......................... 51  
Rationale for Methodology .............................................................................. 51  
Research Design ............................................................................................... 53  
Participant Selection ......................................................................................... 54  
Interviews .......................................................................................................... 55  
Data Collection .................................................................................................. 60  
Data Analysis ..................................................................................................... 61  
Trustworthiness and Credibility ....................................................................... 62  
Researcher Bias ................................................................................................. 63  
Limitations ......................................................................................................... 65  
Ethical Consideration ....................................................................................... 66  
Summary ........................................................................................................... 67  

CHAPTER FOUR: ANALYSIS AND FINDINGS ............................................. 68  
Introduction to the Participants ........................................................................ 69  
Internal Factor Themes and Participant Perceptions ....................................... 70  
External Factor Themes and the 5P's: Perceptions of Client Participants, Prehab Therapists, and Principal Investigator ......................................................... 90  
Summary ........................................................................................................... 102
CHAPTER FIVE: SUMMARY, DISCUSSION, AND IMPLICATIONS .......... 104
Summary of the Study................................................................. 104
Answering the Research Question............................................. 107
Discussion.................................................................................... 108
Implications for Practice............................................................... 119
Implications for Theory............................................................... 123
Implications for Research............................................................. 125
Reflections................................................................................... 125
Conclusion................................................................................... 127

References.................................................................................. 129

Appendix A: Preoperative Interview Questions Prehab Clients.............. 138
Appendix B: Postoperative Interview Questions Prehab Clients.............. 140
Appendix C: Interview Questions Prehab Therapists................................ 142
Appendix D: Interview Questions Faculty Supervisor for Principal Investigator... 143
Appendix E: Verbal Script used to Obtain Permission for Clients' Mailing Address.. 144
Appendix F: Brock University Ethics Approval..................................... 145
Appendix G: External Factor Themes and the “5 P’s”: Perceptions of Client Participants, Prehab Therapists.............................................................. 146
CHAPTER ONE: THE PROBLEM

This study investigated the perceptions of clients who have received either a total hip or total knee replacement surgery. The process of effecting positive change in client perception through involvement in a hospital-based preoperative education program called Prehab was explored in this study. Internal as well as external factors that shape client perception are examined. This chapter reviews the background and context of the research problem and provides an overview of the Prehab education program. The research problem is defined, and the importance and purpose of the study are outlined. Invitational theory and the manner in which it serves as the main theoretical framework for this study are discussed in this chapter. The application of this study in terms of its scope and limitations is reviewed.

Background of the Problem

The Canadian Institute for Health Information (CIHI) is a nonprofit organization created by the federal, provincial, and territorial governments of Canada. CIHI collects and examines data, serving as a central source of information in the areas of health and healthcare. Healthcare organizations such as a hospital refer to the data collected by CIHI when creating policies or devising approaches that will enhance the delivery of healthcare services. The information collected and analyzed by CIHI is also made available to the general public. In a report dated October 25, 2006, CIHI revealed statistical information on the dramatic increase in the number of total hip and total knee replacement surgeries that have been performed in Canada between the years 1994-1995 and 2004-2005, with the numbers reaching 31,463 and 58,714 respectively. This represents an overall increase of 87% during this 10-year period.
A similar statistical comparison of the number of total hip and total knee replacement surgeries that have been performed in the hospital of this study reveals an increase from 138 to 441 between the years 1994-1995 and 2004-2005. This represents an overall increase of 220% during this 10-year period in the number of clients who have received total hip and total knee replacement surgeries. During the year 2006-2007, the number of total hip and total knee replacement surgeries for the study hospital has increased to 525, which would represent an overall increase of 280% if compared with the year 1994-1995.

According to the demographic data collected by CIHI (2006), the greatest increase in the number of total hip and total knee joint replacement surgeries during the years 1994-1995 and 2004-2005 is represented by individuals 45 to 54 years of age. For this age group, the number of total hip replacement surgeries in 1994-1995 equaled 1,313 and has increased to 2,664 in the year 2004-2005. The total knee replacement surgeries for this same time period increased from 655 to 2,529. Adults 65 years of age or older continue to represent the highest percentage of the overall population of those who have received total hip and total knee replacement surgeries in Canada: 71% in 1994-1995 and 66% in 2004-2005. However, this percentage has declined during this same time period due to the growing number of younger adults undergoing these surgeries.

The waiting period prior to these elective surgeries has also increased for the hospital in this study as well as many other Canadian hospitals. With adults and older adults representing the majority of the voting populous, the topic of wait time has been at the forefront of many political debates. Attending to the issue of wait time has been further prompted by surgical candidates choosing to have their total hip or total knee
replacement surgery performed by qualified surgeons working in the private sector. To address this sense of urgency and to help ensure the survival of our public healthcare system, Ontario’s Ministry of Health and Long-Term Care has created the Wait Time Strategy as part of a client-focused healthcare initiative (Hudson, 2006). The hospital of this study was one of the recipients of the funding for this healthcare initiative. In January, 2005, the study hospital developed a new and innovative client-focused education program called the Prehab Program.

The Prehab Program is designed to be an interactive client-focused education program that is unique in its design, process, and content when compared with other education programs within the study institution as well as other hospitals. The Prehab Program of this study has incorporated the principles of invitational theory and adult learning theory with the goal of preparing clients physically, socially, and psychologically for surgery. The program also uses a client-focused approach to client education and treatment. Duke (2004) states that education programs have become a popular means of facilitating educational change. According to Duke, educational change focuses on educational goals, content, and methods of instruction as well as assessment of learning. The Prehab Program represents a change in the manner in which group education sessions are conducted in the hospital of this study.

For example, the hospital in this study as well as many other healthcare institutions typically establish the learning needs of the individual based on the physical aspects of the recovery process with regard to the client’s medical diagnosis rather than his or her unique experiences, perceptions, and approach to learning. In my experience as an occupational therapist, there appears to be a growing trend to replace traditional
forms of hospital-based education programs in which clients passively receive education with more client-centred education programs. Clients who receive traditional forms of teaching and learning that utilize only a didactic style are less likely to remember and apply the information to their lives. Learning, however, is a more dynamic process, as reported by Giroux Bruce and Borg (2002), who refer to Bandura’s work in which he states, learning is “an outcome of the interaction between behavior, person, and environment” (p. 165).

Although the Prehab Program represents positive educational change, other forms of educational change that have been implemented following the introduction of the Prehab Program may have a negative effect on clients as well as healthcare staff. For example, with the rising cost of delivering quality healthcare, hospitals have become part of a growing trend to eliminate or reduce a client’s length of stay (Clode-Baker & Gregg, 1997; Johansson, Salantera, & Katajisto, 2007). In a document by CIHI dated March 10, 2004, during a 7-year time period prior to the date of this report, the average length of stay in hospital had decreased by 33% for total hip and total knee replacement surgery. CIHI also revealed in this report the views of Dr. Robert Bourne, an orthopaedic surgeon, and chair of the Canadian Joint Replacement Registry, who stated that this reduced length of stay is likely related to improved preoperative education, surgery that is less invasive, improved methods of pain control, and better rehabilitation postoperatively.

Duke (2004) states that educational change also includes examination of the manner in which educational functions are “organized, regulated, governed, and financed” (p. 31). A hospital environment may not appear to be capitalistic, but it is competing with other institutions for government funding which it must demonstrate that
it uses productively and responsibly. The hospital in this study follows a "care path" which consists of a predetermined length of stay associated with total hip and total knee replacement surgeries. Since the initial inception of the Prehab Program in 2005, there has been a reduction in length of stay from 7 to 4-5 days for a total hip replacement and from 5 to 3-4 days for a total knee replacement surgery.

This reduced length of stay may contribute to an increase in the level of stress for the recipients of total hip and total knee replacements surgeries as well as healthcare educators. Clients, in addition to having the added pressure of recovering in a timely manner, have to deal with the potential source of stress associated with this type of invasive surgery according to Trousdale, McGory, Berry, Becker, and Harmsen (1999). Gammon and Mulholland (1996) argue that clients are affected on a physical as well as a psychological level during their stay in hospital, which in turn may influence compliance and physical recovery. Certain organizational processes that exist in a hospital may affect a healthcare educator’s ability to provide an optimal learning opportunity for clients who have received total joint replacement surgery.

For example, healthcare educators who see clients postoperatively have a narrow time frame in which to prepare clients for discharge from hospital. In addition to a shorter length of stay, there has been a reduction in the amount of the time allocated for teaching once the client is in hospital (Butler, Hurley, Buchanan, & Smith-Van Horne, 1996; Johansson et al., 2007). Healthcare educators working in institutions that do not offer preoperative education also have less time to prepare clients for the pending surgery, as hospitals tend to admit clients the same day as the surgery according to Hough, Crosat, and Nye (1991) as well as Butler et al.
Another issue associated with a hospital's attempt to comply with reduced length of stay is the focus on the physical aspects of recovery when determining a client's readiness for discharge home following total hip replacement surgery (Heine, Koch, & Goldie, 2004). These physical markers include the client's functional abilities, such as being able to get in and out of bed or to climb stairs. Heine et al. state that there is usually little emphasis placed on the psychosocial aspects of care associated with the postsurgical recovery process. Not preparing clients psychologically can prove to be costly. By not addressing the psychological or social aspects, hospitals are finding themselves in situations where clients, even when they are physically ready for discharge, are stating that they are not prepared for early discharge home. As a result, hospital staff are spending an inordinate amount of time postsurgically convincing the clients of their readiness for discharge (Heine et al.).

**Statement of the Problem**

Daltroy, Morlino, Eaton, Poss, and Liang (1998) state that the mandated reduction in the length of stay in hospital has made it even more important to have preoperative education to prepare clients for total hip and total knee replacement surgeries. It is also essential that the preoperative teaching sessions offer comprehensive education that examines and addresses the clients' physical, social, and psychological needs in order to assist clients in their recovery process and to facilitate their timely discharge from hospital to home. During the past 2 years, I have attended several information-sharing sessions with representatives from other Ontario hospitals who have established preoperative education programs for their total hip and total knee replacement clients. It appears that these programs differ in terms of content, process, and number of clients.
who attend the education sessions. This lack of standardization makes it difficult to perform comparative interinstitutional research on these types of programs. There also appears to be a lack of awareness and evaluation of the psychological aspects that influence a client's educational experience and recovery from surgery.

In order to address the psychological needs of clients, it is important to understand the underlying psychology behind human behaviour. Combs (1999) states that perceptions are at the core of human behaviour and relationships. Within the healthcare system there is a need to acknowledge, understand, incorporate, and evaluate psychological factors that influence the learning needs and recovery process of clients following these orthopaedic surgeries. Combs reports that it is only recently that a deeper and more expansive look at client perception is taking place.

Research in healthcare typically uses measurable physical outcomes such as early mobilization or a reduction in length of stay when examining and determining the effectiveness of education programs. Due to the many interacting variables that influence a client's recovery, it is difficult to prove conclusively that the Prehab Program of this study contributes quantitatively in terms of reducing clients' length of stay in hospital following total hip and total knee replacement surgeries. C. Reed's (1992) comment with regard to evaluating the measurement of progress and achievement in student programs could also apply to hospital-based client-focused programs. Reed believes that assessment of progress and achievement should include qualitative as well as quantitative data. Draper (2001) states that while quantitative forms of evaluation of learning are important, so too are the qualitative aspects of learning such as feelings and attitudes.

Client satisfaction surveys are one method of qualitative evaluation used by the
Prehab Program. Following each teaching session, clients who attend the Prehab Program are asked to complete a numerically rated satisfaction questionnaire that includes a section for comments on the various areas of the program. A second survey is given to the clients following their surgery. This survey has the same questions from the initial survey in addition to a section that determines if a client is following the suggestions made by the therapists in the Prehab teaching session. For example, did clients improve the accessibility of their home prior to surgery to accommodate a mobility aid such as a walker as advised by the occupational therapist? The comment section of the second survey has been a useful source of feedback, as clients are in a position to reflect on their entire experience related to their surgery.

The numerical and verbal responses serve as a basic form of quantitative and qualitative data respectively. The questionnaire is designed such that the client provides a brief account of whether or not he or she found the program to be useful rather than to gain an understanding of the elements that shape a client’s perception or what the learning process for the client entails. Given the basic format of these surveys, the therapist can almost anticipate from a variety of responses what the client will say. As a result, although these types of findings are informative, they fail to advance the study of human behaviour by exploring the relatively unknown territory in healthcare that involves client perception. Qualitative research in the form of a case study involving in-depth interviews with the Prehab clients may lead to a more accurate representation of the views of clients when determining program effectiveness such as providing clients with psychological support.
The Purpose of the Study

The purpose of this study was to examine a “bounded system” (Creswell, 1998; Merriam, 1998), namely the Prehab Program that is bounded by time and location. In addition to providing a rich and more accurate account of whether or not the Prehab Program is preparing clients psychologically for surgery, this qualitative study has the potential to increase the effectiveness of educators. The results of this study will provide educators with the opportunity to take a deeper look and develop a more expansive view of perceptions that influence human behaviour as described by Combs (1999). The field of medicine has historically focused on human behaviour that is directly observable and measurable rather than gaining an understanding by examining the elements and processes behind behaviour. Combs encourages educators to move beyond attempting to understand human behaviour only in terms of what is directly observable to one that appreciates inference. Inference was used when interpreting the findings of this qualitative study to provide educators with the opportunity to gain a deeper appreciation and understanding of the complexity of human behaviour.

This qualitative study examined the internal as well as external factors that influence client perception. In this study, internal factors refer to elements that are within the client such as the client’s self-concept as learner, self-efficacy beliefs, and the client’s emotional response to a surgical experience. With regard to external factors, these may influence the internal state and perceptions of a client but originate from a source that is external to the client as seen during the client’s interaction with others and his or her environment.

The manner in which perception shapes a client’s learning experience and
recovery from surgery were also explored in this study. In addition to understanding what constitutes client perception, this study examined the manifestation of client perception in terms of physical as well as psychological outcomes. For example, with regard to a client’s physical well-being this study examined the conditions that shape a client’s perception of his or her physical abilities such as being able to climb stairs with crutches. In terms of a client’s psychological well-being, factors that contribute to the presence or absence of feelings of anxiety and stress were explored. An understanding of client perception provides healthcare educators with essential information to promote therapeutic relationships as well as the tools to consciously create optimal learning experiences for their clients within the current time constraints of the healthcare system.

The results of this study will also help to inform the practice of healthcare educators by providing the opportunity for reflection on practice. Reflection on practice is essential for determining the learning needs of healthcare clients, educators, as well as the institutions in which healthcare educators practice in. Bailey (1984) reinforces this belief, that “there is an inter-play of practice and reflection upon the practice, with the reflection becoming more structured, systematic and sophisticated as the body of knowledge, and the literature in which it is embodied grows” (p. 2). The results of this study were compared with the findings in the literature which, according to Merriam (1998), assists in determining the manner in which this study “advances, refines, or revises what is already known” (p. 51).

The intention when creating the Prehab Program was to utilize an inviting approach to client education and prepare clients physically, socially, as well as psychologically for surgery and discharge home. It is important to support these
intentions with evidence-based practice. The findings of this study will help to ensure that the "espoused theory" in relation to the Prehab Program is in keeping with the "theory in use" as described by Barr and Tagg (1995) such that the theory behind the program is consistent with what is actually practiced.

**Research Question**

In what manner does an inviting approach to a preoperative teaching and learning educational experience influence perception and the subsequent recovery of clients receiving total hip or total knee replacement surgery?

**Theoretical Framework**

When originally created, the Prehab Program incorporated elements of invitational theory in the design, implementation, and basic evaluation of the program. This study took an extensive look at the Prehab Program from a qualitative perspective with the philosophical orientation of invitational theory serving as the compass to guide the journey. The framework of invitational theory facilitated the examination of client perception as noted by Russell (1992), who stated that invitational theory is built on a foundation that encompasses both self-concept theory and perceptual psychology.

The framework of invitational theory was used to assist with examining the deeper processes involved that influence human behaviour and learning experiences. Invitational theory, according to Beardsley and Jacobs (1992), is based on the "theory of process and practice" (p. 40). Russell (1992) elaborates on the process involved in invitational education in her review of the work of William W. Purkey and John M. Novak (1984), the creators and authors of invitational theory. Purkey and Novak state that invitational theory acknowledges as well as assists learners in fulfilling their need to
aspire and reach towards their untapped potential. The results of this study when compared against the principles of invitational theory will also inform educational practice. This is supported by Beardsley and Jacobs, who state “the strength of invitational education lies in the philosophical foundation that can guide the behaviour of the teacher and the professional in the joint effort of education” (p. 40).

Importance of the Study

According to Daltroy et al. (1998), less than 10 of the over 200 studies that involved psychoeducational interventions were represented by clients who had undergone orthopaedic surgery. The majority of the information was acquired from master’s theses and unpublished doctoral dissertations that addressed relaxation training or hypothetical forms of intervention. Heine et al. (2004) reported that little is known about the psychological status of clients with regard to readiness for discharge for those who have received total hip replacement surgery. Trousdale et al. (1999) stated that although there is an abundance of information on clients in terms of outcomes based on radiographic or clinical findings, there has been minimal attention as to what the concerns are of the clients undergoing total hip and total knee replacement surgeries.

Combs (1999) revealed that the study of perception is expanding, which is fortunate given the need to understand the client experience of total hip and total knee replacement surgeries from a psychological point of view. Combs states that a paradigm shift is taking place in the field of science, with the focus moving from the physical sciences to the social sciences. The medical model of scientific reductionism is being replaced by a holistic approach to health which Combs reports views the human experience as an interaction of elements that when working in combination are greater
than the sum of its parts. Combs believes that events are being examined in terms of "relationships, processes, organizations, and systems" (p. 245). As human beings we are influenced not only by our environment but also by our perception of our environment (Giroux Bruce & Borg, 2002).

Healthcare professionals will be more effective in their role as educators by developing an understanding of the significance that client perception plays in the areas of learning as well as the healing process of clients. Utilizing the lens of invitational theory will enhance the examination of these elements and their interactions that help to formulate an inviting educational experience. According to Purkey (2000), inviting relationships are greatly influenced by the "5 P's," namely programs, people, places, policies, and processes. He states that these "five powerful P's compose the educational ecosystem in which individuals continuously interact with themselves and others" (p. 78).

One of the goals of this study was to examine the subtleties of this ecosystem. This study explored a holistic approach to healthcare, one that acknowledges the importance of preparing clients psychologically in addition to physically, and socially. The findings of this study were compared with existing themes in educational and rehabilitation literature.

Scope and Limitations of the Study

The findings of this qualitative study may be highly contextualized, as they were limited to the perceptions of clients from one community-based hospital. Duke (2004) reviewed the work of King, Morris, and Fitz-Gibbon (1987), who believe that evaluators need to accentuate the program's essential characteristics and include the context in which the program functions in terms of the location as well as those involved in the
program. It is also important to compare the distinguishing features of the program with other programs of its kind. In order for other healthcare organizations to benefit from the results of this study, they will have to determine if the information can be applied to their educational setting.

**Outline of the Remainder of the Thesis**

Chapter One discussed and defined the problem, the purpose of the study, and the research question that the study addressed. The theoretical framework and the importance of the study as well as the scope and limitations of the study were reviewed in this chapter.

Chapter Two, "Review of the Literature," examines various theoretical and philosophical approaches to education as represented in education and rehabilitation literature. The themes found in the literature assisted with conceptualizing important features of an inviting teaching and learning experience for adult clients awaiting a total hip or total knee replacement surgery.

In Chapter Three, "Methodology and Procedures," the rationale for choosing the research methodology, the design of the research study, and the selection of the study participants are discussed. The interview process as well as data collection and analysis are also reviewed in this chapter. Methods of ensuring trustworthiness, research credibility, avoiding researcher bias, as well as ensuring client confidentiality that is reflective of ethical considerations are outlined in this chapter.

In Chapter Four, "Analysis and Findings," the study participants and the research findings in accordance with the analysis of the research data are presented.

Chapter Five, "Summary, Discussion, and Implications," examines the important
findings of the study. The manner in which these findings relate and contribute to the existing literature in education and rehabilitation are reviewed in this chapter. Areas that will benefit from closer examination or further research are also recommended.
CHAPTER TWO: REVIEW OF THE LITERATURE

This literature review explored the various theoretical and philosophical approaches to client education and assisted with identifying the important features of an inviting teaching and learning experience. A closer examination and understanding of the nature of client perception was accomplished as a result of the literature review. The manner in which an inviting approach to teaching and learning provides educators with the opportunity to observe, discuss, and positively influence client perception was investigated. Examples of internal as well as external influences on client perception and how they relate to a hospital setting and clients’ recovery were studied in this literature review. The rationale behind the design and implementation of the Prehab Program as well as the need for in-depth qualitative research are also discussed. This chapter is divided into sections with headings that incorporate the “5 P’s” as described by Purkey (2000), namely programs, people, places, policies, and processes. These sections are listed accordingly: (a) Designing the Prehab Program; (b) Building Inviting Relationships with Clients; (c) Establishing Effective Policies; (d) Creating Inviting Teaching and Learning Environments; and (e) Streamlining Process.

Designing the Prehab Program

A hospital has a hierarchical organizational structure; therefore, upper management performed the preliminary discussions concerning which department would receive the funds allocated by Ontario’s Ministry of Health and Long-Term Care for the Wait Time Strategy Initiative. Management was agreeable with the creation of the Prehab Program once they were informed of the need and benefits of offering preoperative education for clients awaiting total hip and total knee replacement surgery.
For example, prior to the Prehab Program, clients would have to wait until after surgery to attempt stair climbing with crutches. When this task is performed after surgery, the medication needed for pain control as well as the general discomfort associated with surgery may affect the clients' ability to learn. The results may be a decrease in their receptivity as well as impairment in the clients' ability to absorb, retain, and apply new information. Santavirta et al. (1994) reported that clients who received intensified teaching prior to their total hip replacement surgery were better able to follow through on instructions concerning their postoperative program. McGregor, Rylands, Owen, Dore, and Hughes (2004) also stated that clients who received preoperative education did not require extensive occupational therapy postoperatively.

In addition, Giraudet-Le Quintrec et al. (2003) reported that clients who received preoperative education that informed them of the importance of early mobilization in order to promote recovery resulted in the clients standing sooner. Hough et al. (1991) also observed that clients who attended preoperative education required less medication, were mobile sooner, and were ready and eager to return home earlier in comparison to clients who did not attend the preoperative class. McGregor et al. (2004) and Spalding (2003) observed that clients who received thorough preoperative information were likely to have prepared their home and purchased adaptive aids in advance of their admission to hospital.

As an occupational therapist, I served as coleader of the Prehab Program along with a physical therapist colleague. The Prehab team consists of the occupational therapist, physical therapist, and rehabilitation assistant. Together, we were responsible for the design, development, and implementation of the Prehab Program with help of
support staff of the study hospital’s Outpatient Rehabilitation Department. In June of 2006, another occupational therapist and physical therapist assumed leadership of the Prehab Program and the accompanying responsibilities. Hargreaves (2004) discussed the influence of external versus internal sources of change in relation to teacher education programs, which could also apply to healthcare education programs in a hospital. Hargreaves observed that it is not so important to consider change in education as internal or external in nature but rather whether or not it is “inclusive or exclusive in its design and conduct” (p. 287). With regard to the Prehab Education Program, although it was initiated externally by management, it was, however, inclusive in nature due to the extensive involvement of the front-line staff with regard to its design and conduct. This inclusive approach promoted ongoing evaluation and timely adjustments of the Prehab Program that enhanced the delivery of care, as front-line staff were also in a position to obtain direct feedback of the clients’ postoperative recovery on the orthopaedic unit.

The Prehab team incorporated the values of a learning organization as described by Giesecke and McNeil (2004) by being flexible, adaptable, and promoting change when seeking new and innovative ways to enhance client-focused learning. During the initial stages of development of the Prehab Program, the Prehab team realized that the program would evolve and that mistakes were going to be made, which gave the team permission to be more “human.” In addition to this being a more inviting approach to program development, it also helped to promote creativity by encouraging deviation from original program plans. The Prehab team created a form of a learning circle as described by Funk (2002), in which the members regularly evaluated their expectations, acknowledged their achievements, reshaped teaching methods, as well as maintained or
implemented improvements as required. The Prehab Program used what Mitchell and Sackney (1998) describe as action research, whereby the team engages in “reflection meetings, the embodiment of plan-act-observe-reflect cycle” (p. 181).

Clients attend the Prehab Program 2 to 4 weeks prior to their elective surgery. The Prehab Program is conducted using a group format as well as a one-to-one session between the client and the occupational therapist. According to Berkeland and Flinn (2005), the process of client education in occupational therapy involves providing clients with a range of responses when engaged in activities, while incorporating the principles of teaching and learning. These teaching and learning principles apply to educational experiences that take place on an individual basis or group level. Prior to engaging in any type of educational activity, Richardson (2006) believes that the occupational therapist must first

be aware of the client’s cognitive capacity, occupations that have value to the client and family, attributes of the task being taught, and the context in which the client will be expected to perform the activity after discharge from therapy (p. 104).

The education session of the Prehab Program consists of a brief lecture accompanied by visual demonstrations as well as the use of pictorial anatomical representations of the respective surgeries. Both the physical therapist and the occupational therapist discuss the precautions associated with the surgery and the use of adaptive equipment. For example, the physical therapist demonstrates and instructs clients in the use of mobility aids such as a wheeled walker and crutches. The occupational therapist demonstrates the various types of adaptive equipment that the
client will require in order to engage in activities of daily living such as using a bath seat in the bathtub. The Prehab Program of this study also incorporated similar education goals as described by McGregor et al. (2004), who stated that the goals of the preoperative class involved familiarizing the participants with the content of the education booklet and instructing them in the use of mobility aids as well as ensuring their understanding of the exercise program. Clients were also provided with information and the resources available that would enable them to perform home adaptations.

When creating a vision for the educational change associated with the Prehab Program, it was helpful to refer to the hospital mission statement to ensure that the interdepartmental vision was in keeping with the larger vision of the organization. The mission statement of the hospital in this study states, "we will constantly seek innovations to improve our ability to deliver care and services and to be leaders in working towards a healthier community" (Amalgamation Plan, 1998, p. 4). The concept of time and efficiency is also built into the mission statement such that "we are committed to providing quality, compassionate care and services to meet the diverse needs of our population in a timely and effective manner" (Amalgamation Plan, p. 4).

In keeping with the guiding principles of the hospital mission statement, another goal when designing the Prehab Program was to ensure that clients were not only satisfied with the program but that it exceeded their expectations. Bourne, Maloney, and Wright (2004) stated that quality of care and client satisfaction continues to be essential aspects of healthcare research. Clode-Baker and Gregg (1997) reported that there is an increasing appreciation of the significance of patient satisfaction in the area of healthcare. Client satisfaction is also linked with client behaviour. Mancuso, Salvati, Johanson, and
Peterson (1997) acknowledged the importance of client satisfaction as it is coupled with client compliance, which is essential to the overall longevity of the prosthesis. Satisfied clients have an increased likelihood to participate in follow-up examinations.

The study by Sjoling, Nordahl, Olofsson, and Asplund (2003) examined the content of client education for total knee replacement surgery from the point of view of care providers. The authors indicate that future studies need to be performed to determine the clients’ perceptions about whether the content of the education session as well as the process used to impart the information were satisfactory. Mancuso et al. (2001) stated that few studies exist that examine orthopaedic procedures in terms of client expectations.

McGregor et al. (2004) found that preoperative education classes had a positive effect in the areas of client expectation as well their satisfaction level. McGregor et al. reviewed three target areas of client satisfaction: satisfaction with regard to the surgery itself, services received in the hospital, and the quality of care in relation to members of the healthcare team. The authors noted that other researchers found that recipients of hip and knee replacement surgery tended to have unrealistic expectations of surgical outcomes in terms of pain and functional abilities. Montin and Suominen’s (2002) review of Showalter et al.’s (2000) work indicated that a source of distress for clients and their families was having unrealistic expectations concerning the client’s postsurgical recovery.

Montin and Suominen (2002) reached a similar conclusion as Sjoling et al. (2003), stating that future studies need to focus on the aspects of care while ensuring that the areas which are deemed important are reflective of client expectations. Mancuso et
al. (1997) discussed the expectations of clients who had received a total hip replacement surgery, which included a desire for a reduction in hip pain that was accompanied by enhancement in their ability to walk and engage in day-to-day activities. Clients also looked forward to improvement from a psychological point of view that involved acquiring a feeling of normalcy such that they no longer felt the stigma associated with having a diseased joint.

Spalding (2000) stated that client expectations of a preoperative education program are more likely to be met if the client is provided with the opportunity to express his or her learning needs prior to the commencement of the program's teaching session. The Prehab Program teaching session of the study hospital provides clients with the opportunity to clarify their learning needs with the therapists as well as express what they feel they will require in terms of length of stay in hospital postoperatively. During the Prehab teaching session, it becomes apparent that some clients are unaware of the expected length of stay in association with the care path for total hip and total knee replacement surgeries.

For example, following their surgery, clients are usually discharged home from the acute care unit within the time frame as outlined in the care path for total hip or total knee replacement surgery. However, some clients, even though they are likely to recover within the care path time frame, expect to be transferred from the acute care unit to the rehab unit, which is designed for clients requiring a longer recovery period in hospital. As a result, there may be a significant discrepancy in what clients perceive they will require in terms of recovery time in hospital versus what they will actually need. The one-to-one session with the occupational therapist as well as the practical session with the
physical therapist are essential in providing objective assessments that help to determine if there are physical, psychological, or social reasons that would necessitate the client being transferred from the acute care unit to the rehabilitation unit.

If no issues are present and provided that clients do not experience postoperative complications, the Prehab Program assists clients with aligning their preoperative expectations with what is likely to happen postoperatively. Awareness of what shapes clients’ perceptions and therefore their expectations provides healthcare educators with the necessary means in which to facilitate an appropriate and timely discharge of clients to their homes. A client is more likely to have a positive perception with regard to discharge home within the time frame of the care path if the therapist focuses on the benefits of recovering from surgery at home versus a hospital environment. Foot (1996) stated that in addition to reducing costs associated with providing healthcare services, clients who recover at home are at a lower risk of acquiring an infection which they may be susceptible to while in hospital. Foot reported that a familiar environment helps to create positive feelings of well-being that enhance the postsurgery recovery. Clients also tend to be more relaxed, happier, and potentially more active in a familiar environment such as their home.

**Building Inviting Relationship with Clients**

Within a hospital environment, clients are also generally happier and more relaxed as a result of experiencing inviting relationships between themselves and healthcare staff such as therapists. Presumably, this may be accomplished by applying the same elements to a hospital that contribute to the creation of an inviting culture within a school as described by Purkey (2000), which include "respect, trust, optimism and
intentionality" (p. 89). According to Purkey (1996), respect for clients in a therapeutic relationship is demonstrated by encouraging clients to assume responsibility for aspects of their recovery such as taking an active role in the decision-making process when determining the most suitable style of adaptive equipment they will require following surgery. Active involvement of clients in decision-making, areas of self-management, as well as the recovery process are suggestive of an empowering approach to education (Johansson et al., 2007; Spalding, 2000). The Prehab Program views the educational process as a partnership between the client and the therapist, with the client constructing knowledge by participating in determining relevant goals and deciding in conjunction with a therapist the most appropriate course of action. Senge, as reported by Newcomb (2003), stated that engaging clients in constructivism conveys a high level of respect for the learner.

In addition to assuming responsibility in the decision-making process, clients also benefit from becoming actively involved in their learning experience (Giroux Bruce & Borg, 2002; Johansson et al., 2007; Purkey, 2000). Giroux Bruce and Borg state that a behavioural approach to occupational therapy involves providing clients with learning activities that are meaningful and involve occupations that are important to the clients. Combs (1999) stated that we have all had educational experiences in which the instructed information was received but not used because the material was presented in a way that was not personally meaningful to the learners.

Creating meaningful and relevant education sessions with the opportunity for clients to physically practice and rehearse tasks helps to ensure that clients are actively engaged in the learning process (Giroux Bruce & Borg, 2002). Utilizing a learning
strategy such as rehearsal of a task also assists with encoding the information into long-term memory and increases the possibility of its being recalled and used postoperatively (Rosenshine, 1995). Some of the clients purchase items such as crutches, which allows them to practice using them at home. Clients are encouraged to practice activities the same day following the Prehab session, keeping in mind the precautions verbally conveyed to them as well as physically demonstrated during the teaching session.

The Prehab Program incorporates a multisensory approach to learning that includes visual, auditory, kinesthetic, as well as tactile learning experiences (Van Hoose & Strahan, 1992). The kinesthetic modality of sensory memory is utilized when a task is rehearsed by a client, such as getting in and out of a car while incorporating the precautions. Combs’s (1999) review of research on learning styles revealed that women are more visually oriented when connecting with the world, with men responding better to learning experiences that are tactile and kinesthetic in nature. However, according to Gage and Berliner (1990), information that is personally meaningful for the client has a greater impact than the medium in which the material is presented when determining how the information will be stored, recalled, and utilized by the learner.

Taking the time to know clients in terms of their life experiences and what appeals to them assists in creating meaningful education sessions as well (Starratt, 2005) and can provide the necessary foundation for the use of scaffolding to facilitate new learning. Scaffolding links new information with the client’s prior knowledge, which serves to decrease the amount of effort required for learning. Thinking out loud and modeling are some of the cognitive strategies associated with scaffolding (Rosenshine, 1995). If a therapist models each step of the task for clients, who then practice the steps,
the result is enhancement of the clients’ sense of self-efficacy (Giroux Bruce & Borg, 2002).

Another learning strategy that assists with the processing of information involves drawing comparisons and contrasts, described by Rosenshine (1995). A therapist could incorporate several learning strategies to facilitate client learning during the Prehab teaching session. For example, activities such as performing a bathtub transfer and getting in and out of a car involve similar body positions. Therefore, in addition to modeling and discussing out loud the correct technique for each transfer, the occupational therapist could also enhance the learning of these transfer techniques by drawing comparisons and contrasts between them.

Clients also benefit from receiving explicit strategy instruction such as question-based problem solving (Woloshyn, Elliott, & Kacho, 2002). Prior to commencing with the Prehab teaching session, clients are provided with the rationale behind the topics chosen for discussion, such as energy conservation techniques and precautions associated with total hip and total knee replacement surgery. As part of the teaching session, clients are presented with a scenario such as preparing a meal for themselves during their postoperative recovery period. The occupational therapist provides explicit strategy instruction by physically modeling the energy conservation techniques and postoperative precautions associated with total hip and total knee replacement surgery as well as verbally conveying how and when the client will use them in daily life. Explicit instruction in the use of strategies takes time and is enhanced by creating an environment that promotes trust and risk taking, which allows learners and educators to try new strategies or creatively revise and adapt old ones. The ultimate goal is to encourage
clients to apply the principles of problem solving and engage in critical thinking when contemplating future problems associated with performing self-care, productivity, and leisure activities during their recovery period.

Providing a client with explicit instruction in the use of strategies may positively enhance the client’s self-concept as learner such that the client perceives himself or herself as being able to effectively participate in new learning as well as having the confidence to engage in problem solving. When describing self-concept and what it entails, Combs (1999) referred to the statement made by Raimy, who believed that the self-concept is a “perceptual object resulting from present and past observation...[it is] what a person believes about himself. The self concept is a map which each person consults in order to understand himself, especially during moments of crisis or choice” (p. 37).

A self-concept is also shaped by a person’s internal dialogue or self-talk, according to Purkey (2000), who believed that this internal process is also reflected and demonstrated externally in the form of a person’s behaviour. Therefore, it is important to break the cycle of negative self-talk as observed by Purkey, as this type of negative filter for examining problems can create a self-fulfilling prophecy. Combs (1999) also reported that when attempting to understand a person’s behaviour one has to only look at his or her current perceptions rather than referring to the past as a source of information. According to Combs, “the data with which we must deal in understanding and changing human relationships, then, are perceptions: people’s feelings, attitudes, beliefs and values” (p. 191). Novak (2002) stated that people use a filter that is woven with past perceptions and personal meaning to allow them to anticipate what will happen in the
future and to interpret new situations prior to taking action.

Developing the ability to take the necessary actions to care for oneself incorporates the concept of "agency" as discussed in Bandura's (2001) social cognitive theory, such that people through their actions create their experiences that help shape the course of their lives. One means of achieving agency is through the concept of "personal efficacy." van den Akker-Scheek, Stevens, Groothoff, Bulstra, and Zijlstra (2007) refer to the four components of self-efficacy as described by Bandura (1997). These include "mastery experience, vicarious experience, social persuasion and interpretation of somatic and emotional states" (p. 98). Lucas (2007) reviewed each of these components as described by Bandura (1997) and the manner in which they can be enriched to enhance surgical outcomes for clients who have received total hip and total knee replacement surgery. Each of these components will be discussed as they relate to various aspects of the teaching and learning experience in the Prehab Program of this study.

Providing clients with master learning experiences is achieved by having them practice tasks that they will be expected to perform postoperatively (Lucas, 2007). The Prehab Program is designed to allow clients to build their self-confidence, positive self-talk, as well as their personal efficacy by having them practice activities that they initially may have perceived as being somewhat threatening, such as climbing stairs with crutches or performing a bath tub transfer, while incorporating the precautions associated with the surgery. A vicarious learning experience refers to visual demonstrations that clients receive but are not followed by their participating in the task (Lucas). An example of this would apply to the occupational therapist using the demonstration kitchen to illustrate for the clients how they would set up the kitchen to engage in meal preparation
postoperatively while taking into account precautions that may be associated with their surgery.

Social persuasion is associated with the verbal feedback provided to the clients during their performance of tasks such as stair climbing with crutches (Lucas, 2007). Combs (1999) reported that a client’s motivation will be optimized when he or she is provided with immediate feedback during a learning experience. When a client is performing a task such as walking with a two-wheeled walker, the physical therapist provides explicit feedback with regard to areas in which the client is performing well and those which require improvement. Novak (2002) stated that an important learning strategy for educators is being able to convey artfully the strengths and weaknesses of a learner in association with his or her current behaviour. In addition to engaging clients in relevant activities, which serves to build their level of self-confidence, the therapy session serves to reinforce the clients’ sense of personal efficacy by having them draw on previous experiences that demonstrated their ability to accomplish goals in the past. According to Novak, learning experiences for clients need to be accompanied by the right level of “whelm” such that clients find the learning goals to be meaningful as well as challenging.

Somatic and emotional states refers to sensations, either physical or emotional, when clients envision themselves performing a task that they will be required to perform postoperatively, such as techniques for coping with pain management (Lucas, 2007). van den Akker-Scheek et al. (2007) believe that mastery experiences are the most important. Montin and Suominen (2002) reported that older adults who are provided with opportunities to create positive perceptions of their personal-efficacy may show
improvement in their functional abilities.

Although specific models for client education were not used when creating the Prehab Program, two models, the Health Belief Model and the Attribution Model as described by Berkeland and Flinn (2005), could be used as a framework for the Prehab Education Program. According to Rosenstock (1990), as cited in Berkeland and Flinn, the Health Belief Model incorporates aspects of “an operant behavioral model and cognitive theory.” Berkeland and Flinn report that an occupational therapist using the Health Belief Model when working with clients would examine elements of this model that influence the behaviour of clients, such as the estimated “severity of the threat, perceived benefits, barriers to change, and self-efficacy to change” (p. 423). This model is especially applicable to designing the educational material for the population of clients who have received total hip replacement surgery, as it would assist therapists in predicting factors that may influence behaviour in this population that lead to compliance or noncompliance in areas such as following the precautions associated with total hip replacement surgery. The “perceived threat” in this case would be the threat of dislocation following total hip replacement surgery if the clients did not adhere to the precautions.

When discussing the Attribution Model, Berkeland and Flinn (2005) referred to comments made by Lewis and Daltroy (1990), who believe that attributions are “causes individuals generate to make sense of their world” (p. 423). Four categories comprise the attribution model, which, according to Berkeland and Flinn, include “locus of control (internal and external), controllability, stability, and globality” (p. 423). The term globality refers to the personal characteristics of the clients that are general enough to be
applied to many areas. For example, total hip replacement clients may demonstrate a high level of anxiety with regard to following specific total hip replacement precautions. If the clients demonstrated a level of anxiety that was global, they are more likely to be anxious with regard to all aspects of the surgery and postoperative recovery period.

The Attribution Model examines the clients’ interpretation of negative as well as positive outcomes. With regard to negative outcomes, Berkeland and Flinn (2005) stated that “depending on the focus of the attribution, they can facilitate feelings of hopelessness, loss of control, and anxiety, and they can feed into self-fulfilling prophecy sequence of behavioral outcomes” (p. 423). From an Attribution Model point of view, the goal of the Prehab therapists is to increase the clients’ sense of control and to develop a positive perception of their self-efficacy.

Both the Health Belief Model and the Attribution Model acknowledge the importance of clients having a sense of personal efficacy. Positive self-talk that is grounded in reality contributes to our sense of personal efficacy (Purkey, 2000). Self-efficacy beliefs influence the goals clients choose as well as the level of effort and perseverance they demonstrate when faced with difficulties (van den Akker-Scheek et al., 2007). Combs (1999) stated that people are more likely to feel threatened and have a negative emotional response if they are dealing with general feelings of inadequacy. Butler et al. (1996) concluded that clients are more likely to experience stress if they have classified the situation as being important to them but lack the ability or the resources to cope with the stress. Bandura (1993) observed that individuals who perceive themselves as having a high level of efficacy tend to feel that their failures are attributed to lack of knowledge or effort. They also tend to recover from failure in a more timely fashion.
Bandura also stated that when faced with challenges, individuals with a low level of efficacy tend to retreat from the challenge, whereas individuals with a high level of self-efficacy tend to persevere and overcome the challenges.

Van Hoose and Strahan (1992) stated that it is important that learners receive inviting messages that help create positive perceptions and promote learning. Clients who attend the Prehab Program benefit from the practical element of the program, which helps shape positive perceptions as well as management of perceptions of failure that may occur postoperatively. For example, when a timely recovery from surgery does not occur due to medical complications, clients may view themselves and their surgery as being somewhat of a failure. Purkey’s (2000) comment regarding the manner in which a teacher helps students to cope with failure can also apply to a client’s interpretation of failure, with the therapist helping the client to understand that everyone experiences roadblocks, setbacks, and failure, as these are integral fibers of the fabric of life. As noted by Combs (1999), clients who modify their perceptions tend to be more creative than health professionals in finding ways to address and cope with their problems.

Occupational therapy uses a client-centred approach to assist clients in finding the means and the opportunity for them to choose, organize, and perform meaningful or useful occupations (Law, Polatajko, Baptiste, & Townsend, 1997). Therefore, it is important to provide clients with the opportunity to disclose and discuss issues that they may not wish to reveal to a group. Unfortunately, none of the four preoperative programs for clients awaiting hip replacement surgery as reviewed by Spalding (2000) provided clients with the opportunity to engage privately in discussions, which was a concern mentioned by one of the presenters. To accommodate the need for a private discussion in
the Prehab Program of the study hospital, the occupational therapist conducts a one-to-one interview with the client, using a small room that is located within the larger teaching room. During the one-to-one session between a client and the occupational therapist, a customized plan of action based on the client’s unique needs, support system, and living situation is formulated.

The one-to-one sessions offered by the Prehab Program of the study hospital are similar to the counseling session described by Stafford (1992), such that the interview provides the therapist with the opportunity to view a client’s perceptions. Use of the Attribution Model as a framework during the one-to-one session would assist the therapist in determining if clients possessed an internal versus external locus of control with regard to factors that would influence the outcome of their surgery and recovery process (Berkeland & Flinn, 2005). In order for a client to be comfortable conveying his or her true feelings, it is essential that an emotional connection and the establishment of trust be created between a client and the therapist during their one-to-one session. Giroux Bruce and Borg (2002) stated that providing clients with the opportunity to express their feelings in an environment of trust enhanced the clients’ focus when performing meaningful activities, improved their level of satisfaction with their therapy, as well as increased the likelihood of clients reaching their functional goals.

During the one-to-one session with the occupational therapist, clients may convey feelings of stress associated with learning new information as this involves clients temporarily letting go of feelings of competency. The presence of stress may alter the perceptual world of clients by affecting their ability to reason rationally, which may lead to cognitive distortions and the activation of incorrect core assumptions (Stanley, 1992).
Giroux Bruce and Borg (2002) reported that learning is influenced by the clients’ cognitive abilities which are used to make sense of reality. These authors believe that clients can “misread reality, over-generalize, have false or rigid beliefs, or use faulty cognitive processing and thus misinterpret reality” (p. 169).

The occupational therapist must take into account the physical and emotional context the client is functioning within in order to be sensitive and respectful of his or her situation and need for modification of the teaching experience. Brandt (2000) concluded that our attention to information may be biologically influenced. Brandt reviewed the work of psychiatrist Greenspan (1997), who stated that emotions are part of our unconscious arousal system and that in order to understand how they affect our behaviour we have to bring them to the conscious level in the form of feelings. For example, it is important that clients express feelings of anxiety and apprehension regarding their surgery, as the presence of these emotions may have a negative influence on the clients’ ability to problem solve and attend to as well as absorb new information (K. L. Reed, 2001). During the one-to-one session with the occupational therapist, clients are also encouraged to express their feelings regarding their current health status and plans to go home.

The presence of cognitive distortions can also contribute to the creation of a discrepancy between the actual abilities of clients versus their perceived abilities. The one-to-one interview allows the therapist to illuminate for clients perceptions which need to be challenged as well as discuss with the clients the benefit of modifying a perception. According to Purkey (2000), the role of the educator is to provide learning situations that challenge cognitive distortions or habitual patterns of thought. For example, clients may
have a preconceived notion that stair climbing with crutches will present too great a challenge. In this case, the occupational therapist may invite the clients to engage in a practice session with the physical therapist. The result of this experience may allow clients to reflect on their successful performance during the Prehab session and apply it to the postsurgery stair climbing as well as when envisioning themselves managing similar tasks in their home environment. Bandura (1993) stated that ability is not a fixed entity, but rather it has a "generative capacity in which cognitive, social, motivational, and behavioral skills must be organized and effectively orchestrated to serve numerous purposes. It also involves skill in managing aversive emotional reactions that can impair quality of thinking and action" (p. 118).

Knowing what to expect with regard to total hip or total knee replacement surgery can be a source of physical as well as psychological comfort. Gammon and Mulholland (1996) found that clients who received preoperative education benefited psychologically as well as physically. A review of the work of Butler et al. (1996), Clode-Baker and Gregg (1997), Giraudet-Le Quintrec et al. (2003), and Spalding (2003) revealed that providing clients with a sense of assurance through preoperative education enabled clients to anticipate what will happen postoperatively, which had a positive effect on reducing client anxiety. The authors, however, differ in their views as to the manner in which preoperative education influences the presence of anxiety in clients as well as its effect on preoperative versus postoperative levels of anxiety. A Cochrane review (McDonald, Hetrick, & Green, 2004) of verbal, written, or audiovisual preoperative education received by clients 6 weeks prior to their total hip or total knee replacement surgery revealed a modest level of benefit on reducing clients' preoperative anxiety, but
the education did not influence their postoperative levels of anxiety.

Giraudet-Le Quintrec et al. (2003) reported that preoperative education and knowing what to expect may result in a reduction in client anxiety and enhancement of coping skills in terms of clients dealing with postoperative pain. Spalding (2003) stated that clients who use their imagination and envision what will happen in the future are able to put their mind at ease and reduce their level of anxiety by playing out the surgery and recovery process in advance. Butler et al. (1996) concluded that clients who received preoperative education were less anxious before surgery and at the discharge date. In addition to education that discussed what to expect prior to surgery and upon discharge home, Hough et al. (1991) found that the level of anxiety experienced by clients and their families decreased when they were informed about what to expect postoperatively.

Heine et al. (2004) encouraged health providers to enhance clients feeling "safe" and ready for their discharge home by preparing clients physically as well as psychologically. Heine stated "a feeling of safety is influenced by psychological factors such as confidence, expectations and fears; community factors such as support after discharge and support of family; and physical factors, such as physical and functional capabilities" (p. 231). Based on these findings it appears that clients and their families benefit from information as to what to expect preoperatively as well as during all stages of recovery including discharge home.

Although the medical literature presents mixed points of view regarding the relationship between pain and anxiety, Spalding (2003) stated that the presence of anxiety usually necessitates an increased need for pain medication. In general, clients usually have an aversive emotional reaction to the level of pain associated with total hip or total
knee replacement surgery. Trousdale et al. (1999) reported that a potential source of stress and concern for clients following their total hip or total knee replacement surgery is the thought of having postoperative pain. Pain is a rather abstract concept, and the management of pain is an ongoing issue. In general, physicians tend to underprescribe pain medication, nurses tend to underadminister, and clients tend to underrequest pain medication.

Sjoling et al.'s (2003) findings did not indicate a correlation between reduced anxiety and reduced postoperative pain. However, the authors observed that some of the research questions were not understood and were left unanswered by the participants and therefore may not accurately reflect clients’ feelings of anxiety. Sjoling et al. discovered a positive connection between the preoperative education and reductions in clients’ postoperative pain and preoperative state anxiety. The authors believed that the positive results were attributable to the preoperative education having contributed to the development of clients’ self-care capabilities.

In terms of self-care, clients who are educated in and encouraged to assume responsibility for informing staff of their levels of pain and need for medication are more likely to take an active role in their recovery process, according to Sjoling et al. (2003). During the Prehab teaching session, clients are informed of the importance of monitoring their level of pain and ways in which they can manage their pain. One visual tool that allows clients to convey their level of pain to the medical staff with greater ease and accuracy is a pain analogue. The pain analogue used by the Prehab Program consists of pictures, numbers, and words that assist clients with rating their level of pain. Clients will also be promoting their recovery if they create a positive association between taking
their pain medication and being able to engage in activities such as the exercise program. Montin and Suominen (2002) reported that clients who have a positive attitude toward pain medication are more likely to take it in comparison to clients who have a negative attitude.

Bandura and Locke (2003) stated that previous negative experiences associated with pain management do not necessarily influence current self-efficacy beliefs in the area of pain management, as demonstrated in their review of clients who had received oral surgery. These findings may also apply to recipients of total hip and total knee replacement surgeries such that currently held perceptions and feelings of self-efficacy have a greater influence in shaping a client’s perception of his or her ability to manage postoperative pain rather than previous held self-efficacy beliefs. The Prehab teaching session offers clients the opportunity to develop positive self-efficacy beliefs regarding their ability to manage postoperative pain. Clients can also reduce their level of anxiety and postoperative pain by altering their perception of the surgery. Daltroy et al. (1998) discussed coping strategies that involve clients rethinking their attitudes and beliefs about joint replacement surgery as well as methods for coping with anxiety and lack of comfort. Included in these strategies are relaxation techniques and restructuring of thoughts as well as reassuring self-talk.

To enable a successful recovery following total joint replacement surgery, clients must follow prescribed precautions. For example, a client who receives a total hip replacement is not allowed to cross his or her legs at the knee and ankle level for approximately 3 months. If the time is not taken to learn the necessary precautions and follow them postoperatively, this may result in serious consequences such as dislocation.
of the hip postsurgery. Human beings are typically resistant to change according to Combs (1999); therefore, the therapist needs to present lifestyle adjustments in a positive manner, encouraging clients to keep in mind the main goal, which is a successful recovery from surgery. Some individuals quickly learn that the healing process of the body will serve as one of their greatest lessons in patience.

The lesson of patience and the need to focus on the larger picture concerning postoperative recovery is especially important for younger clients. While some clients require encouragement to engage in activities postoperatively, younger clients tend to feel that they can return to performing some activities such as work earlier than the prescribed time frame associated with their respective surgery. This misconception may extend to members of their family. Clients may need to protect their self-concept, which is based on their roles and attributes such as being a financial provider for their family. Purkey (1992) believes that a person has a fundamental need to defend, sustain, and advance the self-concept. According to Beane and Lipka (1984), this need results in "the self, in seeking stability, consistency, and enhancement, may choose to simply avoid threatening situations, to select certain sources of information and exclude others, to alter undesirable feedback, or to simply ignore it" (p. 16).

To optimize the client's healing process, it is essential that the occupational therapist and physical therapist stress to the client as well as members of the client's family the importance of adhering diligently to the temporary activity limitations. Combs (1999) believed that we cannot manipulate clients' perceptions so that they would view themselves or the world around them differently. Rather, he suggests that we are more likely to enhance positive change by providing a teaching environment that invites a
person to be more open to viewing as well as possibly enhancing his or her perceptions. As noted by Purkey (1992), change will most likely occur if a person is invited rather than threatened to change. Combs found that students benefit from being “challenged” to learn rather than threatened. For example, during the one-to-one session with the occupational therapist, clients are invited to increase their level of awareness of potentially unproductive perceptions. This increased awareness enables clients to adjust their perceptions and subsequent behaviour, which may in turn enhance their performance postoperatively. The length of time required to modify a client’s perceptions may be extensive according to Combs, as current perceptions are usually built on past perceptions. Combs stated that during a person’s life, perceptions are continuously being constructed and reconstructed based on new experiences.

Gammon and Mulholland (1996) found that clients benefit physically and psychologically when they are provided with the rationale for following various procedures, as this leads to compliance, active participation, and the promotion of their recovery. Butler et al. (1996) stated that clients will incorporate the educational information if they believe it will help them cope and reduce their level of stress. Bandura (2004) revealed that the goals pursued by a person are based on his or her value system. Bandura reported that people are more likely to be motivated to engage in habits that will promote their well-being if they are enabled to see that changing a habit is in keeping with their best interests and the greater goals valued by them.

Intentionality, as discussed by Purkey (1996), is demonstrated when a therapist intentionally invites a client to pursue a learning experience while being cognizant, as suggested by C. Reed (1992), of the need to have and convey positive expectations that
the client will succeed at the undertaking. A therapist’s attitude, whether positive or negative in regard to his or her expectations of a client’s recovery, will respectively influence that client’s perceptions and behaviour regarding recovery. If the therapist models a level of optimism when dealing with potential setbacks, the client is likely to take an optimistic stance as well. As discussed by Seligman (2002), optimists see problems as temporary obstacles that are isolated incidents that can be overcome. Bandura (1997) stated that optimism is required for achievement and a feeling of “well-being.” Combs (1999) believes that the doubt a therapist conveys regarding a client’s ability to perform a task may influence a client in such a manner as to contribute to a negative downward cycle of the client’s self-concept. Combs challenged educators to postulate what would happen if they “consciously and carefully set about the task of providing experiences that would lead people to perceive themselves as adequate, worthy, self-respecting people” (p. 141).

Duke (2004) reported that it is only recently that educators are becoming aware that learners utilize prior knowledge, construct knowledge, and that a great deal of learning evolves from social interaction. The average group size for the Prehab teaching session consists of four clients. Giraudet-Le Quintrec et al. (2003) have observed that a smaller group size such as three to six members facilitates the development of trust by allowing more interaction and response to questions. The social interaction of the clients at the group level helps to promote learning.

Creating Inviting Teaching and Learning Environments

Lack of a nurturing environment would be considered an external factor that influences a client’s perception of an educational experience. A nurturing environment
offers support, guidance, and encouragement, keeping the client’s best interests in mind. Clode-Baker and Gregg (1997) stated that a hospital environment may serve as a source of stress for the client and therefore affect the client’s ability to “assimilate” new information. Creating an inviting educational environment serves to promote learning. Purkey (2000) stated that all aspects of a hospital should have a positive effect on client health. Of the four preoperative educational programs reviewed by Spalding (2000), two utilized approaches that demonstrated elements of an inviting stance. For example, in one of the educational programs the atmosphere was relaxed and client-centred such that clients felt comfortable asking questions and discussing their concerns. Clients from another preoperative education session were informed that they would be doing "things for themselves," which invites clients to take responsibility for their educational experiences and outcomes.

Combs (1999) believes that “person-centred thinking is a process-oriented frame of reference” (p. 216). Spalding (2003) also observed that an atmosphere that is relaxed helps increase the level of confidence that the client has in the healthcare staff. Hough et al. (1991) reviewed the approach used by the preoperative educators who sent inviting messages that set the tone for collaborative work by introducing the teaching session with phrases such as "doing with." Ultimately, clients must take ownership of their educational experience, with the therapists serving as facilitators, assisting with strategizing, and determining relevant goals to increase the level of independence of clients and improve their quality of life.

It can be argued that the intrinsic nature of a healthcare institution does not advocate the qualities of a nurturing environment and therefore is not connecting with the
client's natural motivation to learn. According to Purkey (1996), a “doing with” approach helps to promote intrinsic motivation. In a healthcare institution, the goal is to have the clients return to a state of health which will allow them to be discharged to their home or seek an alternative living situation. There are philosophical differences between therapists and other healthcare providers. The traditional approach to healthcare is to serve as the provider of care based on the medical needs of the individual. The goal of therapists, however, is to determine the client's occupational performance issues and work in partnership with the client on goals that are relevant to the client.

The provision of a nurturing environment may contribute to a client's motivation and ability to learn. Motivation is enhanced by formulating goals (Doll, 1992). An adequate amount of time has to be spent to determine what motivates the client to engage in learning. Clients who have an awareness of their values and goals are more likely to draw on internal self-sustaining motivational factors rather than trying to accomplish a task well based on external motivational factors such as approval/disapproval of their therapists. This concept of internal motivation is supported by Doll, who stated that “others merely set the stage or provide suitable conditions for his motivation. Richardson (2006) reported that clients will achieve a higher level of independence when performing activities if the learning process involves intrinsic versus extrinsic forms of feedback. In occupational therapy, the goal is to eventually reduce extrinsic feedback, which in turn increases the clients' level of independence and ability to perform the activity in a variety of contexts (Richardson).

**Streamlining Process**

Giesecke and McNeil (2004) reported that learning involves the process of
moving from data collection to taking action on the data collected to create the needed changes. As a result of receiving feedback from clients and peers, the Prehab Program has made major as well as minor changes to enhance the content and process of the program. For example, some of the Prehab clients, in addition to being booked for the Prehab Program, were scheduled to attend another presurgery program the same day. The practice of booking clients for both programs, which results in an all-day teaching session, is not uncommon in other hospitals. Unaware of the practice in other hospitals, the physical therapist and the occupational therapist had assumed that this type of double booking was not taking place. Many of the candidates for total hip and total knee replacement are elderly, and the therapists believed that these clients would likely not have the general tolerance to partake in two programs on the same day. Giesecke and McNeil encouraged educators to examine their assumptions in relation to the manner in which the organization functions and to examine the system in its entirety to improve “processes” as well as “systems.” Following the feedback from clients, the receptionists of the Prehab Program of the study hospital have almost eliminated the double booking of appointments.

Another example of streamlining process involved a change in the process for acquiring confidential information during the one-to-one interview between the client and the occupational therapist. This interview takes place in a small room located within the larger room where the Prehab Program's group teaching session is held. Initially, the representative of the computer program services provided the occupational therapist with a portable computer that is designed for use on the acute care units. The computer cannot be detached from its sizable wheeled stand. The placement of the computer was also
limited due to the small size of the interview room. The interviewer's body had to be positioned sideways to the client, with the therapist turning her head in the direction of the client when asking questions. It was deemed that it would be more comfortable for the therapist and the client if they were facing each other. The fan in the computer also made a loud humming noise that was not absorbed by the cement walls. Given the fact that many of the clients attending the Prehab Program are older adults with a degree of hearing impairment, the volume of the fan was rather disruptive.

The manner in which the one-to-one interview is conducted or the "how" is just as important as "what" is discussed with a client, as reported by Purkey (2000). Fink (1992) stated that educators who are engaging in disinviting practices may fall back on the notion that they do not have a choice in the types of behaviour they show at work. This sense of apathy may also apply when a healthcare educator does not make an attempt to create an inviting teaching and learning environment. Although it was initially time-consuming on the part of the Prehab therapists as well as the Outpatient Rehabilitation manager to address the issue with the computer, the result has been the provision of a laptop computer, which has made the process of gathering information more inviting for the therapist as well as the clients.

Establishing Effective Policies

The finance department of the study hospital has a policy that involves registration of clients in the main computer system under the appropriate category for their attendance. Prior to the Prehab Program, clients scheduled for a total joint replacement attended only the Preadmission Clinic, whose main purpose is to ensure that a client is medically fit for surgery. The person who co-ordinates this program would be
the same person who also establishes appropriate account for the Prehab clients. During the initial stages of running the Prehab Program, the Prehab therapists noted that at times the account was not set up until 15 minutes before the arrival of the client, which was rather stressful for the therapists of the Prehab Program. Inevitably the interview sessions would be delayed, which necessitated an explanation to the client. Clients may have potentially perceived this delay as a disinviting message in that it appeared that the hospital had not prepared for them in advance of their arrival.

Possible frustrations associated with the delay of the interview process could also have set a negative tone for the rest of the teaching and learning experience that was to follow. Combs (1999) stated that learning is enhanced when a person feels “cared for” and given a sense that they “belong.” Therefore, a revision of the policies of the study hospital was required following the inception of the Prehab Program. The manager of the Outpatient Rehabilitation Department, who represents the Prehab Program, participated in many conversations and has devoted a substantial amount of time to ensure that this routine which was years in the making would finally change.

Summary

A review of the literature in the area of orthopaedic surgery, specifically total hip and total knee replacement surgery, reveals that research, especially as it relates to the psychoeducational teaching, is lacking for clients receiving these types of surgeries. Another void in orthopaedic research appears to be in the area of client satisfaction and expectations associated with orthopaedic surgery. There is a need to clarify, meet, and in some cases assist clients with realistically modifying their expectations to ensure client satisfaction and positive surgical outcomes.
This literature review was structured using the “5 P’s” as discussed by Purkey (2000) that influence inviting relationships, namely programs, people, places, policies, and processes. Purkey noted that the five P’s can be used to create positive change within educational organizations. He uses the analogy of the starfish to illustrate the manner in which the starfish effectively deals with its prey by using the cumulative effect of all five points to create the desired effect. Purkey suggests using the five P’s of invitational education to approach problems from many vantage points, which will assist in finding effective solutions. The five P’s were also used as a framework for the research questions of this study.

The main question that this research study addressed concerns the manner in which an inviting approach to preoperative education influences perception and recovery of clients receiving total hip or total knee replacement surgery. This study intended to determine if the clients of the Prehab Program perceive that the program has prepared them psychologically, physically, and socially for surgery. The five P’s were also used in this study to facilitate an educator’s understanding of the interrelationship of the internal and external elements within the educational ecosystem that shape and influence client perception. The findings of this study will also evaluate the degree to which the Prehab Education Program has incorporated the principles of invitational theory into practice.

Two one-to-one interviews took place between each of the study participants and the principal investigator. The first interview occurred prior to the study participant’s attendance of the Prehab Program. The second interview took place after the participant had attended the Prehab teaching session and had received total joint replacement surgery. Based on the literature review, preoperative and postoperative interview
questions (Appendixes A and B) were created. Individual interviews (Appendix C) were performed between the principal investigator and the occupational therapist and physical therapist who were the coleaders of the Prehab Program at the time of this study. As former coleader of the Prehab Program and principal investigator of this study, I was interviewed by the Faculty Supervisor, Dr. John Novak (Appendix D). Below is a summary of the questions for the aforementioned interviews.

Preoperative Interview Questions for Client Participants

The preoperative interview questions were designed to provide the opportunity to gain an understanding of the clients in areas such as the clients’ attitude and level of understanding of total hip and total knee replacement surgery, their preoperative and postoperative concerns, as well as their prior experience in the management of health-related issues. With regard to the surgery and recovery process, clients were encouraged to express their expectations in terms of themselves as recipients of a new joint replacement, the Prehab educators, the Prehab Education Program, as well as general expectations they might have. The preoperative questions also probed deeper into a variety of topics such as client participants’ views on perception, role of self-talk, and their unique learning styles.

Postoperative Interview Questions for Client Participants

The second interview took place once the clients were discharged home from surgery. The postoperative interview questions were created to facilitate client participants’ reflections on their surgery and recovery process to determine if their preoperative expectations were fulfilled. Client participants were asked to evaluate the Prehab Program in terms of its content as well as its process. Participants were
questioned if information that was provided during the education session was conveyed effectively, respectfu
Questions for Principal Investigator of this Study to Be Asked by Faculty Supervisor

Just as the interview questions for the Prehab therapists promoted reflection on practice of their experience as coleaders of the Prehab Program, the interview questions administered to me by the Faculty Supervisor of this study promoted my reflections on my role as cocreator of the Prehab Program and principal investigator of this study. The questions included discussing my rationale for choosing the topic of perception as the primary focus of this study as well as the reason why invitational theory was used as a framework both for creation of the Prehab Program and as a compass to guide the study investigation. An evaluation of the effectiveness of the Prehab Program in terms of incorporating the principles of invitational theory was also included in the interview questions. The manner in which an inviting approach to teaching and learning experiences has the potential to influence the perception of Prehab clients was also reviewed during this interview. The interview concluded with a question that requested that a comparison and contrast be drawn with regard to the approach to interviewing as a researcher versus therapist.

A qualitative case study methodology was used in this research study. Candidates at the study hospital who were scheduled for either a total hip or total knee replacement surgery were contacted by letter inviting them to participate in a research project. Details of the research methodology and processes involved are described in Chapter Three of this paper.
CHAPTER THREE: METHODOLOGY AND PROCEDURES

The Prehab Program originated in January 2005 as part Ontario's Ministry of Health and Long-Term Care Wait Time Strategy that included client-focused education programs. The intention of this government-sponsored initiative was to reduce the waiting period for some elective surgeries such as total hip and total knee replacements. This chapter describes a qualitative case study research project used to examine the preoperative education offered in the Prehab Program and the manner in which it influences the perception of clients awaiting total hip and total knee replacement surgery.

The program is based on the assumption that in order to optimize the educational experience of clients and positively influence their recovery from surgery, educators need to understand the psychology behind human behaviour and factors that influence it (Combs, 1999).

The rationale behind the methodology and study design chosen for this thesis is discussed in this chapter. The manner in which participants were invited to be a part of the research study and the interview process used to acquire the confidential information are outlined in this chapter. The format for data collection and data analysis methods as well as the procedures used to ensure the trustworthiness of the research findings are also described herein. Finally, the importance of acknowledging the limitations of this study as well as the potential areas of research bias and the methods that were used to avoid it are reviewed in this chapter.

Rationale for Methodology

A case study methodology was used in this study as described by Merriam (1998). According to Merriam, a case is viewed as a "thing, a single entity, a unit around which
there are boundaries” (p. 27). The “case” of this research study refers the Prehab Program. Merriam’s reference to the work of Kenny and Grotelueschen (1980) supports the use of a case study research method especially when the objective of the evaluative research is to “develop a better understanding of the dynamics of a program. When it is important to be responsive, to convey a holistic and dynamically rich account of an educational program” (p. 39). A case study approach also complements the values of invitational theory as it too is concerned with the “process” of an educational experience (Beardsley & Jacobs, 1992; Merriam). According to Salminen, Harra, and Lautamo (2006), case study methodology provides the means to examine “occupational therapy interventions and to study what these interventions mean to participants, clients, their intimate partners and therapists, and it can be used to focus on processes of interventions that are not easy to explore in experimental studies” (p. 7).

Wright and McKeever (2000) reviewed the work of Gilchrist and Engel, who state, “qualitative methods are often optimal for the investigation of social or psychological phenomena including behaviours, motivations, perceptions, and expectations” (p. 276). Merriam (1998) believes that “in education a case study of an individual, program, event, or process might well be informed by a psychological concept” (p. 37). This qualitative case study of the Prehab Program was informed by the psychological concepts of the perceptualist Combs (1999) as well as self-concept theory and perceptual psychology associated with invitational theory (Russell, 1992). Qualitative research assists in the understanding of an experience while taking into account the important role context plays in the experience (Giacomini, 2000; Salminen et al., 2006; Sofaer, 1999; Wright & McKeever). Popay and Williams (1998) also
acknowledged the importance of context, stating there is not "one truth" with regard to an experience and that the meaning connected with the experience is dependent on the social context.

In addition to enabling the study of patterns amongst variables, qualitative methods provide researchers with the opportunity to acquire rich and meaningful descriptions of what is being studied (Giacomini, 2000; Salminen et al., 2006; Sofaer, 1999). Popay and Williams (1998) stated that qualitative research focuses on the "meanings that people attach to experiences, the relationship between knowledge, experience and action and the social factors that shape these processes" (p. 34). Sofaer and Corbin (2006) reported that qualitative research serves as a mechanism for developing concepts as well as evaluating and adding to existing theory. Salminen et al. believe that case study research enables occupational therapists to "learn more about their clients and interventions, understand their practice in more detail, reconceptualise practical problems and relate theory to their practice" (p. 7).

**Research Design**

According to Merriam (1998) and Creswell (1998), case study research design is commonly found in education. Merriam stated that a qualitative case study is an "intensive, holistic description and analysis of a single unit or bounded system" (p. 12). The single unit or bounded system analyzed in this research project refers to the Prehab Program. The main source of data collection for this case study involved semistructured interviews with key informants (Merriam). The interview questions were formulated with reference to the themes derived from the literature review. According to Merriam, "the things we observe in the field, the questions we ask of our participants, and the
documents we attend to are determined by the theoretical framework of the study" (p. 48). The participants' interviews were coded. Concepts derived from the coding evolved from simple to more complex. Eventually, as stated by Corbin (2006), "themes" or "patterns" were created. The themes that emerged from this study were compared with existing themes in education as well as rehabilitation literature.

**Participant Selection**

Participant selection for this study involved purposeful selection and convenience sampling. Five clients agreed to be participants in this study. Creswell (1998) reports that the average number of cases in a qualitative case study is four. Larger numbers do not permit the level of depth associated with case study research, and according to Merriam (1998) the goal of case study research is to acquire an "in-depth understanding of a situation and meaning for those involved" (p. 19) rather than generalizability of findings which is associated with quantitative research.

The receptionist for the Outpatient Rehabilitation Department contacted clients who were awaiting total hip and total knee replacement surgery to book their appointment to attend the Prehab Education Program. The receptionist was provided with a script (Appendix E) that was used to acquire client permission for release of the mailing address to enable an information package regarding the Prehab case study to be sent to clients. Candidates who were agreeable to receive an information package were sent a Letter of Invitation and Information Consent Letter/Form that they were to complete should they wish to participate in the research project. Once study participants completed and returned the consent form, they were contacted by the principal investigator to arrange a time for the initial one-to-one interview session. As the
participants were provided with the option of meeting at the hospital or their home for a face-to-face interview, it was preferable to have individuals who lived in close proximity to the study hospital for convenience and easy access.

Interviews with the clients’ therapists, present and past, were also performed. The therapists were provided with a Letter of Invitation as well as an Information Consent Letter/Form. Individual interviews (Appendix C) between the principal investigator and the occupational therapist and physical therapist who are the current coleaders of the Prehab Program were conducted. The interviews took place at the hospital of this study. As former coleader of the Prehab Program and as the principal investigator of this study I was interviewed by the Faculty Supervisor, Dr. John Novak (Appendix D). This interview took place at Brock University Campus in St. Catharines. All of the aforementioned interview questions are outlined in detail below.

**Interviews**

Two one-to-one interviews took place between each of the study participants and the principal investigator at a location that was convenient for the participant and was conducive to performing a one-hour confidential interview, such as the study hospital or the participants’ residence. The first interview occurred prior to the study participants’ attendance of the Prehab Program. The second interview took place after the participants attended the Prehab teaching session and received total joint replacement surgery. Based on the literature review, preoperative and postoperative interview questions (Appendixes A and B) were created. Individual interviews (Appendix C) between the principal investigator and the occupational therapist and physical therapist who were the current coleaders of the Prehab Program were also performed. As former coleader of the Prehab
Program and principal investigator of this study, I was interviewed by the Faculty Supervisor, Dr. John Novak (Appendix D). Below is a summary of the questions for the following interviews: preoperative and postoperative client participants, Prehab therapists, and the principal investigator of this study.

Sofaer (1999) believes that qualitative research allows clients to express their thoughts more freely rather than confining their responses to “categories.” With regard to health services Sofaer stated,

the “rich description” capacity of qualitative methods can result in a far more complete, and often far more compelling articulation of the intervention, one that can be used both in helping to explain outcomes and in encouraging the adoption of effective practices (p. 1107).

Participants who were classified as key informants engaged in face-to-face, semistructured interviews. According to Sofaer, qualitative researchers need to be cognizant of what constitutes an open-ended style of questioning during interviews, as this is a “core discipline” of qualitative research. Spalding (2000) reported that the researcher’s questions are not limited in semistructured interviews, and therefore the responses of the participants are broader and not restricted. One of the research goals was to obtain information that I potentially could not anticipate from clients. Spalding’s review of the work of Field and Morse (1985) revealed that a semistructured format is especially beneficial when researchers have the topic or issues to be discussed but the responses are unknown.

The interviews in this study also incorporated the suggestions made by Rubin and Rubin (1995) such that in order to allow for “flexibility to change questions while
maintaining an overall structure, researchers pattern interviews around three types of questions – main questions, probes, and follow up questions” (p. 145). The main questions should convey an underlying focus of the interviews as discussed by Rubin and Rubin. The use of probes by the researcher during qualitative interviews provides participants with an opportunity to clarify ambiguous information. This results in the full expression of an idea and reduces the incidence of the researcher making assumptions based on his or her own perceptions rather than the clients’ when gathering and interpreting the material. To encourage full expression of the participants’ thoughts, Corbin (2006) believes that qualitative researchers need to ask the question “why” behind participants’ comments, which helps to create meaning through elaboration.

The one-to-one interview with the participants were introduced by informing the clients of the focus of the study, which involves the examination of client perception. Clients were informed that one of the main goals of the study is to determine whether or not education can influence client perception, which includes areas such as a client’s feelings, beliefs, and attitudes towards his or her surgery and recovery. In Appendixes A and B preoperative as well as the postoperative interview questions for the clients are listed as well as a basic rationale as to why each question had been chosen. It is also noted where questions may require further explanation or the provision of examples to facilitate a client’s understanding of the question.

*Preoperative Interview Questions for Client Participants*

The preoperative interview questions were designed to provide the opportunity to gain an understanding of the clients in areas such as the clients’ attitude towards having surgery, specifically their preoperative and postoperative concerns. Clients were asked to
conveyed effectively, respectfully, and was performed in an environment that facilitated learning. This question examined whether or not the Prehab Program was incorporating the principles of invitational theory into the practice.

Client participants were also asked if they believed that the Prehab Program prepared them physically, socially, and psychologically for their surgery and recovery period. In addition to having clients define how the program prepared them, this question facilitated determining if the clients followed through on suggestions made by the Prehab therapists. Participants were also asked if the Prehab Program influenced their perceptions concerning their surgery and recovery process. This question explored whether or not the participants perceived the Prehab Program as being an influencing factor in the area of their thoughts, beliefs, and attitudes concerning their surgery and recovery period. The role that client participants believed they played in their own recovery as well as the content of their inner dialogue, if present, such as self-talk were included in the interview questions. The response to these questions revealed the clients’ ability to assume responsibility for aspects of their recovery and whether or not they participated in negative or positive self-talk postoperatively.

*Interview Questions for the Prehab Therapists*

These questions were designed to investigate if the Prehab therapists at the time of this study believed they were incorporating the principles of invitational theory. For example, the therapists were asked if elements of an inviting relationship such as respect, trust, optimism, and intentionality were part of their interaction with clients. Specifically, they were asked to examine if the Prehab Program was inviting in terms of the “5 P’s” as discussed by Purkey (2000), namely programs, people, policies, places, and processes.
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The therapists were also questioned as to whether or not they believed that the Prehab Program was preparing clients physically, socially, and psychologically for surgery. During the interview, it was requested that the therapists discuss factors that they believed where important for the creation of an effective teaching and learning experience for the Prehab clients. Included in the therapist questions was the possible role that the Prehab Program plays in terms of influencing the perceptions of clients, which in turn may influence their recovery from surgery.

*Questions for Principal Investigator of this Study to Be Asked by Faculty Supervisor*

Just as the interview questions for the Prehab therapists promoted reflection on practice, the interview questions administered to me by the Faculty Supervisor of this study encouraged reflections on my roles as cocreator of the Prehab Program and as principal investigator of this study. The rationale for choosing the topic of perception for the primary focus of this study as well as the reason why invitational theory was used as a framework both for creation of the Prehab Program and as a compass to guide the study investigation were included in the interview questions. An evaluation of the effectiveness of the Prehab Program in terms of incorporating the principles of invitational theory was also included in the interview questions. The manner in which an inviting approach to a teaching and learning experiences has the potential to influence the perception of Prehab clients was reviewed during this interview. The interview concluded with a request to examine the possible differences in the approach used when interviewing clients in the role of researcher versus as an occupational therapist.

*Data Collection*

According to Mays and Pope (1995), the "basic strategy to ensure rigour in
qualitative research is systematic and self-conscious research design, data collection, interpretation, and communication” (p. 110). Mays and Pope stated that audiotaping allows the information to be independently reviewed by another observer. All interviews were audiotaped in addition to notes taken by myself in what Strauss and Corbin (1998) as well as Creswell (2005) refer to as memos, which are written accounts of the coding. I used these notes to capture my inferences as well as cue myself to areas that needed further clarification. The memos assisted in keeping track of ideas and directions that I wanted to explore further with each participant. I also kept track of my feelings and attitudes to facilitate my awareness of potential biases when interpreting the findings.

The collection and coding of data followed a process as described by Rubin and Rubin (1995) which consisted of identifying patterns, concepts, and themes, with the eventual creation of theory or explanations that incorporated the themes.

Data Analysis

Data analysis in this study involved comparison and contrast of the participant interviews while taking into account observations and notes taken by me during and after the interviews. Creswell (2005) stated that analysis and data collection occur simultaneously in qualitative research. Mays and Pope (1995) stressed the importance of qualitative researchers keeping detailed records of the interviews, observations, and the analytical process involved when interpreting the research material. Therefore, once the tape-recorded interviews were transcribed, I recorded in brief form what I believed was the essence of each of the study participants’ quotations. After reviewing each transcript several times, a tentative category was then assigned to each of the quotations. Five coloured highlighters were used to colour-code the participants’ quotations as they
related to the framework of “5 P’s” of invitational theory. Once preoperative and postoperative themes were established, the quotations were cut and pasted electronically and placed under their respective themes.

Qualitative research involves the breaking down of ideas and then rebuilding them to create a more fluid form, according to Corbin (2006). The depths of my understanding of the clients’ perceptions increased following each interview, which resulted in an adjustment of the categorical ideas. Corbin reported that in order to accurately represent the information presented by clients, categories need to be adjusted as the body of knowledge grows. Corbin also encourages qualitative researchers to examine the transcripts of client interviews and ask questions such as “so what?” or “what if?” to encourage the researcher to consciously look at the material from another perspective.

**Trustworthiness and Credibility**

To ensure the credibility of this study, the standards suggested by Rubin and Rubin (1995) were incorporated such as transparency, in which the process involved in the collection of the research data is visible to reviewers. A record of the organization and analysis of the transcripts as recommended by Rubin and Rubin was implemented. Evidence of the manner in which themes where scrutinized was also provided. I invited one of my physical therapist colleagues to review the preoperative and postoperative client participant transcripts. On each of the client participant transcripts I made interpretive notes to capture the essence of their interview comments. I requested that my colleague review these notes to determine if she would draw similar or different conclusions based on the transcript data. Although my colleague’s interpretation of the
findings did not differ significantly from mine, even slight variations were taken into account during my analysis of the data. Input from a variety of sources such as clients and therapists provided multiple perspectives of the Prehab Program, thus enhancing the credibility of this study by facilitating the triangulation of data.

Maintaining consistency as prescribed by Rubin and Rubin (1995) was achieved by performing continuously comparison and contrasts with the emerging themes from the interviews. If inconsistencies were present in the research findings, a plausible explanation was sought. Last, member check (Creswell 1998; Giacomini, 2000; Merriam, 1998) or what Rubin and Rubin refer to as communicability was incorporated to ensure that the study participants, upon review of the research report, felt that as a researcher I accurately captured the thoughts they conveyed during the interview. The client as well as therapist participants in this study were provided with a typed transcript of each of the interviews. I reviewed these transcripts by phone or in person with each of the respective participants. Although minimal alteration of the transcripts was required, the member check discussion provided the study participants with the opportunity to include and clarify words that were somewhat inaudible during the taping of the interview. The information collected should be rich in detail and description such that upon examining the material and the means of data analysis, it will appear to an external reviewer as though he or she has been transported to the time of the actual interview (Giacomini; Rubin & Rubin).

**Researcher Bias**

Merriam (1998) stated that the researcher is the main instrument for the collection and analysis of data. According to Merriam “one of the assumptions underlying
qualitative research is that reality is holistic, multidimensional, and ever-changing; it is not a single, fixed, objective phenomenon waiting to be discovered, observed, and measured as in quantitative research” (p. 202). Therefore, just as the participants are continuously making meaning of their experiences based on their perceptions, I too am using my perceptions and life experiences which serve as a filter during my observations and analysis of the data. Popay and Williams (1998) advised qualitative researchers to resist using their professional knowledge as a filter when examining a participant’s experiences but rather acknowledge that there are other ways of expressing knowledge that are equally worthy. Popay and Williams believe that a key question to ask is “does the research, as reported, illuminate the subjective meaning and actions and contexts, of those being researched?” (p. 35). With regard to identifying patterns and working towards a hypothesis, Sofaer (1999) referred to the work of Patton (1990), who stated that when qualitative researchers identify a pattern they should deliberately seek out evidence to the contrary resulting in rejection of a hypothesis which, according the Sofaer, helps to prevent researcher bias.

Mays and Pope (1995) also advised openly presenting assumptions and research methods. One of my assumptions associated with being one of the original designers and co-co-ordinators of the Prehab Program is that the program is designed to prepare clients physically, psychologically, and socially for surgery. I also assume that the principles of invitational theory and adult learning theory will continue to be an integral part of the program. During the time of this study, a new occupational therapist assumed responsibility for coleadership along with the original physical therapist of the Prehab Program. The occupational therapist had made adjustments to the program in terms of
content and process. Sofaer (1999) reported that qualitative research enables the
discovery of the manner in which the current leadership agendas, interventions, and the
intentions behind them may differ from the original planner's.

**Limitations**

As an occupational therapist, performing client interviews is part of my daily
practice. My role as a therapist is similar to what Stafford (1992) described when
referring to a counseling session such that interviews serve as an opportunity to view
client perceptions. According to Stafford, during a therapeutic interaction, a therapist
expresses "by reflection or confrontation, new insights or understandings to the client
which the client previously had not been able to accept or understand" (p. 214). During
my discussion with clients, I normally illuminate for the clients areas that involve
perceptions, self-talk, or self-efficacy beliefs that may be counterproductive to his or her
recovery. I also promote a sense of self-efficacy in clients by helping them to understand
that they have overcome other challenges in their life. Whenever possible, I attempt to
draw parallels between the clients' prior life experiences and the new challenges they
face in terms of the surgery and postoperative recovery process.

In my role as researcher, however, I found that I did not probe as deeply into
topics that were associated with evoking a sense of fear and anxiety for the participants.
Upon reflection, I believe that several factors contributed to my inhibitions. First, these
interviews were a forum for clients to reveal their perceptions, and yet, because they were
not conducted in a therapeutic manner, I felt that probing too deeply would serve only to
increase the level of anxiety for those participants who were contending with that
emotion.
Second, I believed that discussing one's inner emotions is challenging in and of itself, and I was very cognizant that these participants were gracious enough to do it on a voluntarily basis. Keeping that in mind, I was aware that they could withdraw from the study at any time. As it was, rich, descriptive materials that included the beliefs, feelings, values, and attitudes that shaped the participants' perceptions were gathered during these interviews.

As with all qualitative research, the focus and the end goal of this research was not the generalizability of the findings, but rather it was an opportunity to take a deeper look at the manner in which a select group of individuals experienced a life event. In this case, the event was total hip or total knee replacement surgery. While the findings of this research are context dependent, they do provide researchers and reviewers with a chance to see the common elements which all of us possess to varying degrees that shape our perceptions and therefore our reactions to life situations.

In order to facilitate the categorization and analysis of the finding in this study, separate themes were created that examined the internal as well as external elements that influence client perception and recovery from surgery. Although these elements were viewed separately, it is important to use a holistic approach that takes into account the interactions between these elements that affect a client's educational experience. For it is the interaction of these elements, when working together in combination, that are greater than the sum if its parts (Combs, 1999). The findings of this study also reinforce our interdependencies rather than our divisiveness as human beings.

**Ethical Consideration**

Prior to commencing with this research study, clearance was acquired from Brock
University's Research Ethics Board (Appendix F) as well as the Board of Governors of the study hospital. The data in this study were acquired and stored in a confidential manner. In addition to coding the results, the names of the study participants were coded as suggested by Creswell (2005). Pseudonyms were used to protect the identity of the study participants. The purpose and nature of this study were outlined in the letter of invitation to partake in the study as well as verbally conveyed to the study participants once they agreed to be a part of the study. As recommended by Creswell, upon review of the transcripts, study participants were asked if they wished to have some of the information withheld if it infringed on their privacy.

**Summary**

In summary, a qualitative approach was used in the study of client perception to acquire a deeper understanding of human behaviour and factors that influence it.

Semistructured interviews were used to obtain the information. This chapter discussed the rationale behind the research methodology, research design, and the process of choosing participants that were involved in the study. The interview process was outlined, and the manner in which the information was documented and analyzed was reviewed. Methods of ensuring trustworthiness and credibility of the research while avoiding researcher bias were discussed. The ethical considerations that were used to ensure that client confidentiality is maintained at all levels were conveyed.
CHAPTER FOUR: ANALYSIS AND FINDINGS

This study examined a preoperative education program called Prehab and its influence on the perception of recovery for recipients of total hip and total knee replacement surgery. The Prehab Program started in January 2005 as part of the Ministry of Health of Ontario’s Wait Time Strategy, which is a client-focused healthcare initiative. When first established, the goals of the Prehab Program were to prepare clients psychologically, physically, and socially for surgery. Principles of invitational theory were incorporated into the original design, implementation, and evaluation of the program.

Using a qualitative case study methodology, clients who were awaiting a total hip or total knee replacement surgery were invited, through the use of purposeful selection and convenience sampling, to partake in this study. Preoperative interviews were conducted with clients awaiting total hip and total knee replacement surgery as well as postoperative interviews with clients who had received total hip replacement surgery. The occupational therapist and physical therapist who were coleaders of the Prehab Program at the time of this study were also interviewed.

This chapter reviewed the findings of this study, which focus on the perceptions of clients as well as the Prehab therapists and are summarized and expressed in the form of themes. The themes of this research study are composed of elements that contribute to creating the internal as well as the external factors that shape participant perceptions and are in keeping with existing themes in education and rehabilitation literature. In this study internal factors refer to elements within the individual that influence perceptions. With regard to external factors, these may influence the internal state and perceptions of a
client, but they originate from a source that is external to the participant such as the environment in which the learning takes place.

When presenting the internal factors that influence participants' perceptions of their surgery and recovery process, seven main themes, some of which have subthemes, were created. The connecting thread that runs through each of these themes involves participant expectations and they are titled accordingly: Expectations of the Surgery, Expectations of Self, Expectations of Recovery Process, Expectations of Support System Preoperatively and Postoperatively, Expectations of the Prehab Educators, and Expectations of the Prehab Education Session.

The "5 P's" of invitational theory (Purkey, 2000), namely people, places, polices, programs, and processes, were used as a framework for the external factors that may have influenced the participants' perceptions of their educational experience and recovery process. This framework also facilitated the organization of the data collected from the therapist interviews as well as the postoperative client participant interviews. The "5 P's" were also used to determine if the principles of invitational theory have been incorporated into the Prehab Program.

**Introduction to the Participants**

Preoperative interviews were conducted with 4 female participants awaiting total hip replacement surgery and 1 male participant awaiting total knee replacement surgery. English was the main language spoken by all participants. The age of the participants ranged from 59 years of age to 82 years of age. Postoperative interviews took place with the 4 female participants once they had returned home following their total hip replacement surgery. The male participant awaiting knee replacement surgery was
interviewed preoperatively but had to withdraw from this study due to medical reasons. Each of the participants attended a different Prehab Program teaching session. All of the client participant interviews, with the exception of one of the preoperative interviews, were performed in the participants’ homes. Pseudonyms were used to protect the identity of the study participants when displaying the data.

**Internal Factor Themes and Participant Perceptions**

The internal elements that may have influenced the participants’ perceptions of their surgery and recovery centred on their expectations and are outlined as follows:

Expectations of the Surgery, Expectations of Self, Expectations of Recovery Process, Expectations of Support System Preoperatively and Postoperatively, Expectations of the Prehab Educators, and Expectations of the Prehab Education Session.

**Expectations of the Surgery**

This theme includes the participants' rationale for joint replacement surgery as well as their attitudes towards having joint replacement surgery.

*Rationale for joint replacement surgery.* Enhancing self-concept appeared to be part of the rationale for having joint replacement surgery for all 5 of the participants. All of the participants perceived themselves as being active individuals who were motivated to have joint replacement surgery to alleviate joint pain and improve the quality of their lives. Three participants reviewed problems they experienced associated with joint pain which hindered their ability to engage in daily functional tasks. Teresa reported, “My hip is getting worse and worse, and I would like to have it done now sooner rather than later so I can get back to doing things afterwards…mostly leisure things I guess.” Doreen stated, “I can’t walk, and I love walking.” Jack believed that “anything is better than pain and [the knee] giving out on you at any time; you don’t know when it will give out.”
Jennifer based her need for surgery on
the fact that I do not sleep very well because I am tossing and turning. I can’t find
a comfortable position, and the realization that there is not point fighting, you
might as well fix the problem and get on with it.

Carol revealed that her family physician and surgeon informed her that
in a year, 18 months, my health could deteriorate. I wouldn't have the same
chances of a good outcome of the surgery. I did have the option to postpone it for
a year but that seemed stupid to put yourself in pain and perhaps get to the point
where your mental or physical health deteriorated and you wouldn't be a good
candidate for the surgery.

In addition to decreasing joint pain, two participants, Doreen and Jennifer, also
wanted to reduce their dependence on pain medication. Doreen made the decision to have
surgery when the pain
hit and stayed for 2 weeks; I knew that I can't ignore this in my head any longer.
There is a problem and I must get it corrected. But up until then, I was telling
myself “deal with it, just keep going.” With rheumatoid arthritis and the heavy
duty drugs I have been on, I don't like it. I said, well, you've got to get this looked
after or you are going to be on heavy-duty drugs again.

Jennifer revealed,
I was having a great deal of discomfort, I wasn't sleeping and I found that I had to
take pain killers to play tennis, which I found after a while was not terribly a good
idea. So then I had to give up playing tennis, which was really hard for me to do.

*Attitude towards surgery.* Three of the participants were happy that they were
going to have the surgery. This was expressed in Teresa's statement, "I am feeling positive about it." Jack reported that he felt "great" about having surgery. Carol concluded that having surgery is "fine if it takes away the pain and life goes back to normal, that's great."

Two of the participants were nervous about having surgery. Jennifer stated that she is "not happy about it at all to be honest with you." Jennifer reported that when she decided to have hip surgery she was initially overwhelmed and wanted to avoid dealing with all aspects of the surgery,

I found looking at the booklet...all those pieces of paper, and I read through it and I just thought "I can't deal with this." I had to put it away because I have to come to grips with actually having surgery. Being out of commission for quite a period of time, I thought that was hard to come to grips with...I guess it is a control thing; I don't have much control over the whole issue and basically, I just have to deal with it as it comes.

Doreen responded, "first of all I don't like the idea of something that is not me, being in my body." She also expressed concern that for some reason, I'm very nervous about this one...I think it is because I'm older and because I'm on my own, this is one is scaring me a little bit. If I had my choice, I would say no, I don't want it. And days like today when I am not hurting, you don't know how many times I have picked up the phone to say no, I don't need this, and an hour later I will say yes, I do.

Expectations of Self

Expectations of Self was a theme that incorporated the aspects of self that were

**Psychological preparation for surgery.** All of the candidates approached the psychological preparation for surgery from different viewpoints ranging through the absence of concern regarding surgery, the need to connect with others, acceptance of the need for surgery, and nurturance of self. This range of perspectives is illustrated in the comments made by the participants.

Jack believed that he was not affected on an emotional level by the upcoming surgery. With regard to dealing with potential stressors associated with surgery, Jack noted, “nothing bothers me in that way.” Carol reported that speaking with her minister provided psychological support in addition to acknowledging the fact that “at any age there are risks to any surgery. So I feel very confident that I will recover well.” Jennifer concluded that accepting her need for surgery was helpful:

> Psychologically it has been a difficult one...it has taken a long time, but I am now at the point where I am psychologically prepared for the surgery. It means I have come to grips with the fact that I need this surgery and that there is no point in fighting it; you just have to get on with it and do it.

With regard to preparing for surgery, Teresa said with a smile, “I try to do nice things for myself beforehand.” Doreen’s mental preparation involved telling herself that she is “doing this quickly [recovering from surgery]. I am going to amaze everybody; I am determined to do that.”
Participant views on perception. Participants were also asked if they believed that the manner in which they perceived a life event or situation was a matter of choice. Each of the 5 participants perceived different levels of self-determination or self-efficacy in terms of having control over his or her thought processes as well as the ability to influence the outcome of a situation or life event. Four of the participants appeared to have an optimistic point of view, and 1 appeared to be pessimistic when dealing with life events. Three of the participants believed that their outlook on life was part of their nature. Teresa stated,

I think it is easy to get into a negative thought frame, but I think you have a choice about whether you go on with it or talk yourself out of it. But I admit that unless you have had experience, it is possibly difficult to do for some people...I think probably basically deep down I am more of an optimist than a pessimist, which I guess works in my favour. I do know some negative people, and you try and sort of talk them out of it. I think they could change, but they have to be somewhat receptive to it to.

Jennifer reported,

It is not always logical [how a person perceives situations]...I have got a stressful situation at work, and he [Jennifer’s doctor] said, “why are you worrying about it?”...I think that is who I am, and I don’t think I have a choice about that. You can tell me “don’t worry about it,” but how do you not?

Regarding choosing to perceive something as positive or negative, Jack responded, “Some people moan and groan about things and they can’t do much about it. And then they say, well, I see a better way of doing it. I can do it that way.”
Carol stated,

How I perceive things goes with my nature....I am sure that God intended me to be a happy person, so I usually see things from the happy side first and usually, no matter what, there is something to smile about. It might be a rueful smile, but there is usually something to smile about.

Doreen provided a classic example of ending a relationship with a “first love” to illustrate her understanding that perception is a matter of choice in which she stated, “you’re so broken up about it and then you say, ‘I could look at this differently’ and [as a result, you] handle this differently.”

*Role of self-talk, preoperatively.* The term self-talk was defined for each of the study participants during the interview process, at which time it became evident that some study participants were more aware of the concept of self-talk than others. Teresa conveyed that her experience with clinical depression has resulted in her learning to “think in other ways...I might start off by being negative, but I think I would get myself out of it. It’s a bit of a possible problem [negative thinking]. It’s something I have to be careful about, I think.” With regard to self-talk and her recovery from surgery, Jennifer added,

I think it is easy to feel sorry for yourself, and we all do at times, but I think you have to tell yourself that this is a process, you are lucky that it is not anything worse. You don’t have cancer and you are not dying and you have got to make the best of an unfortunate situation and be tough and push yourself.

Although Jack believed that he does not engage in self-talk, he did comment on his generally positive outlook. He believed that, “like everything else, something could
go wrong and take longer, but in my mind, everything should go fine.” Jack’s strategy for coping with stress included going “along with it; there is not much you can do with it. Don't let it upset you.”

Doreen believed that self-talk is “very major to your overall recovery. If it's in your head that you're not going to get better quickly you won't.” She added,

I think the mind does really strange things to us, and the mind can convince you that you are sick when you are not. And if you let yourself think oh God, I can't do these exercises, I am never going to be able to do this, then you won't do it.

Carol stated that postoperatively she would tell herself,

This is just a short amount of time when you will be in pain, incapacitated, and other people will be in control. But I know when that phase passes it will go back to me being healthy and I will be in control. I will be able to walk and garden and do the things I need to do.

Carol reported that when encountering possible problems postoperatively she would ask herself if there was “something in my attitude or my physical being that I could change or help.”

*Role of self-talk, postoperatively.* Three of the study participants appeared to have positive self-talk postoperatively. One participant seemed to engage in harsh self-talk and perceived delays in recovery as being a personal weakness.

Teresa conveyed the self-talk she engaged postoperatively regarding her exercises such that she immediately told herself to “pump the legs. I did sort of remind myself of these things.” When progress was delayed, she would tell herself, “I am doing okay. As I say, even though I was delayed a little bit I thought that everything is going to be fine.”

Doreen reported that postoperatively there was “one exercise, moving this leg over, that I
could not do. The first day I got that moving I thought, I am on the way, go for it....I didn't do them once or twice, I did them five or six [times].”

Carol discussed her postoperative self-talk which involved telling herself,
You have had an epidural, you are not going to be sick. You are not going to be disoriented. You are going to be wide-awake and raring to go, because that is what happens....Nothing negative is going to happen because everything is going so smoothly, and the doctor said it had all gone well.

When experiencing difficulty during the recovery process, Carol stated she would say, Alright, I couldn't manage that bit at this moment, but give me a minute. Obviously, I am not sitting in the right position, or my leg is not far enough over as they taught me. Stop and think, “what did they say?”....My first reaction is, “I can do that. I'll work out how in a minute, but I can do that.”

Jennifer appeared to be upset with the delays in her postoperative recovery process. She appeared to be holding herself personally responsible for these delays as noted in her comments:

Come on, you have got to get it together; you know you have got to start moving around and getting out of bed. Even sitting up caused me a great deal of distress. I spent a lot more time in bed than I would have liked. I felt a personal weakness. I was quite upset with myself that this was happening...that kind of a response [low blood pressure and feeling faint] is not unusual for me. If I injure myself it is not unusual for me to faint or to throw up. That is just my body's response, and I was really quite upset with myself.
Physical preparation for surgery. When asked how they were physically preparing themselves for surgery, 3 of the study participants emphasized the importance of keeping active prior to their surgery through exercise. Jennifer stressed, "I get up at 6 o'clock in the morning and go for a walk and comeback and do my hour's worth of exercise. I am very diligent about that, as I feel very strongly this is the right thing to do."

Carol stated that she is keeping fit...I am gardening and I still like to walk, and that is one of the requirements of getting better because I love to walk. I am swimming; my daughter has a pool, and whenever I am over there I am swimming.

Jack acknowledged that engaging in his regular exercise program was helping to prepare him physically for surgery as well as the postoperative recovery period and reported, "according to the book you'll really be pushed; the nurses and the therapists will push you."

Role of self in the recovery process. Each of the study participants verbalized an understanding of his or her role and responsibility in the recovery process in terms of adhering to the precautions, engaging in the exercise program, and acquiring the necessary adaptive equipment.

Teresa reported that "I think my responsibility is to do everything I am instructed to do, properly....Following the precautions and not doing things I am not supposed to do." Regarding self-responsibility, Carol stated that she was committed to working collaboratively with the staff in the hospital and reported that "they can do their part, but I have to do mine, and I have to work at it; it doesn't just happen I don't think." She also believed that by doing "what they tell me, and then I will be fine. I will do the therapy or
rehab or whatever they call it. If there are exercises I will do them.”

Jennifer emphasized that she is planning on doing everything I am told religiously and meticulously....I don’t like being a patient. I would rather take responsibility for what I should. I am not huge on taking medication, even though I have done so because it is what has kept me going.

Doreen revealed her belief that the recovery process is all about me. I have to be hundred percent the one to do it. I can get advice and be shown it, but it is up to me....I am trying now to eat healthy, as my daughter told me a healthy body recovers quicker....I am gathering whatever I think I’m going to need like that chair, the cushion, the equipment I think I’m going to need. I went and bought the proper shoes, the slippers.

*Expectations of the Recovery Process*

The theme expectations of the recovery process included specific concerns that the participants had concerning their surgery and recovery process. All 5 of the study participants expressed the desire for a timely recovery in order resume functional activities or life roles. For 2 of the younger participants a timely recovery appeared to be associated with their self-image, as they did not wish to be seen mobilizing with a walker. Two of the participants felt that part of the recovery process involved the success of the surgery itself.

Jack believed that regardless of his attitude towards recovery, the outcome of the surgery was ultimately in the hands of the orthopaedic surgeon and revealed that it depends on the doctor, the surgeon. Regardless of your own outlook it depends how they operate. I mean a lot of these surgeons, well, from what I have seen
with some of them, they are overworked, put it that way. They don't have too much time, and they pass it on to an assistant who is not really up to standard. But I have been lucky; anything I have done, I have had no problems. With regard to factors that were outside of her control, Carol concluded that the people who are doing the surgery are professionals, they must love their work or they wouldn't be doing it. They want me to get better; they want it to be a success, so why wouldn't it be. I have to do my part to make sure it is.

Doreen revealed that she would like to be “fully recovered before the 3 months that they say. I’m not going that long, I give myself 2 months and I’m gone. I’m walking and doing what I have to do, and that’s my goal.” Carol desired instruction to facilitate recovery “in the quickest possible time, I have a life to live.” She also stated that she is “used to coping and being independent, and I presume that I will still be able to do everything I need to do. That might be too high an aim, but that is the aim….I have to get out to be able to drive.” Jack expressed the need to return to his role as caregiver to his wife. Jack was planning to follow his sister’s warning, which consisted of, “keep a straight line and do as they tell you.” He added that his sister also stated,

Those who did as they were supposed to do following the rules, regulations, and instructions, the knees turned out fine, they were healthy. The ones who said “ah, I can do this. I can do that. I don’t need that,” they are having problems with their knees.

Jennifer reported that her “expectation is that if I do everything I am supposed to, I am going to be okay. I am not expecting anything else. She also expressed the need for a timely recovery in her statement,
I know there is going to be rehab and exercises, which I am very disciplined and will do quite willingly. My goal and what I am hoping for is to be able to walk unassisted with cane or walker as quickly as possible, and I think probably what I expect of myself is possibly a little unrealistic, but that is my goal; I don't want to be walking with a cane or walker.

Jennifer revealed that she was concerned with how her friends would respond to her postoperatively in her statement,

I am afraid I am going to see people and they are going to laugh at me if they see me with a walker or a cane...because they are used to me being physically active, which I have been since my 30s...I think it's this aging thing, and only old people have canes and walkers, and I don't want to be seen with a walker or a cane....Little old ladies have walkers and canes, and I don't want to be a little old lady.

Doreen stated that she doesn’t “like to be a burden on people.” She also does not want people within her apartment complex “saying ‘oh, my God, you poor dear’ and all of this. So, the quicker I get better the less they'll be able to say that.” Doreen also added, “I'm not going to go around this place in a wheelchair. I am giving in with the walker; I don't even want that but I have to start somewhere.”

The postoperative concerns for 4 of the participants included their ability to perform activities of daily living. One participant did not have postoperative concerns as noted by Jack’s comment, “I have no concerns because I figure everything should be fine and, well, I'll have plenty of help now.”

Teresa revealed, “I might get a bit too ahead of myself....If I feel better I might do
too much.” She added that

I worry a little bit about that sleeping position because all my life I’ve slept on my right side and it’s my right hip, so I’m having to train myself to sleep on my back or my other side, and I have problems with that.

Doreen initially responded, “as long as I can function to get myself on my own, to get out of bed, into the kitchen, and be able to shower, fine, I have no concern.” Doreen stated, “I am envisioning my goals. The already recovered part is not so easy to visualize. I am a little nervous about the recovery process.” In particular, Doreen reported that getting through the first 3 days I think is going to be the toughest. You know, first of all recovering after you have been put out and they’ve operated, that’s not a very good time….I am going to be hurting, I am prepared for that. Then, when I start to get moving and exercising it has to get better; it can’t go any other way. When you hit bottom you can only go up.

Carol revealed that one of her “concerns is the constraints that might be with a hip replacement because I have no idea what they would be. I am used to being active.” She wondered “how quickly I will be walking.” As well as what is the “process of learning that [how to walk] because obviously, you have to learn. I don’t think it will be an automatic reaction.”

Jennifer also reported that she was concerned about returning home and coping postoperatively and stated that she is “more concerned about that than the actual surgery.” She also expressed concern about her ability to adhere to the postoperative hip precautions and reported that the thing that worries me the most is I know you have to be really, really careful,
and you can’t bend any more than 90 degrees. I am afraid of messing up and kind of concerned about mucking up the surgery by doing something I shouldn’t.

Accidentally turning over in bed the wrong way, it probably isn’t that bad, but it concerns me.

*Expectations of Support System, Preoperatively*

Each of the 4 participants conveyed their thoughts about the importance of having a support system postoperatively. Jack stated that he originally had to postpone his surgery, as he did not have support regarding the provision of care for his wife. Jack revealed that he

put it off so long. I did see him in December [the surgeon], but I couldn’t find anyone who could look after Julie [his wife]. She didn’t want to go in a nursing home for the time being or anything like that. Most of our friends are all away on holiday. But I have arranged, or should I say our daughter has arranged, to come up from Connecticut for at least 3 weeks and look after her.

Teresa focused on her need for emotional support in her statement, “It’s silly things, like I want my husband to be there immediately afterwards.” To which she added,

My husband is excellent. He will do everything for me if I want him to. And friends will…I guess I will need to find out how they can help me if I want to…. We have one really close couple who are friends …we support them and they support us.

Doreen reported that her friends will be “bringing me food. A friend down the hall is going to have a key, and it is going to be very helpful. But I don’t want my friends showering me.”
Doreen also stated with reference to her fellow tenants that

I don't like being in a seniors' residence, but if you have to go through something like this, be in a senior's residence because they are so helpful and they help each other.

Carol initially discussed her plans for surgery with three of her closest friends. She is also aware that she has a larger support system through her church, to which she concluded, “it is an incredible safety net that we have at our church and wonderful teams of people that just go into action if they are needed. So, I know if I am in real need someone will come.”

*Expectations of Support System, Postoperatively*

With regard to the Prehab Program discussing the need for the participants to incorporate their support system as part of the recovery process, 3 of the 4 participants discussed the benefits of having and using their support system postoperatively. One of the participants, Doreen, stated that the Prehab Program did not review the importance of having a support system and reported that her daughter was unable to provide support as “she has a pacemaker, and she is under her own stress...I live alone and don’t have the help.”

Teresa stated having her husband present for the Pehab teaching session “helped my recovery in that he [her husband] then knew what he had to do to help me....So that was very good, because then I could say this is how you are supposed to do it.” Jennifer reported that having a support system “is a great aspect to be emphasized. Make sure that you keep your friends and family involved; you can thank them afterwards, do whatever you can afterwards, but meanwhile, this is very, very huge.” Carol stated she was happy to have “the support of my family and friends because they are all so convinced that I can...
do anything. They just think, oh well, it's you, you will do it.” Carol also added,

It isn't all my own energy…I do firmly believe that God helps us. You don't always get the answer you would like, and maybe someone would say, well, you have such faith, how come you have to go though all this? That's not the point, that isn't the point at all. God will help me, He will give me the strength, the courage if I need it, and the reasoning to go through it.

*Expectations of the Prehab Educators*

When questioned if they thought the Prehab educators would be providing them with emotional support, 1 participant believed that although emotional support may be provided she did not feel that she would be connecting with the therapists on an emotional level. The 4 other participants were not sure what to expect in terms of support.

With respect to providing emotional support, Doreen responded,

It is hard to tell because I haven't met them. I'm sure they're going to be very supportive; I mean that's their jobs. Emotional, I don't really expect them, well, maybe, but I'm kind of a private person and my emotions will probably show late at night when nobody's around.

Teresa stated, “I honestly don’t know…this surgery is a bit of a surprise. [The educators] will probably go over the material in the book. Possibly in more depth to make sure the patient understands it.”

Jennifer revealed that she had “no expectations in that respect. I think my impression is it will be very clinical.” With regard to her expectations of the therapists, Carol responded that she is “usually the one who is giving it [support] to other people…[I expect] just a friendly voice and a kind approach, I don’t like the sergeant major type.”
Jack believed that the educators “will warn me what to do and what not to do and the best way of doing it.”

*Expectations of the Prehab Education Session*

The theme expectations of the Prehab education session included two subthemes which addressed the participants’ expectations in terms of pain management education as well as the manner in which meaningful learning could be optimized during their educational experience in the Prehab Program. All 5 participants believed that the content of the Prehab education session should provide them with the necessary information to facilitate their recovery. This includes receiving education regarding postoperative precautions, instruction in the postoperative exercises, having assistance in determining equipment needs, as well as gaining an understanding of the recovery process.

In addition to informing her of the type of equipment she would require postoperatively, Teresa emphasized the importance of being provided with the opportunity to “ask questions, review written material…not pictures per se, but actual things.” Teresa also believed that the Prehab teaching session would be positive. Giving me a sort of aim...knowing what to expect, and therefore you’ve got goals to strive for....I know there will be a time when I can’t do some things, but I think the education session would make me understand that it’s going to be a temporary thing and [will inform her] how you come up the other side.

Jennifer assumed that at some point the Prehab educators would have to speak individually with the group members to find out
what their living accommodation is like...to assess what your needs are within the home. Is the bathroom door big enough to accommodate whatever I am going to need in the shower? How to get in and out of the bathroom? Is the bathroom door big enough for instance?

Jack’s expectation of the teaching session included the educators “dealing with the facts about everything and how they actually work out and how they all connect. Are there any side effects [of the medication]...anything you should and shouldn't do?”

Doreen’s expectation for the teaching session involved providing her with a “quicker way to recover and encouragement. But definitively, they are going to show me what exercises to be doing so I can get out of there quicker than they think.” She also believed that “the Prehab meeting I think is very critical....If it happens before [regarding attending the Prehab teaching preoperatively] you've got an idea now of what's going to happen [postoperatively].”

Carol wished to acquire “knowledge and expectations...so that when I actually go for the surgery I know the procedures. Nothing will come as a big surprise.” Carol added,

I think the more you know, the easier the process. You know what to expect, you know within the realms of normality. I know everyone is different, but you can gauge it for yourself that you have parameters, and I think that’s good.

Pain management. With regard to expectations for learning how to manage their pain, all 5 of the participants did not seem too concerned with this issue.

Doreen reported that a friend had informed her that “there is going to be pain when you first start to exercise, and it's bad pain, but as you keep doing it, it gradually
lessens.” Teresa stated “I guess...they will help you manage the pain” [referring to the hospital staff].

Jennifer acknowledged that she hadn’t given it [pain management] a great deal of thought. I know that the general consensus now is to have the pain managed because the healing is much faster. I know they will be giving me pain medication, but I am hoping I will only have to have the minimal amount.

Carol focused on using alternative means of managing her pain rather than using medication, such as having a cup of tea, reading a book, or gardening, to which she added, “If I am very tired, have a snooze.”

*Meaningful learning optimized.* In addition to conveying what they believed would constitute meaningful learning, the participants also discussed the various approaches to teaching and learning that they believed would optimize their learning experiences. The Prehab Program used the multisensory approach to teaching and learning as prescribed by Van Hoose and Strahan (1992). This includes visual learning, auditory learning, kinesthetic learning, and tactile learning, and they are defined as follows.

*Visual learning:* reviewing education booklets, anatomy poster. Modeling correct postures while incorporating precautions during activities (e.g., use of long-handled aids, bathseat, mobility aids, as well as during kitchen/home management tasks).

*Auditory learning:* listening to verbal instruction provided by educators.

*Kinesthetic learning:* includes writing in booklets, speaking, and hands-on practice in the use of adaptive equipment.


**Tactile learning:** abstract concepts such as precautions associated with joint replacement surgery made concrete by receiving touch feedback; for example, receiving tactile feedback when using walking aids.

All 5 participants expressed the desire to be visually shown the educational material as demonstrated by the following comments. Teresa reported, “I need to see, have pictures. I definitely need to have some things written down.” Carol stated, “I like visual aids...diagrams.”

Jennifer emphasized, "I do better if somebody actually shows me.” Doreen concluded, “if you show me once I have got it, and I will be able to do it.”

Three of the participants appeared to benefit from a teaching approach that involves kinesthetic learning. Doreen stated, “let me participate immediately and show me and I’ll do it.” Teresa commented, “some things I learn better by writing them down.” In addition to showing her a technique, Jennifer stated that she benefits from the educator saying “this is what you have to do, you do it, and I'll be there if you need me.”

Two participants expressed the need to have an auditory method of teaching. Teresa stated, “I want to ask...what is the sort of normal things to feel afterwards in the way of discomfort or whatever and what is something that needs more attention.” Jack reported that the educators will “deal with the facts about everything and how they actually work out and how they are all connected.”

One of the participants, Jennifer, appreciated the tactile approach used to teach clients in the Prehab Program how to gauge their weight bearing status postoperatively. Participants are instructed to put their “foot on a scale and measure twenty pounds.”

In addition to discussing the methods of instruction required for optimal learning, Carol believed that the learning environment and the manner in which the instructors
addressed her were important. She preferred a "comfortable, relaxed atmosphere...I don't like uniforms and official looking places. One-to-one if possible, but if not, a group is fine...I don't like to be talked down to."

**External Factor Themes and the "5 P's":**

**Perceptions of Client Participants, Prehab Therapists, and Principal Investigator**

The "5 P's" of invitational theory (Purkey, 2000) were used as a framework to analyze external factors that may have influenced the participants' perceptions of their surgery and recovery process and were listed under the following headings: people, places, policies, programs, and processes. The comments made by the client participants are rich and descriptive and as a result are rather lengthy. Therefore, the findings from the client participant interviews are summarized below under each of the 5 P's. The Prehab therapist interviews were not as lengthy; therefore, the quotations that pertained to each of the 5 P's are presented below. The detailed quotations from the client participant interviews have been placed in Appendix G and are categorized according to the participants' pseudonym, topic, quotation, as well as classification of the quotation such as inviting or disinviting. To unify the topics and to facilitate a comparison of the Prehab therapists' and client participants' perceptions, the quotations of the Prehab therapists as outlined below are also repeated in Appendix G.

Under the 5 P's below are the comments made by the Prehab therapists and client participants. Included in this section are some of the quotations from my interview with the Faculty Supervisor of this research study. Intentionality is an essential element of invitational theory. Therefore, the headings for the therapist and principal investigator comments are framed using the term intentionality with regard to the design of the Prehab
Program and how it was functioning at the time of this study.

*People*

Inviting messages that apply to people are examined in this section. This includes the approach used for client education, provision of psychological support for clients, and the one-to-one session with the occupational therapist. Invitational leadership that demonstrates inviting messages according to Novak (2005), is “person centred, in that it begins and ends with people and their perceptions about what is happening and what is possible” (p. 47).

*Intention of Prehab therapists when approaching client education.* The Prehab therapists intended the Prehab teaching session to be informative and to be conducted in a manner that according to the occupational therapist demonstrates respect for the participants. “We show it verbally, we show it through our listening, our empathy…the way we respond to the person, our voice, our body language. We make sure everything is consistent.” [Regarding negative clients], "the negative ones I am not so sure that we influence them as much, maybe we give them food for thought and maybe if they are given time to think about it, or we had more time to spend with them, maybe we would give them power."

The physical therapist believed another means of demonstrating respect is providing clients with the rationale behind the precautions.

I think the patient needs to understand why they have to do certain things such as total hip replacement. When we do the education showing them pictures, telling them how the surgery is performed…to remember the precautions for 3 months.
Intention of principal investigator when creating Prehab Program. As cocreator of the Prehab Program, my intention was to integrate elements of invitational theory and to regularly evaluate the program in terms of the 5 P’s to ensure that we were consciously inviting Prehab clients as well as ourselves to enjoy and benefit from all aspects of the teaching and learning experience offered in Prehab. "Invitational theory focuses on optimizing a person’s potential. Clients are invited to examine and possibly modify their perceptions. We [Prehab therapists] hopefully instill optimism, hope, and build on client strengths.” With regard to inviting behaviours,

I think the majority of the Prehab Program is inviting; however, based on the responses given by the participants, it appears that the clients perceive the behaviour of the therapists to be disinviting at times. In these instances it is likely that the therapists are being unintentionally disinviting.

Client participants' views of Prehab education session. Two of the participants, Carol and Teresa, found the session to be inviting, stating that the program had elements in keeping with a “personal service” as well as used a “gentle” approach when discussing program content such as precautions. The other 2 participants, Jennifer and Doreen, found the Prehab therapists to be disinviting in their approach to teaching and reported that the occupational therapist was “negative” and “abrupt” during the teaching session. Doreen did state, however, that 90% of the staff associated with the Prehab Program demonstrated respect.

Prehab therapist intentions regarding psychological preparation of clients. With regard to preparing participants psychologically for surgery, the Prehab therapists viewed the provision of educational information as a source of psychological preparation
for the clients awaiting total hip and total knee replacement surgery. The occupational therapist stated,

   Psychologically, I think the more information they have, even though they are overwhelmed, they are anxious and they start questioning should I have the surgery or not; I think that is good because they start to realize the reality of the situation. It is not going to be, oh, it is going to be easy or there are going to be people that are going to help me, the hospital will make sure I have everything.

The physical therapist reported, "I think at least 95% of the clients feel that they are learning, and it is preparing them [psychologically] for their surgery."

   Intention of principal investigator to provide psychological support for Prehab clients. When creating the Prehab Program the goal was to prepare clients physically, socially, as well as psychologically for surgery.

   Invitational theory is based on self-concept theory and perceptual psychology; therefore, people behave in keeping with how they see themselves and the world around them. [As therapists] we want to encourage behaviour that enhances recovery [from surgery]. As [Prehab] educators we can influence a learner's self-concept and provide them with positive words of encouragement.

   Client participants' views of Prehab Program and psychological support. Two of the participants felt that the educational information provided them with psychological support. Carol reported that she appreciated “the matter of fact way” the education was presented. The discussion surrounding how to acquire the adaptive equipment made Teresa feel “more comfortable knowing I had the equipment beforehand.” Doreen and Jennifer believed that the Prehab Program did not prepare them psychologically for the
surgery or the recovery process. Doreen stated the Prehab education session “scared me more.” Jennifer added that the therapists could have been “a little warmer” and she wished the educators had provided her with a sense of assurance that she is “really doing the right thing.”

*Prehab occupational therapist’s intention for the one-to-one session with clients.*

The occupational therapist, when discussing her intentions for the one-to-one session with the clients, conveyed that more time and supports are required to make the session more effective. She believed the presence of the discharge planner is needed to facilitate the discussion of the postoperative discharge plans as well as review the current “reality of the healthcare system” with the Prehab participants.

We need to have more time to be able to problem solve and support each other. Even having a discharge planner here, where they can sort out what is your [the client’s] plan going to be? Or even having someone where if these people [the clients] do not have a plan in place, how are they going to manage after? Maybe they should not have the surgery...we still have people not realizing the reality of the healthcare system and how it is.

*Principal investigator’s intention of one-to-one session with the occupational therapist.* The one-to-one session is to an opportunity to challenge clients’ perceptions and self-talk. As therapists we are aware that “self-concept is influenced by self-talk. I think we can influence this as therapists [clients’ self-concept]. Some people [clients] do not make the connection between self-talk and performance—as therapists we can help them, which will increase their sense of efficacy.”
Client participants' views of one-to-one session with the occupational therapist.

Two of the Prehab participants, Carol and Jennifer, found the one-to-one session to be a positive experience and stated that it was "comfortable and it felt confidential" as well as being "helpful" in terms of providing instruction regarding equipment rental. Doreen believed that the occupational therapist demonstrated disinviting behaviour when the therapist apparently stated, "these are my rules and this is what I have to go by.” Doreen was also surprised to discover that she may not be transferred to the Rehabilitation Unit postoperatively as she had originally understood from her conversation with her surgeon. She also noted that alternative discharge plans were not discussed with her during the Prehab Program should she not be transferred to the Rehabilitation Unit.

Places

A school environment sends messages about the "competence, care and commitment of those in charge” (Novak, 2005, p. 47). A hospital environment also sends messages to its clients that influence their level of trust and perceptions regarding the competence of those in charge to deliver the proper care to them. The role of place in terms of sending inviting messages to the Prehab client participants is examined below.

Intention of Prehab therapists and teaching environment. The Prehab therapists both conveyed the desire to have a teaching space that is specifically designated for the Prehab Program, as this space is currently shared with other programs. The occupational therapist stated,

It is nice to have the kitchen here, having the equipment there is great, having the bathroom is great, so that the people can see what they are doing and practice if they want to. We have designated space for those two afternoons; however, it is
not exclusively ours. We have people walking in to put their stuff in the fridge...the hand program comes in for their waxing.

The physical therapist revealed that she “would have preferred a place that is larger and purely for the Prehab Program, but space in a hospital is at optimum and we have to share with different programs...and there are interruptions.”

*Client participants’ view of Prehab Program’s teaching/learning environment.*

Three of the participants, Teresa, Carol, and Doreen described the room in which the Prehab teaching session takes place as being “comfortable.” Jennifer, however, believed that it was a disinviting environment due to the distractions such as people [hospital staff] “coming in and getting food and heating it.”

*Policies*

Inviting mission statements need to be translated into day-to-day practice for all level of employees within a hospital. Messages conveyed and received in association with the informal and formal policies of the study hospital will be discussed as follows.

*Prehab therapists’ intentions when discussing hospital policies.* The Prehab occupational therapist revealed that she perceives the hospital to have policies that convey the message,

This is it and this is how it is going to be, and you [the client] better be prepared, so it is up to us to try to share that information without being harsh but making sure they understand the reality of the situation.

The occupational therapist also believed her role is to inform the Prehab clients of these policies in a manner that is not too “harsh.”

The physical therapist stated that she encourages the
patients to get the equipment ahead of time rather than saying you are able to get this [the equipment] from CCAC, but only when you are discharged and if you are referred by a doctor. We encourage clients if you have this now at home [the equipment] so you can practice using it. You still have to pay with CCAC anyway after a month, and you will be required to use it more than a month. So, why don't you get the equipment so that you have it there ready for when you go home?

The physical therapist also added that organizing their own equipment assists clients by reducing the "anxiety of having to plan or arrange the delivery of the equipment to their home prior to their discharge from hospital."

Client participants' views of the study hospital’s policies. One of the participants, Teresa, believed that too much time was spent on the discussion of "what the hospital did not provide in terms of occupational therapy and physical therapy." She added "there wasn’t as much emphasis on how you find out where to get these things in the group session." Two other participants, Doreen and Carol, were told by the Community Care Access Centre (CCAC) therapist that CCAC would have covered the cost of the equipment rental and that all they had to do was phone the "CCAC and for a month we could have had it all for nothing." Doreen added with reference to the communication between the hospital and CCAC that it is like the "right hand doesn’t know what the left hand is doing."

With regard to receiving equipment from the Community Care Access Centre, clients are usually not aware that they have to be deemed eligible based on criteria established by the CCAC in order to receive this equipment free of charge for the first
month when they are discharged from hospital to home. The hospital representative from the CCAC has informed the Prehab therapists that clients who wish to access their adaptive equipment through CCAC will have to wait until the day of discharge from hospital before the equipment can be delivered to their home. On the day of their discharge, clients also have to have someone in their home to receive the equipment, which can take up to 5 hours to deliver. Therefore, an informal policy has been established by the hospital in this study that encourages clients to assume responsibility for renting/purchasing the required adaptive equipment. The rationale behind this policy is to facilitate a timely discharge from hospital to home and to help reduce the stressors associated with last-minute organizing of equipment. When this rationale is explained to clients in the Prehab Program, they usually respond positively to assuming responsibility for the organization of their equipment.

Programs

An education program that is reflective of the needs of clients sends an inviting message. This section addresses the messages sent and received in terms of pain management education as well as the Prehab Program in general.

Prehab physical therapist's intentions regarding pain management. The physical therapist normally provides the instruction on pain management during the Prehab education session. She stated that there are a handful of people who we may increase their anxiety, because sometimes clients want to be in a state of not knowing and being oblivious of what is happening to them. When we give them specific information it sort of scares them a little bit, but we need to let them know it is not smooth sailing. You
[the client] need to work hard; you [the client] need to take your pain medication. It is not going to be pain free, but there is a light at the end of the tunnel. If they can go past and beyond that point, they do feel much better and it is a worthwhile surgery to have.

Client participants’ views on pain management education. Two of the participants presented mixed views regarding the education on pain management. Teresa found that receiving encouragement to take her pain medication was helpful as she has a “reasonably high threshold and the tendency isn’t to take it,” to which she added, “I was remembering what they said, and I did do it [take the pain medication] and found that it makes a big difference.” Jennifer believed that the therapists “accentuated the pain you are going to be in.”

With regard to the overall program, all 4 participants found the Prehab Program to be helpful. Jennifer reported that she “fully appreciated the whole session after the fact...having the knowledge already was very helpful.” Teresa stated that the program was “actually much better than I expected...the actual going through it was very good.” Carol acknowledged that her recovery from surgery would likely have been slower if she had not had the Prehab session because she would be “hearing all these things for the first time and having to process it.” Doreen believed that she benefited from knowing what to do with the equipment postoperatively and stated, “instead of just coming home and having all this equipment and saying ‘what am I going to do with it?’ I knew what I had to do with it.”

Processes

The “spirit” in which each of the above P’s is carried out sets the tone for
educational institutions (Novak, 2005). The spirit in which the practical information is shared by the Prehab therapists also sets the tone for the Prehab Education Program. The messages received by the client participants during the group teaching session and the adaptive equipment practice sessions will be examined below.

**Prehab therapists' intention for practice/practical teaching session.** The intention of the Prehab therapists is to offer the participants a practical teaching session, as stated by the occupational therapist who reported,

I think that knowledge is power, and I do believe that practice and giving them responsibility to them...back to them makes them much stronger people. Making sure they have the practical information, not just the knowledge you are going to have pain but what can you do to cope with the pain. You [the clients] have restrictions, “how are you going to manage during that period of restrictions?” and then giving them that opportunity to practice.

The physical therapist believed that doing practical things, using a walker, getting in and out of bed. It helps them increase their confidence in those tasks so that after surgery they can certainly perform them without a lot of fear and anxiety. The clients will say I will never do stairs [with crutches]. I tell them stairs are not hard, they are easy, let's go and try. And once we try, they say it is not so hard, I can do that.... [Practicing stair climbing] gives them the confidence and optimism that nothing will be too hard for them to do.

**Client participants' views on practice/practical teaching session.** All 4 of the participants incorporated elements of the Prehab Program into their behaviour
preoperatively. Doreen stated that when “sitting in a chair I had my ankles crossed or
my leg, and I immediately stopped doing that.” Carol reported that she “practiced
climbing up and down stairs.” Jennifer appreciated the rationale and demonstration in the
use of the equipment and stated that the Prehab Program shows you “all the things that
you need…someone explains why this particular piece of equipment is better and show[s]
you how to use it.” Teresa also applied the teaching information when choosing the
equipment prior to her hospital admission and reported that she “chose the commode
chair because the raised toilet seat wouldn’t have been appropriate for me, and I wouldn’t
have known that before the session.”

Additionally, all 4 of the participants commented on the postoperative benefits of
having the practical Prehab teaching session. Teresa believed that postoperatively she
“caught up on the walking and moving around…because of the practicing that Prehab has
given me.” Jennifer stated when climbing stairs postoperatively with the physical
therapist, she “could remember what she [the Prehab therapist] said.” Carol reported that
postoperatively, she “knew what to expect.” She incorporated the instructed technique
provided by the Prehab therapist for getting into bed, so when doing it for the first time
postoperatively it “wasn’t a shock.”

*Intention of Prehab therapists during group teaching session.* With regard to the
group teaching session, the Prehab occupational therapist believed that the Prehab
Program gives clients

some practical solutions, letting them come up with ideas, allowing them to share
their thoughts with the group, starts sympathizing or empathizing or sharing their
experiences; we encourage all of that so that they become more optimistic about
what is going to happen.

During the group teaching session the physical therapist stated that she wanted clients “to ask questions and certainly if there are perceived problems I intentionally ask them to ask so that we can work them through…and patients share previous experiences too.”

**Client participants’ views of group teaching session.** With regard to the group teaching session, one participant, Carol, believed that having four people in her teaching group was “excellent” as “each person had time to ask questions.” Teresa expressed frustration with several aspects of the group session and stated, “I seemed to be the only one who actually opened the book [in advance of the teaching session].” She added that a member of the group repeatedly interrupted the group with personal questions. Teresa believed that these interruptions were taking up “precious time” which may have resulted in all the material not being reviewed during the teaching session. Although Jennifer was aware of the need to have a group teaching session as “it makes sense to have several people there because they are all having surgery and you can’t take all these people’s time [the Prehab therapists]” she was “nervous sitting amongst other people having the same surgery” as she did not wish to openly share her feelings in a group setting.

**Summary**

This chapter discussed the major findings of this study based on the 5 preoperative and 4 postoperative interviews with study participants who had received either a total hip or total knee replacement surgery. Interviews were also performed with the occupational therapist and physical therapist who were the coleaders of the Prehab Program at the time of this study. The opinions of the client participants as well as the
Prehab therapists were categorized in the form of themes that focused on the internal as well as the external factors that influence participant perceptions. Internal factor themes were placed under the main theme of expectations of the client participants. The "5 P's" of invitational theory served as a framework for the external factor themes. Quotations from the interview between the principal investigator and the Faculty Supervisor that pertained to the 5 P's were included under the external factor themes.
CHAPTER FIVE: SUMMARY, DISCUSSION, AND IMPLICATIONS

This chapter reviews the study, discusses the findings, and examines the implications of these findings and their potential application to the areas of theory, practice, and further research. Reflections of my role as primary investigator of this study and cocreator of the Prehab Program are also explored in this chapter.

Summary of the Study

The Ministry of Health of Ontario has developed a Wait Time Strategy as part of a client-focused healthcare initiative. The hospital in this study was one of the recipients of this funding and created a preoperative educational program called Prehab. The Prehab Program is an interactive, client-focused education program that is designed to prepare clients physically, socially, and psychologically for surgery. Since the inception of Prehab, another change has taken place at our hospital that involves a reduction in the postoperative length of stay for clients who have received a total hip or total knee replacement surgery. This cost saving measure is part of a growing trend in healthcare (Clode-Baker & Gregg, 1997; Johansson et al., 2007).

This mandated reduction in length of stay has made it even more important to have preoperative education that prepares clients for total hip and total knee replacement surgery (Daltroy et al., 1998). In addition to the reduced length of stay, there is a reduction in the length of time that healthcare staffs spend with clients postoperatively (Butler et al., 1996; Johansson et al., 2007). Receiving total joint replacement surgery is a potential source of stress for the recipients (Trousdale et al., 1999). The physical and psychological effect of having surgery may influence a client's compliance and physical recovery from surgery (Gammon & Mulholland, 1996). There is usually little emphasis placed on the psychosocial aspects of care associated with the postsurgical recovery.
process (Heine et al., 2004). Not preparing clients psychologically in terms of readiness for discharge home can be costly, as it may result in a longer length of stay in hospital (Heine et al.)

Therefore, preoperative education when offered needs to be effective in preparing clients for their surgery and recovery process. For an educational program to be effective, it is important to be aware of the expectations of clients with regard to their learning needs. A review of the rehabilitation literature revealed that few studies exist that examine orthopaedic procedures in terms of client expectations (Mancuso et al., 2001). Montin and Suominen (2002) as well as Sjoling et al. (2003) reinforce the need for studies that focus on aspects of care that are reflective of client expectations. The concerns of clients undergoing total hip and total knee replacement surgery have also received minimal attention (Trousdale et al., 1999). One of the goals of the Prehab Program is to meet and exceed the expectations of clients, which includes addressing concerns clients may have with regard to their surgery and postoperative recovery. Expectations that clients have preoperatively as well as their postoperative experiences are shaped by their perceptions. Perceptions are at the core of human behaviour and relationships, and it is only recently that a deeper look at client perception is taking place (Combs, 1999). According to Combs, perceptions include, "people's feelings, attitudes, beliefs and values" (p. 191). In addition, the behaviour of clients is influenced not only by their environment but also by their perception of their environment (Giroux Bruce & Borg, 2002).

The purpose of this study was to examine the manner in which the Prehab Program influenced the perceptions of clients receiving total hip and total knee joint
replacement surgery. This study evaluated the effectiveness of the Prehab Program in terms of preparing the clients physically, psychologically, and socially for surgery. The various internal and external elements that shape a client’s perception of his or her learning experience and recovery from surgery were also explored in this study. The results of this study will also assist with evaluating whether or not the theory behind the program is consistent with what is actually practiced. When creating the Prehab Program, the principles of invitational theory have served as the framework for the original design, implementation, and evaluation of the program. Invitational theory encompasses self-concept theory and perceptual psychology (Russell, 1992). This study will also inform the practice of healthcare educators, with the findings of the study facilitating reflection on practice. Bailey (1984) states, there is an “inter-play of practice and reflection upon practice, with the reflection becoming more structured, systematic and sophisticated as the body of knowledge, and the literature in which it is embodied grows” (p. 2).

The education literature suggests that educational programs require quantitative as well as qualitative evaluations when determining success of educational programs (C. Reed, 1992) and that qualitative evaluations should incorporate aspects of learning such as feelings and attitudes (Draper, 2001). A qualitative case study methodology was used for this study. Through the use of purposeful selection and convenience sampling, 4 female clients awaiting total hip replacement surgery and 1 male client awaiting total knee replacement surgery agreed to participate in this study and were interviewed preoperatively. Due to medical reasons, the male participant had to withdraw from this study. Interviews were also held with the occupational therapist and physical therapist
that were the coleaders of the Prehab Program at the time of this study. Reflections of my roles as the primary investigator of this study as well as the original cocreator and coleader of the Prehab Program were acquired during an interview between me and the Faculty Supervisor of this research study. Coding of the interview transcripts was performed using key descriptor words as well as colour-coded highlighters.

**Answering the Research Question**

The main research question of this study involves examining the manner in which an inviting approach to a preoperative teaching and learning educational experience influenced client perceptions and recovery from total hip and total knee replacement surgery. In order to answer this question, it is important to first determine if an inviting approach to teaching and learning was incorporated into the Prehab Program. In this study the various aspects of recovery were also reviewed, as the Prehab Program, when originally created, intended to enhance the clients’ recovery by preparing clients physically, socially, and psychologically for surgery. Purkey’s (2000) metaphor of an educational “ecosystem” with regard to the use of the 5 P’s was used in this study to facilitate an understanding of the internal and external elements that shape participants’ perceptions during their interaction with themselves and others in their environment.

Specifically, the internal factor themes of this study focused on participant perceptions in the areas of expectations. The external factor themes examined the perceptions of client participants as well as the Prehab therapists and the principal investigator and were written using the 5 P’s of invitational theory, namely people, places, policies, programs, and processes as a framework.
Discussion

The findings of this study have revealed elements within the Prehab Program that represent internal as well as external factors that have positively as well as negatively influenced participants’ perceptions of their surgery and recovery process.

Internal Factors Influencing Client Participants’ Perceptions

An interesting finding in this study was the interrelationship between self-concept, self-talk, and the personal efficacy beliefs of clients awaiting total joint replacement surgery. Each of the study participants expressed the desire to have the surgery in order to reduce joint pain and enhance their lifestyle. This rationale for having joint replacement surgery is supported in the rehabilitation literature (Mancuso et al., 1997). As part of the participants' self-concept involved viewing themselves as active individuals, each participant was motivated by the fundamental need to defend, sustain, and advance his or her self-concept (Purkey, 1992). Doll (1992) stated, “motivation results from establishing and possessing goals” (p. 43). In addition, the goals pursued by an individual are based on his or her value system (Bandura, 2004). In this study, it was apparent that 2 of the participants valued maintaining a youthful appearance, as this was part of their self-concept. These participants were self-conscious of how other people in their lives would perceive them should they be viewed using a mobility aid such as a walker. Therefore, they did not wish to use a walker any longer than required, as they believed only “older” people used walkers.

During the preoperative interview, all participants appeared to have a high level of personal efficacy regarding their ability and motivation to assume responsibility for performing the prescribed exercises postoperatively. Two participants, however,
presented with a low sense of personal efficacy with regard to their ability to follow the total hip precautions. One participant feared dislocating her hip, and the other did not feel that she could follow the precautions for the prescribed length of time. The anxiety that both participants experienced and their concern regarding their ability to follow the precautions may be associated with a perceived threat to the maintenance of self (Combs, 1999). In addition, these participants are more likely to experience stress if they have classified the situation as important to them but believe that they lack the ability or the resources to cope with the stress (Butler et al., 1996). The more anxious participants may have general feelings of inadequacy that contribute to their negative emotional response in addition to the possible accompanying feeling of being threatened when faced with external demands (Combs).

The participant who was concerned about the duration she would have to follow the precautions decided to use her walker for a 3-week period of time instead of the prescribed 6-week period as instructed by the Prehab therapists. It is essential as healthcare educators that we seek to understand the factors that influence behaviour of this nature, as noncompliance with the precautions will affect the success of the surgery. When attempting to understand a person’s behaviour one has only to look at his or her current perceptions rather than referring to the past as a source of information (Combs, 1999). It was clear that this participant did not understand that the duration of these prescribed precautions applied to all individuals who had received total hip replacement surgery and not just select cases as she had believed.

In addition, the presence of stress and anxiety resulting from a perceived threat may in turn narrow the participants’ perceptions and negatively affect their ability to
attend to and absorb new information (K. L. Reed, 2001). The presence of stress may also alter the participants’ perceptual world by affecting their ability to reason rationally which may lead to cognitive distortions and misinterpretation of reality (Giroux Bruce & Borg, 2002; Stanley, 1992). Beane and Lipka (1984) support this altered perception of reality, stating, “the self, in seeking stability, consistency, and enhancement, may choose to simply avoid threatening situations, to select certain sources of information and exclude others, to alter undesirable feedback, or to simply ignore it” (p. 16). Any one of these factors may have contributed to the participant erroneously concluding that she did not have to follow the precautions for the prescribed length of time.

When experiencing delays in their recovery postoperatively, the participants’ sense of personal efficacy in addition to the absence or presence of positive self-talk appeared to have influenced the quality and timing of their recovery process. By developing a sense of “agency” which is accomplished through means such as “personal efficacy,” participants through their actions create their experiences that help shape the course of their lives (Bandura, 2001). When faced with challenges postoperatively, 1 of the 4 participants perceived these delays in her postoperative recovery period as a personal failure. A self-concept is shaped by a person’s internal dialogue (Purkey, 2000). According to Raimy’s quotation as reported by Combs (1999), “the self concept is a map which each person consults in order to understand himself, especially during moments of crisis or choice” (p. 37). This participant reasoned that her current complications associated with her recovery were part of her body’s historical response to medical interventions. Using the Attribution Model to review this case, the client appeared to have a low level of “controllability” and externalized rather than internalized the locus of
control with regard to managing the medical complications and delay in recovery she experienced postoperatively (Berkeland & Flinn, 2005). This belief of an external attribute and control of the recovery process could create a self-fulfilling prophecy and influence her behaviour and subsequent recovery from surgery (Berkeland & Flinn). To avoid creating this type of self-fulfilling prophecy, educators need to help learners break the cycle of negative self-talk (Purkey, 2000).

Self-efficacy beliefs may have also influenced the goals the participants chose as well as their level of effort and perseverance when faced with difficulties (van den Akker-Scheek et al., 2007). Bandura (1993) stated that when faced with challenges, individuals with a low level of self-efficacy tend to retreat from challenges, whereas individuals with a high level of self-efficacy tend to persevere and overcome the challenges. Although this participant did not totally retreat from these challenges, the quality of her recovery from surgery may have been compromised due to her negative self-talk and decreased sense of personal efficacy as well as a self-concept that anticipated the body responding negatively to a medical intervention such as surgery. Self-efficacy beliefs may be context dependent such that clients may demonstrate a high level of self-efficacy preoperatively, but this belief may be altered when they are faced with challenges during the postoperative recovery period (Lucas, 2007).

The other 3 participants also experienced postoperative setbacks but appeared to use positive self-talk that was affirming and served as a means of motivating them to move forward. Positive self-talk that is grounded in reality contributes to our sense of personal efficacy (Purkey, 2000). Bandura (1993) observed that individuals who perceive themselves as having a high level of efficacy tend to feel that their failures are
attributed to lack of knowledge or effort. This was evident with 1 participant who stated that when she experienced roadblocks to her recovery she would examine her attitude or modify the approach she was using when performing an activity such as the postoperative exercises. These 3 participants may also have been somewhat more optimistic in their approach to problems. Optimists tend to see setbacks as temporary obstacles that they can overcome (Seligman, 2002). Optimism is also required for a feeling of “well-being” and achievement (Bandura, 1997).

External Factors Influencing Client Participants’ Perceptions

With regard to the external factors that influenced the client participants’ perceptions it appeared that setting up their support system following surgery was a vital element to their recovery process. Two of the participants mentioned and appreciated that the Prehab therapists emphasized the importance of having a support system in place postoperatively. Heine et al. (2004) encourage educators when preparing clients psychologically for discharge home to help instill a feeling of “safety,” such that clients feel that they have the necessary community and family supports in place to facilitate their transition from hospital to home.

It appeared that all of the study participants found the practice session offered by the occupational therapist and the physical therapist to be meaningful and beneficial. Gage and Berliner (1990) reported that receiving personally meaningful information is more important to promote learning when compared with the medium in which the information is presented. Clients in this study, however, appeared to benefit from a multisensory approach to learning as prescribed by Van Hoose and Strahan (1992), which involves visual, auditory, kinesthetic, as well as tactile learning. Participants also
benefited from the use of learning strategies. Preoperatively, all 5 participants stated that they would like to receive the Prehab education visually. Combs (1999) believes that men tend to appreciate kinesthetic learning more than women. In this study, however, 3 of the women voiced their desire to engage in kinesthetic learning as well.

Clients benefit from active involvement in their learning experience (Giroux Bruce & Borg, 2002; Johansson et al., 2007; Purkey, 1996). This was evident when clients reviewed the practical aspects of the Prehab Program that used a multisensory approach to teaching and learning, such as stair climbing with the physical therapist. Participants were able to reflect on the teaching experience and their ability to effectively learn, recall, and perform stair climbing postoperatively with ease and proficiency. The participants also incorporated the learning strategy, “good goes to heaven and the bad goes to hell” with regard to which leg leads during stair climbing. van den Akker-Scheek et al. (2007) believed that clients benefit most from mastery experiences as described by Bandura (1997). However, the finding of this study suggest that clients benefited from three components of self-efficacy (Bandura, 1997 cited in Lucas, 2007). These were demonstrated during the stair climbing session with the physical therapist. This teaching session included a vicarious experience or visually observing the task that is to be performed, mastery experience or practicing of the task, and social persuasion or verbal feedback when performing the task.

It is important to create an inviting educational environment, as a hospital environment is a potential source of stress for clients, affecting their ability to “assimilate” new information (Clode-Baker & Gregg, 1997). The Prehab physical therapist used an inviting “doing with” approach that helped to promote collaborative
work (Hough et al., 1991). Clients' intrinsic motivation is also engaged when a "doing with" approach to teaching and learning is utilized (Purkey, 1996). The physical therapist also intentionally conveyed her positive expectancy (C. Reed, 1992) that the participants would have the necessary skills to effectively perform stair climbing with crutches. Inviting messages also help to create positive perceptions and promote learning (Van Hoose & Strahan, 1992). Combs (1999) encourages educators to provide educational experiences that encourage learners to feel like "adequate, worthy, self-respecting people" (p. 141). When a person feels cared for and that they belong, this serves to enhance the person's learning experience (Combs).

From a psychological point of view it appeared that the participants developed a stronger sense of self-efficacy with regard to their physical abilities as a result of the practice session. Having the participants practice tasks that they may have initially been apprehensive about, such as stair climbing with crutches, promotes positive self-talk as well as builds self-confidence. The participants benefited from having learning goals which are meaningful as well as challenging and are accompanied by the right level of "whelm" (Novak, 2002). The rehabilitation literature supports providing clients with the opportunity to create positive perceptions, as this has resulted in older adults demonstrating an improvement in their functional abilities (Montin & Suominen, 2002). The benefits of creating positive perceptions was also evident in this study, as rehearsal of activities such as stair climbing prior to surgery translated into an increased level of confidence when the participants performed this task postoperatively.

Following the Prehab session, the participants also appeared to have a higher level of self-efficacy and confidence in their ability to arrange adaptive equipment for their
home. In the Prehab Program participants were invited to engage in a practice session with the occupational therapist, which involved trying out the adaptive equipment such as the commode and the bathseat. This aspect of the practice session appeared to enhance the participants' confidence when selecting the appropriate equipment for their discharge home. Clients are more likely to have prepared their home and purchased/rented the necessary adaptive equipment prior to their admission if they have received preoperative education (McGregor et al., 2004; Spalding, 2003). The practice session also resulted in the participants incorporating the total hip precautions into their daily life in advance of the surgery as well as postoperatively. Preoperative education also appeared to enhance the participants' ability to follow through on instructions postoperatively with regard to total hip replacement surgery (Santavirta et al., 1994).

One participant also conveyed the psychological benefits of receiving the education prior to her surgery such that she did not have to take the time to process the information postoperatively, which she believed would have contributed to a delay in her recovery. In the rehabilitation literature, clients who attended preoperative education and who were made aware of the importance of early mobilization as a means of promoting recovery tended to stand sooner postoperatively (Giraudet-Le Quintrec et al., 2003). Although the findings of this study did not focus on the time frame of recovery with regard to the participants' ability to stand and mobilize, each participant did convey and demonstrate a high level of motivation to engage in the exercises postoperatively, which may be associated with an understanding of the rationale and benefits of movement postoperatively.

An interesting finding of this study occurred when participants were asked
directly if they believed that the Prehab Program prepared them psychologically for surgery. Only 2 of the participants linked the practice session and the organization of equipment with psychological preparation. The other 2 participants believed that the program increased their level of anxiety. These participants referred to aspects of the education session that they believed were disinviting such as the instruction on the total hip replacement precautions. One of the participants stated that the Prehab therapists presented the educational material in a "negative" manner. It is interesting to note that some of the topics that the participants found to be presented in a disinviting manner and were therefore anxiety evoking were also topics that contributed to the participants’ level of anxiety prior to their attending the Prehab Program. A third participant perceived there to be a differentiation between the topic and presenters, stating that although the topic involving the total hip precautions was “scary,” the manner in which the Prehab therapists presented it was not.

The Prehab Program did not appear to prepare clients psychologically for surgery in terms of assisting participants in building their personal sense of efficacy or reviewing potentially negative self-talk regarding dealing with obstacles associated with their surgery and postoperative recovery period. The one-to-one session with the Prehab occupational therapist did not appear to be utilized as it was originally intended in terms of providing participants with the opportunity to discuss their feelings and attitudes towards their surgery. Purkey (2000) believes that the greatest challenge for educators is not to build positive internal dialogue but to extinguish "self-defeating inner conversations" (p. 19).

For example, an occupational therapist, when working with clients who are
anxious and feel “generally unprepared” for their surgery, would initially illuminate for clients the manner in which self-defeating thought patterns increase their level of anxiety. The therapist would then challenge these thought patterns and offer concrete methods for dealing with the issues that are of concern to the clients. The therapist and the clients would work collaboratively to break down the topics of concern into manageable pieces and establish a plan of action for prioritizing tasks to prepare clients physically, socially, and psychologically for their surgery and recovery process. Part of a learning experience should involve teaching clients how to deal with their perception of failure and that everyone in life experiences roadblocks and setbacks (Purkey, 2000). Based on the findings of this study, it appeared that clients when faced with postoperative challenges relied on their preexisting skills and beliefs in the area of self-talk and self-efficacy.

The one-to-one session has the potential to be similar to the counseling session as described by Stafford (1992), enabling the therapist to view the client’s perceptions. During the one-to-one session with the therapist, potentially unproductive patterns of thought or perceptions that the client may have are bought to the client’s attention as well as methods of modifying them. Purkey (2000) believes the role of the educator is to challenge these patterns of thought or cognitive distortions. However, the occupational therapist that was the coleader at the time of this study stated that she did not feel comfortable addressing the psychological issues with the participants during the one-to-one session. She believed that it is important to have support from members of the multidisciplinary team when discussing these issues.

Although the one-to-one session did not directly address the possible fears and apprehensions of the participants, it did provide the opportunity for the each participant to
disclose information that she may not have wished to discuss in a group setting and allowed the therapist and participant time to construct relevant goals and establish a course of action for achieving them. Being actively involved in their recovery is an empowering approach to education (Johansson et al., 2007; Spalding, 2000). Unfortunately, the interview session for 1 of the participants was interrupted, and as a result the discussion of alternative discharge plans was incomplete.

Clients benefit physically as well as psychologically when the rationale associated with the preoperative teaching is conveyed, which leads to compliance, active participation, and the promotion of recovery (Gammon & Mulholland, 1996). Knowing what to expect postoperatively provides clients with a sense of assurance and allows them to anticipate what will happen postoperatively, assisting in reducing client anxiety (Butler et al., 1996; Clode-Baker & Gregg, 1997; Giraudet-Le Quintrec et al., 2003; Spalding, 2003). Preoperative education has also been associated with a reduction in a client's preoperative state anxiety (Sjoling et al., 2003). Hough et al. (1991) reported that clients as well as their families showed a reduction in their level of anxiety when they were informed of what to expect immediately postoperatively. McDonald et al. (2004) performed a Cochrane Literature Review of verbal, written, or audiovisual preoperative education received by clients awaiting total hip or knee replacement surgery and found that while the education had a modest beneficial effect on client anxiety preoperatively, it did not influence postoperative levels of anxiety. With regard to levels of anxiety, an interesting finding of this study was that while all the participants stated that they appreciated the Prehab Program in terms of teaching them what to expect postoperatively, the highly anxious participants did not perceive the program as
contributing to a reduction in their level of anxiety.

**Implications for Practice**

Following completion of this study, I was able to resume my former coleadership role of the Prehab Program. Returning to this position provided me with an opportunity to implement the valuable information learned from the study participants with regard to client expectations. Learning involves the process of moving from data collection to taking action on the data collected to create the needed change (Giesecke & McNeil, 2004). Modifying certain aspects of the Prehab Program would help optimize the learning experience for future clients of the program. The findings of this study have been applied to the “how,” or the processes used to convey the information, which according to Purkey (2000), is just as important as the “what” we teach in the program in terms of content.

The results of this study have provided the Prehab therapists who were the coleaders of the program at the time of this study with the opportunity for reflection on practice to increase their conscious awareness of how clients perceive them as educators. Some participants in this study appeared to appreciate a matter of fact approach to client education when discussing topics such as the precautions associated with total hip replacement surgery. The participants who were predisposed to experiencing anxiety found the manner in which this topic was addressed to be negative. It appeared that the more anxious participants were seeking emotional assurance with regard to their decision to have the surgery in addition to receiving technical information.

To be effective as educators, therapists have to be sensitive of the emotional context in which a client is functioning and adjust the educational session accordingly.
The emotional state of the client also impacts his or her receptiveness to being part of a group teaching session. Smaller group sizes such as three to six members facilitates the asking of questions and the establishment of trust by encouraging interaction amongst the group members and between the group members and the Prehab therapists (Giraudet-Le Quintrec et al., 2003). However, for the participants with a high level of anxiety, the group session may be more distressing to them, as it raises their level of self-consciousness.

The one-to-one session provides clients with the opportunity to discuss privately topics they may not wish to reveal at the group level. Environments and relationships that facilitate disclosure and trust increase the likelihood that the information that has been disclosed is an accurate representation of the situation for the client (Giroux Bruce & Borg, 2002). During the one-to-one interviews between the occupational therapist and the client, it is important to create an environment that encourages the establishment of rapport and trust, which in turn enables clients to disclose their thoughts and feelings regarding their surgery and recovery process. The participant who experienced an interruption during this one-to-one session stated that she did not want to resume a discussion of this personal nature at a later time. Efforts have therefore been made to eliminate the interruptions that occur during the one-to-one sessions between the occupational therapist and the clients as well as during the group teaching session with the Prehab therapists. As a result of the study findings, the one-to-one interviews are no longer held prior to the group teaching session, as there is a high risk that they will be interrupted when the group teaching commences.

The findings of this study were also applied to improve the communication
between the hospital-based Community Care Action Centre (CCAC) and the community-based CCAC. As the CCAC representatives in the hospital strongly encouraged clients to assume responsibility for the arrangement of their equipment, it was assumed that the CCAC representatives in the community also supported this approach. During this study, it became apparent that therapists working for CCAC in the community were not aware of the hospital's rationale for this informal policy of having clients arrange their own equipment and were therefore not supporting this method of arranging equipment. The discrepancy between what the hospital was advising versus what the community was telling the clients postoperatively was brought to the attention of the Client Services Manager for CCAC in the community. She will communicate the hospital's rationale for organizing the equipment in this manner with the managers of the therapists who are employed by the contracted community-based agencies.

In addition to improving "processes" as well as "systems," Giesecke and McNeil (2004) encourage educators when examining educational programs to keep in mind their assumptions about how programs function. One of my assumptions prior to commencing this study was that the occupational therapist during her one-to-one session with the clients addressed the psychological issues that clients may have regarding their surgery and recovery process. My intention when designing the Prehab Program was to emphasize equally the importance of as well as provide the means for preparing clients physically, socially, as well as psychologically for surgery. The one-to-one session appeared to provide psychological comfort indirectly by discussing and assisting participants in the organization of equipment, but it did not address their fears and anxieties in terms of providing them with coping strategies.
In addition to clarifying realistic versus unrealistic expectations that participants may have with regard to their surgery and recovery process, this research study also examined whether or not the expectations placed on the Prehab therapists are realistic or not. Just as self-efficacy beliefs shaped the participants’ motivations to embrace certain goals and persevere in times of difficulty, the self-efficacy beliefs that therapists possess influence their motivation to engage clients in discussions that deal with emotional issues such as feelings of anxiety. In addition to possible limited beliefs with regard to a therapist’s sense of self-efficacy, there is also a limited amount of time a therapist has to engage in topics of this nature during the Prehab session. The one-to-one session with the occupational therapist is limited to 10 to 15 minutes with each client. In this time period, an in-depth interview takes place in which the therapist and the client review the client’s home situation. The amount of supports and the type of adaptive equipment the client will require upon discharge from hospital are also discussed. The one-to-one session is also a time in which the possible need to consult other services such as CCAC or the hospital discharge planner takes place.

Given the limited amount of time with clients, creating a handout that outlines coping strategies for dealing with potential preoperative and postoperative stressors may serve as a means of providing psychological support for the clients. Strategies for reducing clients’ level of anxiety could include having clients use their imagination and positively envision their surgery and recovery process, which will put their mind at ease (Spalding, 2003). Daltroy et al. (1998) also encourage clients to learn methods for coping with their anxiety and lack of comfort associated with the surgery by utilizing strategies such as reassuring self-talk and relaxation techniques. Clients are more likely
to follow the educational information if they believe it will assist them in coping with as well as reducing their level of stress (Butler et al., 1996). Therefore, in consultation with the department of psychiatry, techniques that have proven to be reliable for dealing with stressors associated with surgery will be created for the Prehab clients.

In addition to reflecting on ways to enhance the content of an education program, ongoing reflection on practice is important when making leadership transitions as well. Applying the principles of inviting leadership to facilitate the process involved when new therapists assumed coleadership of the Prehab Program would have been beneficial. The need for transitional leadership was evident when the new therapists in charge appeared to be focusing on increasing the efficiency of the program by centralizing the teaching into one room. The result of this centralization was the elimination of the visual aspects of learning such as the use of the kitchen and the bathroom, which had served as visual references during the teaching session. Following a discussion with the new and former leaders of the Prehab Program, it was apparent that each possessed different philosophical approaches to teaching. Novak (2002) states that "inviting educational leaders, working from the perceptual tradition, strive to have each person's point of view understood and to develop a larger shared perspective" (p. 151).

**Implications for Theory**

The results of this study may apply to the area of invitational theory and the manner in which its principles can be incorporated into the creation, implementation, and evaluation of educational programs within healthcare settings. In addition, analysis of the study findings has contributed to a deeper and more expansive look at the manner in which perceptions influence the learning needs and recovery process of clients following
total hip and total knee replacement surgery. The use of inductive analysis and inferences as suggested by Combs (1999) when interpreting the findings of this qualitative study have contributed to a richer appreciation and understanding of the complexity of human behaviour. A more comprehensive understanding of the expectations that orthopaedic clients who are awaiting total hip or total knee replacement surgery have with regard to their surgery and recovery process has also been acquired as a result of this study.

The findings of this study also enhance as well as challenge existing theory which states that clients who have received preoperative education have noted a decrease in their level of anxiety. In this study, clients, with the exception of those who appeared to have a high level of anxiety, believed that the Prehab Program prepared them psychologically for surgery. The highly anxious clients did not appear to consciously connect physical preparation with psychological comfort.

The results of this study affirm the views of the educational theorists who state that learners desire as well as benefit from being active participants in their learning experience (Giroux Bruce & Borg, 2002; Johansson et al., 2007; Purkey, 2000). The positive effect of creating meaningful educational sessions as suggested by educational theorists (Giroux Bruce & Borg) was also evident in the results of this study, as meaningful sessions appeared to contribute to participants' incorporation of the precautions into their daily life preoperatively as well as postoperatively. The medium used to present the material, such as multisensory learning suggested by educational theorists Van Hoose and Strahan (1992), also appears be important as it appeals to the variety of learning styles and thus seemed to facilitate the study participants' ability to
attend to, learn, recall, and utilize the information at a later time.

Implications for Research

The results of this study have revealed that research is required in the area creating inviting teaching and learning experiences specifically for the clients who are experiencing emotions such as high levels of anxiety. Research will be conducted in the study hospital in the design and development of a handout on coping strategies that will assist the highly anxious clients in the preparation for and recovery from their surgery. In addition to creating a handout on coping strategies, it would be beneficial to evaluate the potential use of preoperative home assessments conducted by CCAC. Home assessments would provide anxious clients with an opportunity to actively problem solve and prepare in advance of their surgery in a comfortable and familiar environment. The creation of a video by the study hospital in the form of a CD that would serve as a supplement to the Prehab Program will also be explored. All clients including the more anxious clients would benefit from an opportunity to review a visual demonstration of the exercises, use of adaptive equipment, as well as a verbal overview of the surgery and recovery process.

Reflections

Many of the following reflections are as a result of my interview with my faculty advisor, Professor John Novak. As I had created the questions, I knew what my basic responses would be. However, as with any engaging discussion, new insights occurred and reflection was deepened through the art of conversation. One of my goals for this research project was to expand my understanding of the complex nature of perceptions and how they influence the behaviour of clients in healthcare. By understanding the inner working of our clients we become more adept as educators in our ability to help our
clients reach their full potential as human beings. In seeking to understand others, we usually gain a deeper understanding of ourselves. As a result of my involvement in this study, I have rediscovered and gained a deeper understanding of my calling as an occupational therapist.

During the last interview with my 82-year-old participant, I found myself assuming a therapeutic role, which involved identifying patterns within the participant that were evident concerning her behaviour and approach to problem solving. I was moved by her response when she said that she was learning new things about herself, as no one had asked her questions of this nature before. She had not given much thought about topics such as self-talk prior to this interview. She expressed her delight that research was being done on the psychological as well as the physical aspects of surgery as reflected in her comment, “it seems that you have taken the time to consider emotions, the psychological effect as well, and that is just as important as the physical side.” As a therapist, my goal is to address the social, physical, as well as psychological needs of my clients. I enjoy challenging my clients in the area of their perceptions.

Perceptions are like mountains, they are constantly experiencing change through their interaction with the elements around them. And like mountains, in order to achieve a more expansive view, a challenging climb is sometimes required. Just as Sir Edmund Hillary (2007) stated after climbing Mount Everest, “it is not the mountain we conquer, but ourselves.” At times, our perceptions can represent our greatest obstacles that have to be conquered in order to move forward in life. As an occupational therapist, although I may provide the tools and invite my clients to join me on the “climb,” it is ultimately up to them to take the first step on their journey towards reaching new levels of self-
awareness.

Conclusion

When creating inviting educational experiences it is important that they are inviting for the learners as well as the educators. Educators benefit from an awareness of client expectations, their learning needs, unique approaches to learning, as well as the personal strengths clients bring to an educational experience. Creating meaningful and relevant educational sessions with the opportunity to physically practice and rehearse tasks has been proven to increase the likelihood that the information will be remembered and used following the client’s discharge home.

Healthcare educators have to invite themselves to the educational experience by having realistic expectations of themselves and a willingness to work collaboratively and creatively with other members of the healthcare team to discover ways of meeting client expectations within the current time constraints of the healthcare system. Awareness of our unique strengths as educators not only helps us during present and future exploration of ways to incorporate invitational approaches in education and leadership but also, as suggested by Seligman (2002), brings “abundant gratification and authentic happiness” (p. 161) to our life.

As educators we can also choose to view the problems we experience with an optimistic lens, which helps sharpen our sense of clarity and enables us to see a variety of options when pursuing solutions to problems. Novak (2002) states with regard to optimism, it is not a “belief that good things are bound to happen, but rather the realistic assessment that good things have a better chance of occurring if one approaches them in a positive, open and thoughtful manner” (p. 72).
Just a Combs (1999) suggests examining a human experience in terms of interactions between elements, the use of the 5 P's of invitational theory also facilitates an educator's understanding of the interrelationship between the internal and external elements within the educational ecosystem that influence client perception of the surgery and the recovery process. Purkey (2000) encourages educators to use the cumulative effect of the 5 P's, namely people, places, policies, programs, and processes when creating positive educational change within an organization.

Purkey (2000) uses the analogy of a starfish when discussing the 5 P's to illustrate the manner in which the starfish effectively deals with its prey by using the cumulative effect of all five points to create the desired result. Purkey suggests using the 5 P's of invitational education to approach problems from many vantage points, which will assist in finding effective solutions. I would also add that the starfish has the ability to move in a variety of directions. Educational leaders when on the road to educational change need to be flexible enough to change course quickly and to do so as required. As educators, we must be willing to explore new educational territory if we are going to thrive in an ever-changing and challenging educational ecosystem.
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Appendix A

Preoperative Interview Questions Prehab Clients

1) In general, what is your understanding of total hip or total knee surgery and what it entails?

   Rationale: examines prior knowledge, expectations of clients, thoughts, beliefs

2) How do you feel about having a total hip or total knee replacement surgery?

   Rationale: determines concerns of clients, possible anxiety related to surgery

3) What are your concerns prior to surgery, immediately after surgery, and the weeks and months that follow your surgery?

   Rationale: possible concerns of the client from the presurgical to the postsurgical phase of recovery

4) Have you had other major surgeries or significant health issues concerning yourself that you believe are similar to this experience? If yes, how did you prepare yourself?

   Rationale: client’s self-efficacy beliefs, prior knowledge

5) You will be attending the Prehab teaching session in the near future where you will be participating in a new learning experience. Describe yourself as a learner and the manner in which you best learn new information. (examples of learning styles will be provided for client)

   Rationale: learning needs and learning style of client

6) What role do you think the Prehab educators will play in your recovery process?

   Rationale: expectations

7) What do you hope that the Prehab Program teaching session will offer you?

   Rationale: reviews expectations of clients

8) With regard to your health, have you had educational experiences in the past where the knowledge or information you received changed how you behaved or thought about something? If yes, please describe.

   Rationale: influence of prior educational experiences on client’s perceptions
9) What role do you play in your recovery process? For example, in what way are you preparing yourself psychologically, physically, and socially for surgery?

**Rationale:** self-responsibility, utilization of stress management techniques, organization of support system, and/or home environment which may have psychological as well as physical benefits

10) Do you think that self-talk plays a role in the recovery process following surgery? If yes, please explain. If no, please explain. (examples of the types of self-talk will be described to client)

**Rationale:** determine if client engages in positive or negative self-talk

11) Do you believe that how you perceive something is a matter of choice? Please describe. (two examples of possible perceptions with regard to his or her surgery will be provided for the client to gain an understanding of perception as defined by this study)

**Rationale:** determine client’s beliefs about perception

12) What other things do you feel will affect your recovery following your total hip or total knee replacement surgery?

**Rationale:** additional factors beyond those found in literature review
Appendix B

Postoperative Interview Questions Prehab Clients

1) With regard to your surgery, did everything happen as you thought it would? If not, how was it different?

**Rationale:** client expectations

2) Did the Prehab Program prepare you psychologically, physically, and socially for surgery? If yes, please describe. (each of these areas will be defined further for the client)

**Rationale:** in addition to client defining how the program prepared him or her for surgery this question will also examine client's motivation to follow through on suggestions and assume responsibility for preparation for surgery such as reorganization of home or rental of adaptive equipment.

3) Was the content of the information session useful or not useful? If yes, in what way? If not, why not?

**Rationale:** examines the “what” of a teaching/learning experience

4) Was the way in which the information that was provided during the teaching session helpful or not helpful? If yes, in what way? If not, why not?

**Rationale:** examines the “how” of a teaching/learning experience

5) Did you engage in any type of self-talk following your surgery? If yes, please describe. (examples of the types of self-talk will be described to client)

**Rationale:** determine effect of negative or positive self-talk.

6) In what way did you participate in your recovery process?

**Rationale:** self-responsibility/self-efficacy beliefs in areas such as pain management

7) Did attending the Prehab Program change your thoughts about your surgery and recovery period? If yes, please explain. If no, please explain.

**Rationale:** determine if program influenced client perception in terms of thoughts and beliefs

8) A/Describe your experience with the Prehab Program from your initial contact with the receptionist to your teaching session with the Prehab therapists. B/What did you think about the learning environment in which the program took place?
**Rationale:** explores if the client’s perceived the educational environment and staff to be inviting versus disinviting

9) What areas were not discussed or planned for that you feel might have been helpful to you if they had been?

**Rationale:** examines other factors that may influence client perception of recovery

10) Are there any other comments on this interview or anything else you would like to add?
Appendix C

Interview Questions Prehab Therapists

1) The principles of invitational theory were incorporated in the design, implementation, and evaluation of the Prehab Program. Do you feel that aspects of this theory such as client-focused educational experiences that include respect, trust, optimism, and intentionality are part of your interaction with clients? Please explain.

2) Describe what you think are important aspects of a teaching and learning experience for the Prehab clients?

3) Do you feel that the Prehab Program is preparing clients physically, socially, and psychologically for surgery as well as the postoperative recovery period? Please comment on each of the three areas.

4) Do you feel that the Prehab Program influences a client’s perception of his or her recovery? If yes, please explain.

5) Invitational theory believes that the “how” of an educational experience is just as important as the “why.” Invitational theorist William Purkey (2000) states that “5 P’s”, namely: programs, people, places, policies, and processes influence inviting relationships. Please examine and comment on Prehab Program to determine if it is inviting for the Prehab clients from each of these vantage points.
Appendix D

Interview Questions Faculty Supervisor for Principal Investigator

1) Why did you choose to study the relationship between a client’s perception and his or her recovery from total joint replacement surgery?

2) What made you choose invitational theory as a framework for your research study?

3) Why did you decide to incorporate invitational theory into the design, implementation, and evaluation of the Prehab Program?

4) In what manner does applying the principles of invitational theory potentially influence a client’s perception of his or her recovery from surgery?

5) Are there lessons learned and things you would do differently to facilitate the transition of other therapists assuming coleadership of the Prehab Program?

6) Do you feel that the principles of invitational theory are used as the compass to guide the current Prehab Program? Please explain.

7) Compare your approach to interviewing study participants as a researcher versus interviewing clients as a clinical occupational therapist.
Appendix E

Verbal Script used to Obtain Permission for Client’s Mailing Address

The receptionist for the Outpatient Rehabilitation Department will be contacting clients who are awaiting Total Hip and Total Knee Replacement surgery to book their appointment to attend the Prehab Education Program. The receptionist will be provided with the following script that will be used to acquire client permission for release of mailing address for Prehab Research Project.

Verbal Script:
One of our occupational therapists at (name of study hospital) , Shirley Coughlin, is conducting research on the Prehab Program as part of her Master of Education thesis. Participation in this research study is voluntary. Prehab clients who may be interested in participating in this study will be sent an information package and consent form to participate. Would you be willing to provide her with your mailing address, which would allow her to send you information about this research project?
Appendix G

External Factor Themes and the “5 P’s”: Perceptions of Client Participants, Prehab Therapists

| PEOPLE |
|-----------------|-----------------|-----------------|-----------------|-----------------|
| **Intention of Prehab Therapists When Approaching Client Education** |
| **Occupational Therapist:** With regard to showing clients respect. "We show it verbally, we show it through our listening, our empathy...the way we respond to the person, our voice, our body language. We make sure everything is consistent." Regarding negative clients, "the negative ones I am not so sure that we influence them as much, maybe we give them food for thought and maybe if they are given time to think about it, or we had more time to spend with them maybe we would give them power." |
| **Physical Therapist:** "I think the patient needs to understand why they have to do certain things such as total hip replacement. When we do the education showing them pictures, telling them how the surgery is performed...to remember the precautions for three months." |

<table>
<thead>
<tr>
<th>Participant</th>
<th>Topic</th>
<th>Comments</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carol</td>
<td>Education on Precautions and Therapist(s) General Approach to Teaching</td>
<td>&quot;Everyone was so approachable and so helpful you almost felt that it was a personal service. I was most impressed.&quot;</td>
<td>Inviting behaviour of therapist(s)</td>
</tr>
<tr>
<td>Teresa</td>
<td></td>
<td>&quot;I think it was very gentle... they didn't actually say what would happen if you did (dislocate the surgical hip)...until somebody said what happens if you do dislocate and then they explained, that's fine, I mean. They were very good at making it very clear you did not want to do this. But you know they weren't scary or anything else except that it was scary because you thought oh, I don't want to do that.&quot;</td>
<td>Inviting behaviour of therapist(s)</td>
</tr>
<tr>
<td>Jennifer</td>
<td></td>
<td>&quot;I found with her (the therapist’s) method of explaining the things that you can and cannot do i.e., no bending beyond the ninety degrees no twisting I think she said it all in a very negative manner I think she could have been a little more positive. At the end of this whole session, I just turned to my husband</td>
<td>Disinviting behaviour of therapist(s)</td>
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<td>Participant</td>
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<tr>
<td>Jennifer continued</td>
<td>Education on Precautions and Therapist(s) General Approach to Teaching continued</td>
<td>and said I'm not doing this, I was crying and I said I am not doing the surgery because I found that if you do this, this is going to happen and you mustn't do this and it was like a drill sergeant. Personally, maybe other people didn't, I don't know, but I was really upset because I was scared to death, because if I do make one misstep I am going to ruin this whole operation.&quot;</td>
<td>Disinviting behaviour of therapist(s)</td>
</tr>
<tr>
<td>Doreen</td>
<td></td>
<td>&quot;Ninety percent yes (with regard to the staff treating her with respect). There was one lady (Prehab therapist) there don't ask me her name I can't remember, it was the first one I met she was very abrupt, by the book no discussion, that's the way it is, that's all I can say. Other than that the rest of them were wonderful.&quot;</td>
<td>Majority of staff associated with Prehab Program were inviting one instance of disinviting behaviour</td>
</tr>
<tr>
<td>Carol</td>
<td></td>
<td>&quot;I felt that they were concerned about your experience that it went well and that your reactions would be a good reaction. I felt that they wanted you to have a positive feeling about it.&quot; (During the group teaching session, the Prehab therapist) &quot;who has had a family… shared her personal experiences and I thought that was a tender thing to do because you don't share deep family problems with everybody. But she gave enough of herself to make us feel… me personally… that she's coped with all this with her family and I have a good family and I am good at coping, so this will be good.&quot;</td>
<td>Inviting behaviour of therapists</td>
</tr>
</tbody>
</table>
Therapist Intention Regarding Psychological Preparation of Clients

**Occupational Therapist:** "Psychologically, I think the more information they have even though they are overwhelmed, they are anxious and they start questioning should I have the surgery or not I think that is good because they start to realize the reality of the situation. It is not going to be oh, it is going to be easy or there are going to be people that are going to help me, the hospital will make sure I have everything."

**Physical Therapist:** "I think at least ninety five percent of the clients feel that they are learning and it is preparing them (psychologically) for their surgery."

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<th>Participant</th>
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<tr>
<td>Carol</td>
<td>Prehab Program and Psychological Preparation for Surgery</td>
<td>&quot;They stressed that this is surgery this isn’t a walk in the park but on the other hand they were positive encouraging and made you realize that thousands of people have done this before and have all gone well. I felt extremely good.&quot;</td>
<td>Inviting behaviour of therapist(s) promoted feelings of confidence in participant</td>
</tr>
<tr>
<td>Carol</td>
<td></td>
<td>&quot;It (the Prehab Program) prepared me psychologically by the matter of fact way you discussed it…this is what will happen…this is a fairly normal thing these days…everything is going to be fine, people were cheerful, nothing was ominous.&quot;</td>
<td>Normalizing surgical process facilitated psychological preparation for surgery</td>
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<tr>
<td>Teresa</td>
<td></td>
<td>&quot;Yes, I think so because it did (prepare her psychologically)….I mean I was ready, I wasn’t just sort of faced with this equipment and thinking oh, ‘what do I do with that?’, sort of thing…it made me feel more comfortable knowing I knew I had the equipment beforehand and I was ready to go as it were.”</td>
<td>Organization of equipment facilitated psychological preparation for surgery</td>
</tr>
<tr>
<td>Doreen</td>
<td></td>
<td>&quot;It (attending Prehab) scared me more….It made me more nervous…there were too many restrictions. (The restrictions &quot;would eliminate most of what I was accustomed to doing. Part of it for six weeks and a total of three months I thought I won’t survive this I have</td>
<td>Education regarding restrictions increased participant’s anxiety Participant erroneously</td>
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<tr>
<td>Doreen continued</td>
<td>Prehab Program and Psychological Preparation for Surgery continued</td>
<td>got to get going.” Doreen then concluded “it was all worry for nothing. Maybe I am lucky that I have come along so well because I was able to do things. Well, three weeks today and I am walking with nothing.”</td>
<td>assumed that she did not have to use a walker for the prescribed duration</td>
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<tr>
<td>Jennifer</td>
<td></td>
<td>&quot;No, a big fat no. It was the negativity of the occupational therapist, the physiotherapist she was severe. There was no warmth, no empathy, no you are going to be just fine. I realize this is going to be a long recovery period...it was just like for three months you can’t do this, you can’t do this...and I just felt agghh, three months....I think there could be something there just to be a little softer, a little warmer just accentuate the positive of having the surgery, the fact that you won’t have any pain, it is a long time, just anything that would cater to that feeling of I am really doing the right thing.&quot;</td>
<td>Participant did not feel that Prehab prepared her psychologically for surgery</td>
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<td>Believed both therapists had disinviting approach</td>
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**Intention of One-to-One Session with the Occupational Therapist**

**Occupational Therapist:** "We need to have more time to be able to problem solve and support each other. Even having a discharge planner here where they can sort out what is your (the client's) plan going to be? Or even having someone where if these people (the clients) do not have a plan in place how are they going to manage after. Maybe they should not have the surgery...we still have people not realizing the reality of the healthcare system and how it is."

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<tr>
<td>Carol</td>
<td>One-to-one Session with the Occupational Therapist</td>
<td>&quot;That was great, it felt personal, it felt comfortable and it felt confidential.&quot;</td>
<td>Inviting approach, participant relaxed</td>
</tr>
<tr>
<td>Jennifer</td>
<td></td>
<td>Jennifer believed the one-to-one meeting with the occupational therapist was &quot;very helpful...we discussed the apartment and what we have here. She measured out and put</td>
<td>Inviting approach, home situation discussed and practical</td>
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<tr>
<td>Jennifer</td>
<td>One-to-one Session with the Occupational Therapist continued</td>
<td>her suggestions down on paper so I mean that was really helpful because that was something we could then take to Shopper's and say okay, this is what we need. And (these suggestions) made the renting and purchasing of the equipment extremely easy. I thought it wasn’t going to be, but it was, so that was very helpful.&quot;</td>
<td>solutions offered</td>
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<tr>
<td>Doreen</td>
<td>&quot;No, I couldn't have a one-to-one... these are my rules (referring to statements made by the occupational therapist) and this is what I have to go by. Now, I understand she has her rules but it was a little... and then she said oh, we have to interrupt this because this meeting (group teaching session) has started and all the people were around the table.&quot;</td>
<td>Disinviting behaviour in terms of therapist's comments and interruptions of interview process</td>
<td></td>
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<tr>
<td>Doreen</td>
<td>(Prehab therapist informed Doreen that there may be a possibility that she would not be transferred to Rehab Unit from Acute Care Unit) I wasn’t that long with the lady and it was mostly I was upset about there was a possibility that I wouldn’t be doing rehab in the hospital and I hadn’t planned for that at all. If I had been told there is a chance you might not then I would have thought what am I going to do if I don’t. But I hadn’t been told that (by her surgeon).</td>
<td>Disinviting Participant expecting stay on Rehab Unit no alternate plans discussed with Prehab therapist</td>
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<tr>
<td>Doreen</td>
<td>(When the teaching session ended) “I was too upset at that point (to resume the one-to-one session with the O.T.)...I really didn't want to. She did come to me later and say that she</td>
<td>Disinviting, therapist hospital policy oriented versus participant</td>
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### PEOPLE

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<tr>
<td>Doreen continued</td>
<td>One-to-one Session with the Occupational Therapist continued</td>
<td>left a note on my file and would do her best (regarding postoperative transfer to the Rehabilitation Unit)….If she (the O.T.) had said we are going to do our best to make sure you do rehab here because of your circumstances at home… a little softer. It was just you know, that’s just the way it is and I can’t promise you (that) you will do it here and if we have an emergency and need the bed you will be sent home. I’m thinking oh, I’ll be sent home.&quot;</td>
<td>oriented</td>
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### PLACES

**Intention of Prehab Therapists and Teaching Environment**

**Occupational Therapist:** "It is nice to have the kitchen here, having the equipment there is great, having the bathroom is great so that the people can see what they are doing and practice if they want to. We have designated space for those two afternoons however, it is not exclusively ours. We have people walking in to put their stuff in the fridge…the hand program comes in for their waxing."

**Physical Therapist:** "I would have preferred a place that is larger and purely for the Prehab Program but space in a hospital is at optimum and we have to share with different programs… and there are interruptions."

<table>
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<tr>
<th>Teresa</th>
<th>Location of Prehab Education Session</th>
<th>&quot;Yes it was fine, I felt comfortable yes. And it was good to have the bed set up.&quot;</th>
<th>Inviting learning environment</th>
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<tr>
<td>Carol</td>
<td></td>
<td>“It was very comfortable we sat at the table and the papers were right there ready for us.”</td>
<td>Inviting and organized</td>
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<tr>
<td>Doreen</td>
<td></td>
<td>When asked if she found the teaching room to be an inviting, comfortable environment she stated, “yes, very much.”</td>
<td>Inviting learning environment</td>
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<tr>
<td>Jennifer</td>
<td>Location of Prehab Education Session continued</td>
<td>(Regarding Prehab Education room) &quot;It is just like where are we going to put these people? Well okay, we have got this room but other people will use it...I thought it was a very odd room to do it because there was a kitchen there and people were coming in and getting food and heating it. So you know, I thought this was strange you would think that it would be in a room where it is just the people involved. And I just thought people were looking, blaze heating their ribs and I just thought it would have been nice had it been in a separate room.&quot;</td>
<td>Disinviting, interruptions</td>
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**Policies**

**Therapist Intentions When Discussing Hospital Policies**

**Occupational Therapist:** "The hospital policy says this is it and this is how it is going to be and you (the client) better be prepared so it is up to us to try to share that information without being harsh but making sure they understand the reality of the situation."

**Physical Therapist:** "Encouraging the patients to get the equipment ahead of time rather than saying you are able to get this (the equipment) from CCAC but only when you are discharged and if you are referred by a doctor. We encourage clients if you have this now at home (the equipment) so you can practice using it. You still have to pay with CCAC anyway after a month, and you will be required to use it more than a month. So, why don't you get the equipment so that you have it there ready for when you go home? This way they (the client's) don’t have the anxiety of having to plan or arrange the delivery of the equipment to their home prior to their discharge from hospital..."

<p>| Teresa | Review of Hospital Policies by Therapist(s) | &quot;They (the therapists) were very clear on what the hospital did not provide in terms of occupational therapy or physio too... and that was fine and very understandable....I have been a healthcare worker I know that it is very important to make it clear to people. But it might have come across a little bit, a little bit on the negative side but I mean (it) definitely needs saying....It was good | Disinviting having to pay for equipment |</p>
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<th>Participant</th>
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<tr>
<td>Teresa</td>
<td>Review of Hospital Policies by Therapist(s) continued</td>
<td>I mean people need to know that not everything is going to be handed to them on a plate they needed to ask for things. However, there wasn’t as much emphasis on how you find out where to get these things in the group session. Now, I think that probably got resolved in the one-on-one session.”</td>
<td>Disinviting having to pay for equipment</td>
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<tr>
<td>Doreen</td>
<td>Informal Prehab Policy that Highly Recommends Clients Rent their own Equipment</td>
<td>(Doreen was) &quot;Definitely concerned about the equipment I would need especially since I was told (in Prehab) I would have to rent it and then subsequently (while on the Rehab Unit) at the end found out that I would have it for a month at no charge. It is like to right hand doesn't know what the left hand is doing. I heard conflicting stories the whole time I was there.&quot; I went through four or five days of you are going to Rehab here, no you are not.&quot;</td>
<td>Disinviting, confusion regarding method and source for acquiring adaptive equipment</td>
</tr>
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<td>Doreen</td>
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<td>&quot;The cost scared me because I am on a limited income and I was told no, I would not get it. I would have to rent it. Um, and yes because my apartment is so small where am I going to put it?&quot;</td>
<td>Increased anxiety for participant concerning unexpected costs of renting equipment</td>
</tr>
<tr>
<td>Doreen</td>
<td></td>
<td>&quot;I heard it, I don't know how many number of times between people on the phone, with the equipment, and this original lady (Prehab therapist)... if I hear elective surgery once more... Everything is different because the government says this is elective surgery. And I said to her, you mean because my surgeon told me you can have this done and walk or you can not have this done and somewhere down the road not...&quot;</td>
<td>Disinviting, negative association with having &quot;elective&quot; surgery and having to rent own equipment</td>
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### POLICIES

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<tr>
<td>Doreen</td>
<td>Informal Prehab Policy that Highly Recommends Clients Rent their own Equipment continued</td>
<td>walk… and because I elected to have it. And apparently it is not elective is if you go in with a stroke or a heart attack and you can’t make the choice.</td>
<td>CCAC not explaining hospital rationale for having hospital having client organize equipment thus hospital appears misinformed of CCAC services</td>
</tr>
<tr>
<td>Carol</td>
<td>&quot;We talked (with the Prehab therapists) about the getting the equipment and that was one thing, I don’t think there was enough stressed about contacting the CCAC people because we just went out and rented everything but the therapist came yesterday for the first time and he said we could have just phoned the CCAC and for a month we could have had it all for nothing.&quot;</td>
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### PROGRAMS

**Intention of Prehab Therapist Regarding Pain Management**

**Physical Therapist:** “There are a handful of people who we may increase their anxiety because sometimes clients want to be in a state of not knowing and being oblivious of what is happening to them. When we give them specific information it sort of scares them a little bit but we need to let them know it is not smooth sailing. You (the client) need to work hard; you (the client) need to take your pain medication. It is not going to be pain free but there is a light at the end of the tunnel. If they can go past and beyond that point they do feel much better and it is a worthwhile surgery to have."

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<tr>
<td>Teresa</td>
<td>Content of Prehab Program Pain Management Education</td>
<td>“They did make a point about taking it (pain medication) before you do any exercises and things like that. Making sure you did take it even though you might think you didn’t need it. And that is a very good point particularly for me because I do have a reasonably high threshold and the tendency isn’t to take it if I am feeling okay but I was remembering what they said and I did do it and found that it makes a big difference.”</td>
<td>Inviting, increased participant’s awareness of pain management and recovery</td>
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<tr>
<td>Jennifer</td>
<td>Content of Prehab Program Pain Management Education continued</td>
<td>&quot;They (the therapists) really accentuated the pain you are going to be in and how you must take your pain medication this is the other negative aspect. And don't wait until you are in pain. You are going to have to call the nurse because if she doesn't come in fifteen minutes you are going to have to buzz her again. The same with going to the bathroom don't wait until you really have to go because you are going to buzz her and it could be fifteen minutes. I just thought, what is this? This feels like a horrible institution I feel like I am going to prison you know and it is just like aggh! Bear in mind, I haven't been hospitalized before it just…it seems so cold. I think that yes, I understand that is the way life is but I think it could have been presented in a better manner.&quot;</td>
<td>Disinviting regarding pain management and recovery process</td>
</tr>
<tr>
<td>Carol</td>
<td>Content of Prehab Program</td>
<td>(If she had not attended Prehab) “I think it might have been slower because I would have been hearing all these things for the first time and having to process it. And it takes time to process information and they don’t just say well, you have to do this and you do it, it takes time. Well I have had time to think about it play around with it, work on it so it was all again... surgery was completed now it's rehab and now all those ducks are in line so lets go.”</td>
<td>Participant aware of benefits of receiving teaching prior to surgery</td>
</tr>
<tr>
<td>Teresa</td>
<td></td>
<td>“…it was a very good program. It was actually much better that I expected it to be in that I probably felt I knew most things but the actual going through it was very good.”</td>
<td>Information facilitates participant independence of activities of daily living</td>
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### PROGRAMS

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<tr>
<td>Jennifer</td>
<td>Content of Prehab Program continued</td>
<td>“I fully appreciated that whole session after the fact. I found there was a lot of information to absorb and I was afraid of forgetting it but it came back…there were people in the hospital, the physios, the occupational therapist but having the knowledge already was very helpful.”</td>
<td>Program increased participant’s awareness of physical elements of recovery</td>
</tr>
<tr>
<td>Doreen</td>
<td></td>
<td>&quot;It did help because instead of just coming home and having all this equipment and saying what am I going to do with it I knew what I had to do with it.&quot;</td>
<td>Participant familiar with equipment prior to discharge</td>
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### PROCESSES

**Therapist Intention for Practice/Practical Teaching Session**

**Occupational Therapist:** "I think that knowledge is power and I do believe that practice and giving them responsibility to them…back to them makes them much stronger people." "Making sure they have the practical information not just the knowledge you are going to have pain but what can you do to cope with the pain. You (the clients) have restrictions, ‘how are you going to manage during that period of restrictions?’ and then giving them that opportunity to practice."

**Physical Therapist:** "doing practical things, using a walker, getting in and out of bed. It helps them increase their confidence in those tasks so that after surgery they can certainly perform them without a lot of fear and anxiety." "The clients will say I will never do stairs (with crutches). I tell them stairs are not hard they are easy, let’s go and try. And once we try, they say it is not so hard, I can do that....(Practicing stair climbing) gives them the confidence and optimism that nothing will be too hard for them to do."

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<tr>
<td>Doreen</td>
<td>Preoperative Application of Practical Teaching Sessions</td>
<td>“For instance sitting in my chair. I had my ankles crossed or my leg and I immediately stopped doing that. Reaching for stuff in the kitchen on the bottom shelf and thinking okay, move that up don’t leave it down there. Getting into my bed, I practiced the way they showed how you should do it from the bottom with a plastic bag and sliding up.”</td>
<td>Implemented precautions and reorganized home environment following Prehab teaching session</td>
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<tr>
<td>Carol</td>
<td>Preoperative Application of Practical Teaching Sessions continued</td>
<td>Carol revealed that preoperatively she “practiced going up and down stairs. I practiced getting on and off the bed. I practiced getting on and off the toilet.” To which she added, “I did the car transfer. I did it with my grand daughter on the driveway.”</td>
<td>Practiced techniques at home following Prehab session</td>
</tr>
<tr>
<td>Jennifer</td>
<td>Regarding renting her equipment preoperatively, “They show you all the things that you need and there are different pictures but having somebody explain why this particular piece of equipment is better and show you how you would use it for instance the bath seat you know how you get on you keep your leg out and swing yourself around rather than have one that is in the bath tub because you would never be able to climb into the bath tub anyway. So, that was very helpful.”</td>
<td>Demonstration and rationale for use of equipment increased participant’s awareness of how to use equipment</td>
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<tr>
<td>Teresa</td>
<td>&quot;...we did learn a lot (in the Prehab Program)...it was practical you could actually get to try these things and do it and see what it felt like such as using a walker....I chose the commode chair because the raised toilet seat wouldn't have been appropriate for me and I wouldn't have known that before the session.&quot;</td>
<td>Choosing appropriate equipment enhanced by trying demonstration equipment</td>
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<tr>
<td>Teresa</td>
<td>Postoperative Application of Practical Teaching Sessions</td>
<td>“Once I was up I actually... they said I caught up on the walking and moving around very quickly and I think to be very honest that was all because of the practicing that Prehab had given me.”</td>
<td>Recovery facilitated by Prehab practice session</td>
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<tr>
<td>Jennifer</td>
<td>Postoperative Application of Practical Teaching Sessions continued</td>
<td>(Regarding stair climbing postoperatively) “I found it extremely helpful (having attended Prehab) because I could remember what she (Prehab therapist) said and I could remember exactly what I had to do having the physio (acute care therapist) there to assist and re-enforce what I already knew. It made it easy.”</td>
<td>Participant recalled and used postoperative instructions from Prehab stair climbing session</td>
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<tr>
<td>Carol</td>
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<td>“I knew what to expect…. They showed us how to get onto the bed um, carefully making sure which side our surgery would be so that we knew how to position ourselves. So that when I had to do it for the first time (while on the Acute Care Unit) it wasn’t a shock. I knew what I was doing so I certainly didn’t hurt myself because I knew which way I had to go. The same with steps…as soon as they (Acute Care Therapists) said good to heaven I had the cane in my hand I…they said you don’t have to go to the top but I went right to the top.”</td>
<td>Greater ease postoperatively with bed transfer and stair climbing associated with Prehab practice session</td>
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<tr>
<td>Teresa</td>
<td></td>
<td>“When we were doing it afterwards (stair climbing postoperatively) it is sort of intuitive but you need to also know what to do to start with. The thing about “good goes to heaven” and the “bad goes to hell” was excellent so the use of little tricks like that was good.”</td>
<td>Participant implemented memory strategy when performing postoperative stair climbing</td>
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### Processes

**Intention of Therapists during Group Teaching Session**

**Occupational Therapist:** The Prehab Program gives the clients "some practical solutions, letting them come up with ideas, allowing them to share their thoughts with the group starts sympathizing or empathizing or sharing their experiences we encourage all of that so that they become more optimistic about what is going to happen."

**Physical Therapist:** I want them to ask questions and certainly if there are perceived problems I intentionally ask them to ask so that we can work them through...and patients share previous experiences too."

<table>
<thead>
<tr>
<th>Participant</th>
<th>Topic</th>
<th>Comments</th>
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<tbody>
<tr>
<td>Carol</td>
<td>Being part of a group teaching session</td>
<td>Carol stated having four people in her group, “was excellent and the number of people I was surprised at the small number of people that was great because each person had time to ask a question and have it answered. So, you didn’t feel hurried and it felt like a learning session, but comfortable.”</td>
<td>Participant felt relaxed and comfortable with each group member being attended to</td>
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<tr>
<td>Teresa</td>
<td>&quot;It turned out that of the four people in the Prehab session I seemed to be the only one who had actually opened the book. “</td>
<td>Other group members not prepared</td>
<td></td>
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<tr>
<td>Teresa</td>
<td>(When teaching)...“the various aspects of the booklet I think it would be very helpful if they (Prehab therapists) refer to the page numbers”</td>
<td>Reference to page numbers in booklet may have enhanced following instructions</td>
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<tr>
<td>Teresa</td>
<td>Teresa discussed the issue of a group member asking too many personal questions “she wasn’t paying any attention to the physio’s instructions and of course was disrupting the rest of the group to some extent...I felt rather bothered by this because it was sort of taking our precious time&quot;</td>
<td>Interruptions of group sessions with client-specific questions</td>
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<td>Jennifer</td>
<td>With regard to group teaching session Jennifer stated, &quot;for me personally I thought oh dear, I am going to be with other people and I understand now yes of course it makes sense to have several people there because</td>
<td>Participant did not wish to discuss emotions with other group members</td>
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### PROCESSES

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<td>Jennifer</td>
<td>Being part of a group teaching session</td>
<td>they are all having surgery and you certainly can’t take up all these people’s time but I was nervous sitting amongst other people having the same surgery.&quot;</td>
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<tr>
<td>Doreen</td>
<td></td>
<td>Doreen appeared saddened that she was the only one not accompanied by a friend or family member stating, “…there were five of us. Four of the other people had their caregiver with them and there I sat by myself.” When asked how she felt about that she stated, “like nobody loved me.”</td>
<td>Perceived lack of support of family and friends heightened during group teaching session</td>
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