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Self-Care Abilities of Older Men After Early Discharge Following Transurethral Prostatectomy

by

Marilyn Elisabeth Woolley 

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of Master of Nursing

Faculty of Nursing

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Dr. Janet Ross Kerr

Dr. Carolyn Ross

Dr. Sharon Warren

September 29, 1997
Date

DEDICATION

I dedicate this thesis to my family.

To John, my husband, for his steadfast love, care and support.

To Heather and Michael, my children, for their love, enthusiasm and maturity.

To Arthur and Marjorie, my parents, for their enduring love and respect for my choices in life.

ABSTRACT

The results from this correlational study of 47 older rural and urban male subjects who experienced early discharge from hospital following a Transurethral Prostatectomy, indicate a significant relationship between cognitive function and independence in performing activities of daily living. There were minimal relationships between activities of daily living, social support resources, and coping strategies. There were no significant relationships between readmission at three months and social support resources, cognitive function, and coping effectiveness. Overall the subjects reported a good to excellent level of independence in performing activities of daily living, and a good level of f social support resources.

AKNOWLEDGMENTS

I wish to thank the following individuals and groups who provided time, talents, and expertise during the evolution of this project.

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CHAPTER I

Introduction to the Study

Statement of the Problem

Decreases in health care expenditures in our society are significantly altering use and access to health care agencies by individuals and families. Shortening the length of hospital stay (LOS) for patients who require surgical intervention is one change being implemented in urban hospitals. Preadmission clinics where patients scheduled for elective surgery receive their preoperative preparation as outpatients are effective in reducing LOS (Judge-Waisgerber, Danehy, & O'Connor, 1991; LeNoble, 1991; Llewellyn, 1991; Williams, 1992). The recovery time in hospital has been reduced to 1 to 5 days for selected patients who have had mastectomy, ophthalmology/oral surgery, and cholecystectomy surgeries (Judge-Waisgerber, Danehy, & O'Connor, 1991) and 1 to 2 days for patients following hernia repairs (Wilson, 1995) and transurethral resection of the prostate (Spear, Bollard & Summers, 1994).

Cost effectiveness has been a beneficial and significant outcome for reducing LOS (Wilson, 1995; Spear, Bollard & Summers, 1994; Judge-Waisgerber, Danehy, & O'Connor, 1991) even when additional costs related to follow-up post discharge care and readmissions are factored into the analysis (Spear, Bollard & Summers, 1994). More efficient planning of the health budget is a positive outcome for change, yet the overall effectiveness of reducing LOS is still being determined. Often patients who experience early discharge receive assistance from health care professionals to promote their recovery, yet many of these patients recuperate at home without formal health care services.

The trend to early discharge is affecting all patient populations. Older patients are a group that use a large portion of hospital based services. In Canada in recent decades two trends have emerged concerning hospitalized patients 65 years of age and older. While the average length of hospital stay has decreased there has been an increase in the percentage of total hospital separations (discharges and deaths) for this age group. In 1991-92 this cohort of patients utilized 57% of total hospital days which reflects the significant use of hospitals by older people. And in Alberta in 1991-92 the average hospital LOS was the shortest at 7.4 days when compared to other Canadian provinces (Randhawa, 1993).

With recent technological innovations in surgical operative procedures, for example endoscopy and lasers, and ongoing efforts to reduce health care expenditures, the utilization of shorter stay programs will continue to expand (Llewellyn, 1991). Because the population in North America is aging, the use of these programs by older persons is increasing. Many older patients, often in their eighth and ninth decades of life, who do not have other complicating illnesses are meeting criteria for shorter stay programs (Llewellyn, 1991).

A consequence of early discharge and recuperating from illness at home instead of the hospital, is that individuals and families are participating more actively in decisions and actions related to their health care. Participation by members of the public in their health care is one of the key principles of the philosophy of primary health care (PHC) in Canada (Canadian Nurses Association, 1993), and self care is but one aspect of this key tenet of public participation (Stewart & Langille, 1995). Self-care along with coping and social support are integral aspects of public participation in a PHC framework. Focusing on the

key principle of public participation in the PHC framework is a positive way of viewing the impact of recent health care reforms and changes. The participation of individuals in their own health care empowers them to make decisions about their care (Stewart & Langille, 1995).

The concepts of self-care, coping, and social support are important components of PHC when placed within the reality of elderly individuals recovering at home after early discharge. Various patient populations who are experiencing early discharge have been studied but with older patients who experience early discharge from hospital, assessment of their level of participation with their own care may give insight into how nurses can best facilitate the hospital to home transition for this group. Researchers need to explore how older persons cope and manage self-care after early discharge, who they rely on for assistance in meeting their health and personal needs and the types of resources they use to maintain their level of health through the recuperative period.

The linkages between self-care, social support resources and coping will be addressed in this study to determine if there are any relationships between these concepts in the setting of elderly individuals managing self-care at home after early discharge. Self-care can be viewed as a type of health behaviour, while social support is an important component of the key principle of public participation in PHC because it has an impact on health behaviours of individuals and families (Stewart, 1995). The juxstaposition of coping within the PHC framework occurs because the social support network may influence the coping methods that are used and the way the individuals cope may also affect the type of support received (Stewart, 1995). Understanding how well older patients manage to care for themselves after discharge is crucial for nurses when planning

interventions to strengthen the support networks and enhance coping strategies so that patients may effectively participate in and make decisions about their care.

Together with self-care, social support, and coping, cognition and rates of readmission back into hospital will also be studied. Understanding levels of cognition in older research subjects is requisite. Although loss of cognitive function is not always an expected outcome as individuals age, the incidence of temporary or irreversible forms of cognitive impairment like delirium and dementia are more prevalent in older persons (Dellasega & Morris, 1993). Informal appraisal of cognition may provide an incomplete picture of an individual or overlook an impairment altogether whereas formal mental status examinations provide for improved assessment that addresses orientation, memory, concentration, and abstraction. Subtle impairments that are detected with a mental status exam could indicate problems with coping during hospitalization in some individuals (Lusis, Hydo, & Clark, 1993). With the focus of this study being older individuals, the significance of cognitive function is paramount. Therefore relationships will be examined between levels of cognitive function and ability to manage self-care at home and readmission.

Rates of readmission back into hospital are of interest with older patients as they are significant and consequently costly to the health care system (Kellough, Brickner, Conley, & Conroy, 1991). What is not clear in the literature are the rates of readmission for older patients following shorter LOS in hospital. This study will investigate the relationship between how well a patient manages at home after this type of early discharge and readmission back into hospital. Data of this nature may enable health care planners to

identify patient populations experiencing shorter hospital LOS who are at risk for readmission.

In the health regions of Edmonton, central and northern, Alberta, Canada, the post operative management of older men who have had a non-complicated transurethral prostatectomy (TURP) has changed significantly. Previously patients who had a TURP recuperated for 3 to 4 days in hospital before being discharged. Now these patients are usually discharged from the acute care hospitals as early as 24 hours following their operation. Pre-operative screening is completed while the patient is attending the preadmission clinic.

The patient is instructed to carry out pre-operative procedures at home, such as fasting the night before surgery, administering a commercially prepared cleansing enema, and possibly taking oral antibiotics for two days prior to the day of surgery. Most of these patients have the TURP procedure performed while under spinal anesthesia. Following an overnight hospital stay the patient is discharged with a retention urethral catheter in situ attached to a urinary drainage leg bag. The catheter is removed at home by a health care professional, usually on the second postoperative day. Based on assessment by their urologist some of these patients may keep their retention catheters for up to 5 days or longer post-operatively.

In similarly managed shorter stay programs for TURP patients, cost effectiveness and patient satisfaction with going home early have been studied (Spear, Bollard, & Summers, 1994;"Royal Alexandra study", 1994). Patient satisfaction and cost effectiveness outcomes provide only a partial picture about the efficacy for this type of

shorter stay program. Other outcomes require research to provide information about how well the older male patient manages his own care at home after this type of surgery.

In this current study, ability to perform self-care, adequacy of social support resources, and use of coping strategies of older men who have experienced early discharge from an acute care hospital were examined. Cognitive function and rates of readmission were also investigated in the study population to determine if these variables were related to how these patients managed at home after early discharge. These variables are important to study to provide a broader and in depth analysis of how older patients manage at home after early discharge while their medical treatment is still in progress. The data collected and analyzed from this research study will increase the knowledge nurses have about the ability of older patients to participate and make decisions about their own care after discharge- a trend that is congruent with the philosophy of primary health care.

Purpose

The purpose of this study was to describe and analyze the relationships between ability to perform self-care, perceived social support resources, frequency and effectiveness of coping strategies, and cognitive function in older men after early discharge to their homes following non-complicated transurethral prostatectomy (TURP) at an acute care hospital. A secondary purpose was to describe and analyze the relationships between readmission, perceived social support resources, frequency and effectiveness of coping strategies, and cognitive function in the study population.

Research Questions

The following questions were asked:

1. What is the relationship between the ability of older men who experienced early discharge to their homes following surgery to perform self-care and perceived adequacy of social support resources, coping strategies, and cognitive function?
2. What is the relationship between readmission at three months of older men who experienced early discharge to their homes following surgery and perceived adequacy of social support resources, coping strategies, and cognitive function.

Variables

The dependent variables in this study were the ability to perform self-care and three month readmission rate while the independent variables in this study were perceived adequacy of social resources, frequency and effectiveness of coping strategies, and cognitive function.

Definition of Study Terms

The following are the definitions of the terms used in this study:

Self-care abilities.

Self-care abilities are defined as an individual's current perception of the ability to perform actions that are necessary for maintaining one's own life, health, and well being (Orem, 1991). Specifically these actions are the level of independence of functional and instrumental Activities of Daily Living (ADL) in a performance range of without any assistance and with ease to needing help throughout the day and /or night to perform ADL

(Fillenbaum, G., 1988). This outcome was measured by the OARS Multidimensional Functional Assessment Questionnaire - Part A: ADL subscale (Fillenbaum, 1988).

Social support resources.

Social support resources are defined as the perceived adequacy of current social relationships of individuals, the quality of those relationships, and the availability of help or care individuals would receive from that/those person(s) (Fillenbaum, 1988). This outcome was measured by the OARS Multidimensional Functional Assessment Questionnaire - Part A: social support subscale (Fillenbaum, 1988).

Coping strategies.

Coping strategies are defined as attempts, plans or methods used by individuals to overcome situations that may be seen as a threat, challenge, frustration, or a gratifying experience (Halstead & Fernsler, 1994). This outcome was measured by the Revised Jalowiec Coping Scale (Jalowiec, 1988).

Three month readmission.

Three month readmission is defined by the researcher as any readmission to a hospital in the three months following the subject's TURP surgery for reasons related to the surgery and corresponding medical condition.

Cognitive functions.

Cognitive functions are defined as those actions of the mind that include all aspects of perceiving, thinking, and remembering (Miller & Keane, 1987) and were measured by the Telephone Version of the Mini-Mental Status Exam (MMSE) (Roccaforte, Burke, Bayer, & Wengel, 1992).

Cognitive impairment.

Cognitive impairment is defined as an individual's diminished capacity to know the world (Folstein, Anthony, Parhad, Duffy, & Gruenberg, 1985).

Ethical Considerations

This study was approved by the Joint Ethics Committee of the Faculty of Nursing, University of Alberta and the University of Alberta Hospitals. The Special Services and Research Committee at the University of Alberta Hospitals (UAH) reviewed and approved the study and provided permission for the researcher to invite patients attending the UAH preadmission clinic to participate in the study (see Appendixes A and B respectfully).

In the UAH preadmission clinic the researcher gave each patient who met selection criteria a letter of introduction which contained information about the study (see Appendix C). Patients were then invited to read the consent to participate in the study form (see Appendix D). All questions about the study and the consent were answered by the researcher. When patients read the consent and indicated understanding of their role in the study, the researcher asked them if they wished to participate in the study and if so, to sign the consent form. Consent forms were witnessed and signed by the researcher in the presence of the subjects. To ensure ease of reading for the subjects, the letter of introduction and consent were analyzed using the Grammatik 5 program and found to have a Flesch-Kincaid grade level of 7 and 8 respectively.

Subjects were informed that there would be no risks or benefits to themselves or the care they were receiving if they participated in the study. In addition they were told that the results of the study may assist nurses in having a better understanding of how patients who have had a prostate operation manage at home after a short hospitalization.

The researcher explained how the data would be collected and that some of the questions in the telephone interview may be perceived as personal in nature. They were advised that they were free to refuse to participate in the study at any time and that doing so would not adversely affect their care or the results of the study. At the start of successive telephone interviews they were asked if they still wished to participate and in addition were given a telephone number to contact the researcher when they received the mailed out questionnaire form. During the telephone interviews, if any subject described medical or nursing care problems related to his operation, he would be advised by the researcher to contact his family physician, his surgeon or the nearest hospital emergency department for assistance.

To assure confidentiality and anonymity each subject was told that number codes were assigned to all questionnaires which would not contain any identifying personal data. The master list containing subjects name, telephone number, and mailing address was kept in a separate location from the data and in a locked cabinet. Data from the study was also kept in a locked cabinet.

Limitations of the Study

A convenience sample of subjects for the study was obtained over a four month period from a pre-admission clinic in an acute care hospital. The results of this study cannot be generalized to any other population because subjects were not randomly selected. To eliminate as much potential bias as possible all patients scheduled for a TURP and who met the selection criteria were asked to participate in the study . A limit to the size of the sample occurred when recruitment of subjects ceased because the clinic was relocated to another hospital where the researcher did not have permission to recruit

research subjects. Because of this the size of the sample was small and hence decreased the power of this study. A final limitation occurred as a result of the design of this study. The correlational design used may only suggest if a relationship exists between the variables in this study and does not imply that there is a cause and effect between them.

CHAPTER II

Literature Review

Introduction

The purpose of this literature review is to examine the study variables and related concepts important in the exploration of the study problem. Therefore in addition to describing descriptive and research literature pertaining to the outcomes of self-care, readmission, coping, social support resources, and cognitive function, the review examines why older persons experiencing early discharge may be at risk for negative health outcomes after their hospitalization episode. Included are topics related to the significance of older individuals as a study population, short stay programs and literature that describes how prepared patients are to manage at home after the hospital experience. The post discharge time period is increasingly important in today's health care milieu because economic constraints and realities have placed many individuals and their families in the position of being recipients and providers of care. Successful management of needs by elderly patients, their families, and health professionals assisting them during this crucial period may demonstrate that participation by members of the public in their own care can support implementation of a system of Primary Health Care.

Significance of Older Individuals as a Study Population

Statistics Canada reports that patients in Canada over the age of 65 years utilize 57% of total hospital days and account for 31% of hospital separations (discharges and deaths) (Ranhawa, 1993). This population is also receiving hospital based health care services in pre-admission programs and is staying in the hospital fewer days. Because

change is occurring so rapidly in Alberta, how these patients manage to cope with their self-care needs when they get home needs to be explored.

Older patients discharged from medical, surgical, ophthalmic, and geriatric units in a large teaching hospital in the United Kingdom were studied in relation to some of the problems they experienced when they got home (Tierney, Closs, Hunter & MacMillan, 1993). Tierney et al., (1993) conducted this exploratory study that in part described preparation for discharge and management of household tasks at home after discharge for 34 male and female patients, ranging in age from 75 to 94 years. Patients were interviewed within 36 hours prior to discharge and 7 to 10 days following discharge. These researchers found that patients consistently managed a variety of tasks such as preparing meals, routine housework and collecting prescriptions, less well at home after discharge than they had previously managed or had expected to manage when they got home (Tierney et al., 1993). The study also revealed that 19 out of the 34 subjects said that they were not asked how they would manage at home while still in hospital. Even though 31 of the subjects felt that their hospitalization was the right length, 28 subjects did not have the timing of their discharge discussed with them. This study illustrates that there is a need for preparing patients for management at home after hospitalization. The ability of older Canadian patients to manage their care at home after discharge has not been reported as yet in the health care literature

The period of time immediately after hospitalization and early discharge is critical for the older patient and family in terms of the quality of their recuperation (Jopp, Carroll, & Waters, 1993). Older patients have definite needs in relation to their ability to cope at home after discharge. They experience stress and anxiety associated with the

predicament they find themselves in when they get home (Waters, 1987). In Britain, a study found that older patients (n = 32) who were discharged from hospital experienced an overall decrease in independence in personal and domestic activities of daily living as compared to before their hospitalization (Waters, 1987). The first two weeks after discharge are crucial. Elderly patient and family member-caregiver dyads (n = 55 dyads) expressed apprehension and anxiety about the two week transition time from acute care hospital to the home (Bull, 1992). The worries and disruptions that these family dyads identified were related to acquiring new skills for managing treatments, changes of their condition and environment, and role changes within the family unit (Bull, 1992).

Early Discharge

Short stay programs have been implemented in a variety of hospital units in North America and Europe. Research related to these programs has focused on the outcomes of patient satisfaction and cost effectiveness. Williams (1992) described a short stay program for orthopaedic patients where patient satisfaction surveys indicated that these patients felt they received satisfactory and adequate nursing care while in the hospital. In another program, patient satisfaction surveys documented that patients were very pleased with the preadmission clinic (LeNoble, 1991). Both of these studies examined how well the patients viewed their experience while in the hospital but there were no reported data about how patients managed when they went home and how they coped in their ability to care for themselves after discharge. Similarly 98% of patients (n = 60) expressed satisfaction with postoperative care they received from home care nurses after discharge from a short stay program following Transurethral Resection (TURP) surgery, and 82% of the subjects preferred going home early. (Royal Alexandra study, 1994). Although cost effectiveness was demonstrated with savings of

about $1215 per patient in comparison to a control group of TURP patients who received their postoperative care in the hospital other outcomes were not reported. In an assessment of a preoperative education and preadmission testing program for hip and knee surgery Haines and Veillion (1990) found that 94% of 143 patients, age 40 to 90, were positive about the screening program. There is no indication in this study of how well these patients fared following discharge. Patient satisfaction with short stay programs (Williams, 1992; LeNoble, 1991; Haines & Veillion, 1990) are documented, but patient outcomes related to self-care or problems encountered after discharge have not been reported in these studies.

Wilson (1995) compared discharge outcomes between patients who had a traditional hospitalization after a herniorrhaphy and those who were in a managed care (MC) group. The MC group were hospitalized an average of 0.57 days as compared to the traditional group who were hospitalized for 1.63 days. A telephone interview at two weeks post discharge yielded results of no significant differences in readmission rates, reutilization of services, and complications. In an opinion survey with the same interview, subjects from both groups stated that they knew how to care for themselves at home, although the 41% of the MC group related that they needed more assistance at home and 59% felt that their length of time in hospital was not adequate. There were significantly fewer laboratory tests, (complete blood count - CBC) in the MC group, which reflected cost efficiency for the shorter length of stay. The importance of this study is that even with a relatively minor surgical experience patients felt that they should have stayed in hospital longer and that they required more assistance at home, which indicates that other patient outcomes need to be explored more extensively with populations experiencing shorter stays.

Judge-Waisgerber, Danehy & O'Connor (1991) describe the functioning of a surgical short stay unit that admitted and discharged patients over a five day period for a variety of surgical procedures. The initial goal of decreasing economic costs was attained after a two year period, although research on patient outcomes was lacking. Through their nursing practice, nurses reported that patients had an increased need for individualized teaching during the stay and after discharge. To gain more insight into the experiences of patients after discharge, postoperative phone calls were used to gather data about patient problems once they were home. This evidence was anecdotal and again reveals a need for research on other patient outcomes following discharge.

Effectiveness of nursing care for 151 patients in five coronary care units was monitored after patients were discharged from hospital (Edwardson, 1988). At discharge results indicated that patients were less informed about prescribed medications, nutrition and activity levels. They had major deficits in their understanding of continued self-care and treatment prescriptions. The researcher also found that age was a significant predictor of outcome at discharge in that older patients had a lower level of functioning than younger patients. As a result of her study, Edwardson suggests that for older patients, shorter hospitalizations may be difficult because they are discharged before they have learned the self-care skills necessary for independent functioning (Edwardson, 1988).

Readiness for Discharge

Researchers have found that discharge planning makes a positive difference for how elderly patients cope at home after hospitalization and may be a factor in reducing readmission rates (Naylor, 1990; Kennedy, Neidlinger & Scroggins, 1987; Rubenstein, Josephson, Wieland, English, Sayre, & Kane, 1984). Other factors are viewed as having a

positive impact on the patient who is to be discharged from hospital. Teaching strategies characteristics of the nurse teaching the patient (Lindeman, 1988) including educational preparation (Johnson, 1989) have an impact in the discharge planning process. Screening the patient for possible risk factors to predict patient needs at discharge are vital in the planning process (Blaylock & Cason, 1992; Fethke, Smith & Johnson, 1986). Screening may involve the use of high risk screening tools, but these should be tested as to their effectiveness and should be supplemented with secondary assessment that includes professional judgment of specially trained discharge planning nurses and other health professionals and the patient (Luken, 1991).

Using follow-up telephone calls for patient education after discharge following myocardial infarction (MI) was an effective method of ensuring continuity of care during convalescence at home (Garding, Kerr, & Bay, 1988). In this pretest-posttest experimental designed study, 51 MI patients were randomly assigned to experimental or control groups and were interviewed at discharge and six weeks after discharge. The experimental group received an average of three teaching follow-up telephone calls for the purpose of patient education throughout the six week interval. The results of the study indicated that subjects in the experimental group had greater knowledge in understanding of the disease, related self-care measures, exercises and all teaching areas combined (Garding et al., 1988). The use of telephone follow-up calls to patients discharged from short stay programs is an effective methodology that should not be overlooked.

Understanding the needs of the elderly during hospitalization and immediately after discharge is essential in planning teaching programs for this age group. Content analysis of general and comprehensive discharge planning protocols taught by two gerontological

clinical nurse specialists (GCNS) to 20 subjects over the age of 70, during and immediately after hospitalization identified four broad categories of patient information (Naylor & Shaid, 1991). The GCNS's spent 64.7% of their time with management of health problems which included a major focus on medication administration, 16.6% with assessment of post discharge services, 10.4% providing information about diagnostic tests and services, and 8.3% for health promotion and disease prevention (Naylor & Shaid, 1991). The high percentage of time spent helping the patients manage their health problems before and after discharge indicates the significance of self-care for this age group.

Satisfaction with a discharge teaching program in a rehabilitation unit and incidence of physiological and psychological needs of 62 patients was monitored 10 to 14 days after discharge by telephone questionnaire (North, Meeusen & Hollinsworth, 1991). One percent of the subjects were under the age of 18 and 67% were over the age of 65. Ninety two percent of the subjects and their families felt satisfied with the discharge plan. Fifty five percent of the subjects reported non-critical problems (e.g. need for respite care, financial concerns, family relationship difficulties, sleep disturbances, constipation, symptoms of urinary tract infection) after discharge. Interestingly, with 55% having some post discharge problems, 57 out of 58 subjects responded positively to the question of satisfaction with the discharge plan. Even though the main intent of the study was satisfaction, it also revealed a high percentage of post discharge problems. North et al. (1991) concluded that for this population, internal readiness or confidence in self-care abilities and problem solving are necessary for successful transition to self-care at home.

Do nurses in the hospital have an adequate understanding of patients' perception of their needs and abilities at discharge? An evaluation of the effectiveness of nursing assessment in an established discharge planning program identified under-assessment by nurses of performance of activities of daily living (ADL) in comparison to self-assessment of those needs by patients (Arenth & Mamon, 1985). Fifty six oncology patients over the age of 18 (29% were 61 years and older) were contacted three days and three weeks post discharge to determine their perception of ADL needs and abilities. High levels of disagreement between nurse assessment of patient ADL abilities and patient self-report after discharge occurred in bathing (28%) and bed/chair transferring (23%). The nurses underestimated the abilities of the patients to perform these activities after discharge. In addition, the study showed levels of non-agreement in patient discharge instruction, most significantly in exercise/ambulation and sites of infection (Arenth & Mamon, 1985). Using qualitative methodology, Congdon (1994) interviewed elderly patients recovering from a fractured hip, family members, and nurses to determine their perception of the patient's readiness for discharge. There was a diversity of perceptions related to readiness, where patients felt that they were able to go home, family members did not, and nurses were generally uncertain. Non-participation of patients and family members in decision making about discharge plans emerged as a major theme in the study findings that illustrated a possible source for problems patients experienced after discharge. Implications for planning discharge programs include collaboration between nurses, patients, and family to assess and identify needs prior to discharge.

The length of time interval for preparing an older patient for discharge is changing. Traditionally discharge teaching has occurred after the patient has had surgery. In some

circumstances it is implemented just prior to discharge. Now with shortened hospital stays for patients undergoing some surgical procedures, discharge teaching is being incorporated into the teaching protocols of preadmission clinics (Llewellyn, 1991; LeNoble, 1991). In a study using a quasi experimental design, two groups of patients with a mean age of 59.1, who were to undergo coronary bypass surgery, received identical preoperative instruction (Lepczyk, Raleigh, & Rowley, 1990). One group (n = 32) received their instruction in a preadmission clinic 2 to 7 days before admission. The second group (n = 42) received their instruction on the afternoon of admission. Results of the study showed that both of the groups had moderate anxiety before surgery, and that the preadmission group before surgery had a better knowledge level. The researchers suggested that doing preoperative teaching in a preadmission clinic is just as effective as doing it post admission. They also suggested that patients in a preadmission group have more time to assimilate information before admission, which may be helpful (Lepczyk, et al., 1990).

Effectiveness of preoperative instruction was compared between a preadmission group who received their instruction in the mail prior to hospital admission and a post admission group who received their instruction after admission (Rice, Mullin, & Jarosz, 1992). Preoperative mood, exercise performance, and post operative mood, analgesic use and length of stay were compared between the 2 groups of patients who had coronary bypass surgery. The preadmission group had higher mood scores and performed more of the exercises than the post admission group in the preoperative period. Postoperatively, both groups were similar in mood, exercise performance, use of analgesic, and length of hospital stay (Rice et al., 1992). Therefore for these subjects, attending a preadmission

clinic for pre-operative teaching was not a disadvantage. Haines & Veillion (1990) described positive anecdotal reports when combining preoperative education with a preadmission screening program. The subjects in these studies demonstrated that the patient does just as well in preoperative preparation, postoperative mood, exercise ability, analgesic use, and length of stay if admitted through a preadmission program versus the traditional post admission preoperative teaching situation.

Self-care

The concept of self-care needs to be studied because it plays a predominant role for people who act independently in response to illness, injury, or disability (Lenihan, 1988). Self-care has roots throughout history when care of the ill person was the responsibility of the family and individuals (Padula, 1992). Self-care has many different conceptualizations ranging from a person's attempt to promote optimal health and manage chronic illness, to self-assessment of minor illnesses and self-prescription of over the counter medications. Individuals, nurses, other health professionals, and self-help agencies all claim an understanding of the concept of self-care (Woods, 1989). The business of caring for oneself includes actions by professionals and lay persons to assess, monitor, and provide treatment to participating in lay helping organizations (Woods, 1989). The idea of individuals caring for themselves is viewed from many different perspectives. Woods (1989) clearly differentiates self-care and outcomes while linking it to four models of health: The clinical model which emphasizes health as the absence of disease and includes mortality, morbidity and cost statistics as outcomes; role performance where the ability to engage in social roles and functional capacity in activities of daily living are measured as outcomes; adaptive which looks at behaviour changes and self-efficacy as outcomes; and

eudaemonistic, with a focus on health promotion, well being and harmony. Outcome measures for this model in relation to self-care are not clearly delineated in the literature.

Woods associates the role performance and clinical models of health as conceptually compatible with the theoretical work of Orem, who has posited a view on self-care but whose work does not describe how to effectively measure this activity as a health behaviour (Woods, 1989). Orem (1991) views self-care "as the practice of activities that individuals perform on their own behalf in maintaining life, health, and well being" (Orem, 1991, p. 117). She (1991) states that it is a learned behaviour that occurs over the lifespan. These behaviours are affected by culture, age, developmental state, level of health, and require motivation and skill for effective performance (Orem, 1991). Self-care abilities are derived from Orem's (1991) theory of self-care requisites which are "the reasons for doing actions that constitute self-care" (Orem, 1991, p.121) and consist of three components.

Universal self-care requisites are those which are common to all humans throughout life and are "associated with life processes, with the maintenance of the integrity of human structure and functioning, and with general well being" (Orem, 1991, p. 125). Providing for and maintaining food intake are examples of a universal requisite. The activities that engage people daily in their drive to survive and progress encompass universal requisites. Developmental self-care requisites are related to human development during stages of the life cycle and include actions that support life processes (healthy nutritional habits during pregnancy) and those that promote processes of development (developmental stages of adulthood - an older person exercising regularly to maintain

muscle tone). These requisites are also related to the effects of conditions that can adversely affect human development (Orem, 1991).

Although Orem examines self-care in depth, she does not describe the outcomes of self-care activities on the health of an individual or community (Woods, 1989). Since self-care can be defined as a health behaviour (Stewart, 1995) one type of measurement of the outcomes of that behaviour is to describe the functional capacity of individuals in their performance of activities of daily living (ADL) (Woods, 1989). To determine whether individuals are meeting the universal and developmental self-care requisites, one measures their capacity to engage in instrumental and physical (ADL) independently versus needing assistance to perform the activities. This type of outcome measurement for self-care can be measured at any stage of the lifecycle and describes how independently individuals perform their daily tasks in their attempt to maintain life, health, and well-being and thus fits well with Orem's concept of self-care (Woods, 1989).

Health deviation self-care requisites occur when people are ill or injured with associated disease or pathology. There may be prescribed medical care ordered for the individual (Orem, 1991). The individual may require assistance from health professionals to monitor and manage the health problem and eventually may be taught to participate in care without the aid of professionals. The outcomes for the effect of self-care behaviours in relation to health deviation are health costs, morbidity, and mortality statistics (Woods, 1989). Readmission back to hospital could be seen as one outcome indicating a failure of the effectiveness of self-care strategies.

Individuals or their caregivers may experience alterations to their universal self-care requisites because of their developmental stage or level of health. A change in the

level of health and the addition of any therapeutic treatments often changes the self-care requisites for individuals. In this way the three requisites can be contingent upon each other. In addition, the ability to care for oneself is often disrupted by illness with new skills needing to be learned (Orem, 1991). Dean (1986) has studied self-care behaviours of elderly people and has found that they function well at home with a continued capacity to maintain their health with effective self-care strategies. Nevertheless her findings reveal that there is a dearth of information about how old people manage at home when ill. Dean suggests that they may use a range of behaviours - from seeking assistance to doing nothing (Dean, 1986).

Determining what outcomes are useful for measuring an older person's ability to manage at home after discharge is open to question. In the medical literature incidence of disease, mortality and readmission rates, along with age and functional capacity, are predictors for further repeat hospitalizations with no reference to self-management at home (Boult, Dowd, McCaffrey, Boult, Hernandez, & Krulewitch, 1993). Other outcomes may indicate how well a person manages after discharge. Closs and Tierney (1993) suggest that positive outcomes such as a person's perception of their ability to manage at home using instruments that measure physical and instrumental ADL may give a different if possibly truer picture of this older population. They argue that high rates of readmission and mortality are inherent with this age group because of the advanced age and higher incidence of disease. Whether this construct is true or not requires further research, but it illustrates that self-care is a complex concept that can be measured in different ways.

Many studies incorporate Orem's concept of self-care as a theoretical framework to describe characteristics of patient populations: self-care medication behaviours in elderly hypertensive persons (Harper, 1984); knowledge of MI disease, it's effects and related self-care measures (Garding et al., 1988); knowledge of self medication following individualized teaching sessions (Taira, 1991); self-care agency [perception of ability to perform self-care (Orem, 1991)], self-care practices, and health promotion concerns of healthy adolescents (Denyes, 1988); older adults perception of self-care after a stroke (Folden, 1993); knowledge and values of health conception and self-care abilities of 30 older rural adults (age 50 to 70) attending a rural high blood pressure clinic (Whetstone & Reid, 1991); nurse assessment of self-care management skills of 38 subjects (75% between the ages of 55-74) who had chronic disease (Snyder, Brugge-Wiger, Ahern, Connelly, DePew, Kappas-Larson, Semmerling, & Wyble, 1991); and assessment of older persons' self-care abilities by family members (Biggs, 1990).

How patients manage by themselves or with a caregiver at home with daily activities after hospitalization has been measured as an outcome using tools that determine the patient's perception of their level of independence with activities of daily living (Prescott, Soeken, & Griggs, 1995; Roberto & Bartmann, 1993; Mamon, Steinwachs, Fahey, Bone, Oktay, & Klein, 1992; Jones, Densen, & Brown, 1989). Abilities related to instrumental and functional ADL reflect how individuals are self managing their universal and developmental self-care requisites. Dependency in self management activities at discharge (activity/mobility, bathing/hygiene, procedures, and recognition of signs and symptoms) and limitations in instrumental and functional ADL were strong predictors in a recent study (n = 145) to assess which patients require home health care after

hospitalization (Prescott, et al. 1995). Older women who were recovering from a fractured hip (n = 76) had a higher functional recovery in performance of ADL and used fewer support services when their preoperative capability in performing ADL was higher. In an regression analysis to predict the women's functional recovery, prior ability to perform ADL accounted for 42% of the variance in the analysis (Roberto & Bartmann, 1993).

In a two week post discharge telephone interview of 919 older patients discharged from urban acute care hospitals, data revealed that 97% of subjects perceived they needed care for needs related to treatment , ADL, mobility and other aspects of self-sufficiency. Thirty-three percent of subjects perceived that these needs were not being met after discharge. (Mamon et al. 1992). Results clearly showed that numbers of ADL limitations along with numbers of treatment and other self-sufficiency needs were major and consistent predictors of unmet needs after discharge. Jones, et. al., (1989) studied 737 elderly hospital patients at discharge and 8 months following discharge where functioning status (ADL) was a significant outcome in comparison to age alone or age in combination with living arrangements to determine knowledge and attitudes about community helping services and need for assistance at home. These studies reflect the role performance aspect of self-care as a health behaviour outcome that can be measured and show that performance of ADL does partly demonstrate the ability of individuals to care for themselves after discharge.

The event of hospitalization followed by discharge often changes the self-care requisites of an individual, which requires changes in self-care abilities. Bull's (1992) research verifies that older people are confronted with new skills to be learned when they

arrive home from the hospital, and that there is a period of adjustment which may or may not be successful. Jackson (1990) in her study of 40 subjects over the age of 70, found that most of the patients required assistance with bathing after discharge from hospital. These subjects also had problems with taking prescribed medications at home. None of the subjects could recall any teaching about their medications prior to discharge. Jopp et al (1993) in their study of 47 male and female patients (over 60 years of age), found that 66% of the subjects were unable to meet all of their self-care requirements.

Thus the older person who has been discharged from hospital to home often must do tasks that have never been part of an existing repertoire of self-care practices. Individuals may be successful by mastering new skills which help to maintain, restore or improve their health as a consequence. Ill individuals may fail or not attempt mastery of the new self-care practices and, in terms of level of health, decline. Jopp et al (1993) found that mastery of self-care practices were not successful for older discharged patients, but Dodd and Dibble (1993) found that self-care was achieved in difficult and trying circumstances. They studied 89 cancer patients who were progressing through 4 cycles of chemotherapy and attempted to identify predictors of self-care in this multi-aged population. Multiple regression techniques yielded the interesting result that patients with higher anxiety and lower social support performed more self-care. Furthermore the chemotherapy side effects of nausea and vomiting resulted in most self-care behaviors followed by fatigue and pain. Education level was a significant predictor of self-care whereas age was not, which is not supported by Orem's theory (1991). The literature is not clear about the stresses of illness on older persons and their ability to care for themselves after hospitalization. Research needs to determine which populations of

discharged patients are able to master new health practices and when intervention is needed.

Readmission

Elderly patients in the United States discharged from acute care hospitals during the last decade faced a 22% to 50% chance of being readmitted back into the hospital within sixty days of their discharge (Anderson & Steinberg, 1984). In a six year longitudinal study started in 1984, data suggests that the percentages are still significant with 29.8% non-institutionalized subjects over the age of 70 (n = 5876), experiencing repeated hospital admissions yearly over a four year observation period (Boult, Dowd, McCaffrey, Boult, Hernandez, & Krulewitch, 1993). The readmitted portion of the sample was divided into two groups - one at a high risk for readmission and the other at a low risk for readmission. Here the results were even more revealing with 41.8% repeated admissions for the high risk group compared to 26.1% for the low risk group (Boult et al., 1993). Kellough, Brickner, Conley, & Conroy (1991) also found a high rate of readmission in their study of 502 patients (age 65 and over). Readmission rates were assessed for 30, 60, 90, and 180 days and revealed 8%, 19%, 26%, and 38% readmissions respectively (Kellough et al., 1991).

The cost of readmissions to the health care system is high. Fifteen years ago in the United States repeated hospitalizations were analyzed in a retrospective study (n = 2238), and were found to cost sixty percent of health care expenditures (Zook, Savickis, & Moore, 1980). In Canada the expenditures are similar. In a sixteen year retrospective study in Manitoba, Canada (n = 5876 patients in hospital and nursing homes) 50% of the elderly subjects accrued large health care expenditures and 5% of these subjects were

responsible for a very large portion of expenditures. The 5% of the study subjects accounted for 65% of health care expenditures (Roos, Shapiro, & Tate, 1990).

Patients who were being readmitted were more likely to have chronic disease (Anderson & Steinberg, 1984), and to be readmitted for treatment of the same disease (Zook et al., 1980, Victor & Vetter, 1985). Because of the rising costs in health care systems and in Alberta in particular, questions that arise are: Is readmission a factor for elderly patients who have been discharged from preadmission and short stay programs? How can the health care system decrease readmissions of patients to costly acute care hospitals?

In-depth assessment and geriatric specific discharge planning for a cohort of elderly patients who were at risk for a high rate of readmission had a positive impact on this group of patients (Rubenstein et al.,1984). Rubenstein et al. (1984) conducted an experimental study that demonstrated lower re hospitalization rates and costs for patients (n = 63) on a geriatric evaluation unit, who received individualized geriatric focused assessment, discharge planning and teaching in comparison to a group of patients who received routine discharge planning on a regular acute care unit. In the geriatric evaluation unit, the program for these patients was managed by an interdisciplinary health care team.

Decreasing readmission rates in elderly patients is a post discharge outcome that nurses may influence by the way they implement discharge teaching for this population of patients. The knowledge and skills of nurses who are assessing patients before they go home or in preadmission clinics is a crucial factor that can improve this outcome for patients after discharge. Individualized assessment and focused discharge planning for

hospitalized elderly patients by skilled gerontological clinical nurse specialists, decreased the rate of readmission for treatment groups of elderly patients in comparison to elderly patients who received routine discharge planning by regularly assigned nurses (Kennedy, Neidlinger, & Scroggins, 1987). Extended contact with a gerontological clinical nurse specialist after discharge through telephone calls with the patient also had a positive impact on decreasing the rate of re hospitalization over a 12 month post discharge time period (Naylor, 1990). Closs and Tierney (1993) argue that using readmission as the only meaningful outcome measure of acute hospital care for this age group does not present a clear picture of the effectiveness of discharge programs. They stress that other positive and personal outcome measures should be used in evaluating the effects of a discharge planning process (Closs & Tierney, 1993).

Predicting the characteristics and risk factors of patients who are likely to be readmitted within six months is difficult but prior hospitalization of elderly patients was shown to be a strong predictor (Kellough et al., 1991). Berkman, Millar, Holmes & Bonander (1991) developed a prediction model and were able to identify three factors as predictors for readmission in 238 study patients who had been readmitted into hospital. Marital status (not married), coping difficulties, and age (older patients more likely to be readmitted) were predictors of readmission. The model had a 61% success rate for prediction of readmission using these factors (Berkman et al. 1991).

Social Support

The concept of social support is multidimensional in nature and is related to many different aspects of the social relationships of individuals and groups and has been defined in ways ranging from broad to precise (Keeling, Price, Jones, & Harding, 1996; Stewart,

1995). It can be defined and measured as the existence or number of social relationships of an individual such as a marriage, friendship or professional organization, the structure or sources of those relationships, or the function of those relationships (Stewart, 1995; Stewart, Hart & Mann, 1995; & House & Kahn, 1985). Stewart (1995) explains that social support consists of "interactions with family friends, peers, and health care providers that communicate information, esteem, aid, and emotional help" (p. 93) which includes the dimensions of structure, function, appraisal, and duration (Stewart, 1995)(House & Kahn, 1985). There is an interactional element linked to social support when it constitutes communication of information, emotional help and aid (Stewart, 1995). Measurement of support may determine whether the recipient of the support perceives it as available and beneficial, or unhelpful and if it endures or dissipates over an extended period of time (Stewart, 1995).

Sources of social support include partners, family, peers, friends, professionals and others, while the functions constitute the emotional, affirmational, instrumental, and informational resources available to people. Families and friends can provide emotional support when they show affection and sympathy for a person, while professionals can demonstrate emotional support by providing reassurance and empathy. Affirmational support or feedback may be provided by peers or professionals, while families often provide instrumental or practical support (Stewart, 1995). In a study of hemophilia patients with Acquired Immune Deficiency Syndrome (AIDS), the patients and their caregivers perceived that health professionals mostly provided informational support, and family members provided emotional and practical support. Even though professionals

provided more practical support when caregivers experienced the death of loved one to AIDS, family still continued to afford emotional support (Stewart et al., 1995).

The incidence of illness and associated recovery in individuals and their families indicates unique needs for social support. Patients who are ill may be vulnerable and experience an increased number of needs that they cannot meet themselves without assistance from others. In the hospital patients receive instrumental and informational support from health professionals for the duration of their hospitalization. They may require practical support to meet family responsibilities (needing financial aid or help with managing household tasks) or emotional support (requiring reassurance to deal with new stressors) (Wortman & Conway, 1985). Social support is significant for the older population, because as a person ages there may be loss of social connections through death of spouse and friends and retirement. These life changes may be even more acute with illness or frailty in the elderly person (Mor-Barak, Miller, & Syme, 1991).

The social needs of two groups of seniors - attendees at a senior centre in a rural region of the northeastern USA (n = 18) and clients attending a geriatric day treatment centre (GDTC) in a major teaching psychiatric facility (n = 18), were compared using the Norbeck Social Support Questionnaire (Sutherland & Murphy, 1995). Each group rated the need for affective support (love and respect) as highest followed by short and long term tangible aid with the need for affirmation (a confident and agreement and support of actions) as third. The subjects at the senior centre frequently identified family members as support sources followed by friends, neighbours, clergy and then health professionals. The subjects from the GDTC had a smaller support network and identified family members, health care providers, friends and neighbours and clergy as supporters in that

order. Interestingly both groups rated spousal support less frequently than family which the researchers felt was mainly a factor of incidence of widowhood. This study shows that with illness albeit mental illness, the support circle of the elderly participants was smaller. To determine direct and buffering effects between social networks, life events, and self-rated health, Mor-Barak et al. (1991) found that social networks were significantly and positively related to better perceived health at 6 months but not at 12 and 18 months. The data also showed that life events which occurred 6 months prior to the study were directly related to poorer health in the elderly. Using regression analysis to control for objective health measures, functional capability, personal characteristics, and baseline self-rated health, the data revealed that the interplay between social networks and life events had a significant effect on self-rated health health. The researchers interpreted this result to mean that more extensive social networks act as a buffer against the negative effects of major life events on the health of the elderly. The results of this study also showed that this buffering effect occurred over the short as well as the long term, measured at eighteen months.

Families were the main providers of support for helping elderly patients at home with day to day activities (Congdon, 1994; Hellman & Stewart, 1994; Roberto & Bartmann, 1993; Schaefer, Anderson, & Simms, 1990) with friends and nieghbours providing some assistance particularly for unmarried and functionally dependent patients (Hellman & Stewart, 1994). The family as a social support resource was an important factor in how well patients with a hip fracture managed after discharge from hospital (Congdon, 1994). In this study family support included being present and helping the patient with personal care activities The type of support required by older patients (over

65 years of age) recovering after discharge following major abdominal and thoracic surgery consisted of transportation, housekeeping, meal preparation, bathing, taking of medications, and wound care. Family caregivers were the primary providers of non-nursing help at home (Schaefer et al., 1990). The support that families provide is essential and often allows the recuperating patient a greater chance to return to independent living. Findings in Congdon's study suggested that patients without active family support were unable to return home after discharge and were consequently admitted to a nursing home.

The quality of social support plays a crucial role in how well the elderly person copes after hospitalization. Important factors related to this issue include the type of assistance available and required, the cognitive ability of the persons in the patient's social network, and the physical living arrangements of the recuperating patient (Titler & Pettit, 1995). Other factors that increase the complexity of social support for older persons include frail family members who are providing support, busy and scattered families unable to give adequate time commitments to the needy person, the personal characteristics of the older person, and even external uncontrollable factors such as weather (discharges in winter making access for supporters difficult), and discharges on a Friday or a weekend where formal support services are not available (Macmillan, 1995).

Poorer health may be associated with fewer support contacts. With a study that examined the association between health status, life events, social support, coping strategies and psychological adaptation in diabetic women, social support diminished in relation to poorer health (White, Richter, & Fry, 1992). These findings are similar to those of Sutherland and Murphy (1995) where elderly patients with mental illness had a smaller social network as compared to a healthier population of elderly. Existing lower

levels of social support and more recent stressful life events in older persons resulted in higher usage of formal health services and visits to the doctor (Counte & Glandon, 1991). Similarly lower levels of social support were associated with higher levels of dependency, lower physical function, and use of home care services after discharge (Prescott, Soeken, Griggs, 1995). The crucial question is to what extent is the older person's support network sufficient to enable them to meet their needs while recovering at home after hospital discharge?

Coping after Discharge

Coping is a multidimensional process where the individual attempts to overcome or manage internal or external stressors which may exceed the existing resources and capabilities of the individual (Lazarus & Folkman, 1991). Coping strategies are the result of attempts, plans or methods used by individuals to overcome situations that may be seen as a threat, challenge, frustration, or a gratifying experience (Halstead & Fernsler, 1994). The multidimensional aspect of coping is demonstrated by the many cognitive and behavioral variations in the way people respond to stress. Lazarus and Folkman have identified eight different kinds of coping strategies that individuals use to manage the demands of stress: confronting or interpreting the problem, distancing one-self, escape-avoidance, accepting responsibility or blame, exercising self-control, seeking social support, and positive reappraisal. When individuals use these strategies to overcome stressors, they are using either a problem-focused approach (interpreting the problem) or emotion-focused approach (positive reappraisal). Jalowiec (1991) has also stratified coping strategies into a similar pattern through her research with hypertensive and emergency room patients (1991).

The link between the concepts of social support and coping occurs with the identification of seeking social support as a coping strategy (Stewart, 1995; Lazarus & Folkman, 1991; Jalowiec & Powers, 1981). Coping as a social support resource for ill individuals has strong links with social support (Keeling et al., 1996; Stewart, 1995; Stewart et al., 1995; Bennett, 1993; Small & Graydon, 1993; White et al. 1992). Maintenance and availability of social support networks seem to be necessary for effective coping in individuals experiencing stress. Maintaining existing social and personal relationships during serious illness was a problem solving coping strategy used by AIDS infected hemophiliac and their families (Stewart et al., 1995). This strategy was used more often than other strategies. In the same study seeking emotional and practical support were also seen as ways of coping, whereas seeking new friends and counseling were used less frequently. Perceived availability of social support positively related to effective coping strategies in post-myocardial infarction patients (Bennett, 1993).

For the older person, effective coping and adequate support promotes independence in a familiar environment even when stressors are added. Older patients experience stressors when they are ill and hospitalized ranging from major life events that alter their lifestyle to less dramatic or low intensity events that can still be disruptive because the ability to adapt to a new situation is altered. Shorter hospital stays and earlier discharge home where care during the recovery period is provided by a lay person may compound the stress that an older person feels (Wagnild & Grupp, 1991). Wagnild and Grupp have identified four categories of stressors related to providing care to older recently discharged home care patients using a Delphi survey of 178 home care agencies in the Pacific Northwest of the United States. Content analysis of open-ended questionnaires

completed by agency staff yielded the following categories of stressors: patients discharged early with inadequate teaching and discharge planning; acute illness at discharge with unprepared informal care givers attempting to cope with a dependent client; home environment poorly adapted to the needs of newly discharged clients; and clients having inadequate or non-existent caregiver resources and support. When confronted with these types of stressors, clients were reported to feel helpless and out of control. This feeling of helplessness in the home environment after early discharge is also verified with research completed by Bull (1992) and Tierney et al., (1993).

Patients and their families experienced worry and disruption in normal routines because of internal (changing roles or functions in the family unit, learning new skills) and external stressors (environment needing modification) after discharge. Through qualitative analysis of interviews with the patient/family dyads (n = 55), the researchers identified how these elderly patients coped with the transition from hospital to home. Patients and families tried to identify problems and cope with their new situation with a variety of strategies, including learning new skills, working and planning together, taking charge of the new situation, and seeking help. One of the most troublesome stressors was the inadequacy of the home environment as a result of illness or treatment. A patient being treated with a diuretic was having trouble getting to the bathroom on another level of the house quickly and frequently. Coping with this change involved getting assistance from a family member, which caused a further disruption in family routines. In this example, the interplay between support and coping is clear - with help the individual remains relatively independent and has developed a solution to maintain relative self-sufficiency.

Frequency and effectiveness of coping strategies in relation to self-care provide insight into how older persons manage after discharge. Helberg (1993) studied patient status at discharge of 367 subjects who were discharged from a home health agency. Patient outcome measures were coping ability, instrumental and physical ADL, nursing problems, number of nursing care activities, medical status, and frequency of help from friends and family. In this study, subjects who had higher coping scores were more independent in performing ADL, and only required help from family and friends. Thus the ability to cope effectively may be related to more independence in performing ADL and reflect how a person manages care at home after discharge.

The way in which an individual copes with illness may predict the outcome of that illness. If ineffective coping strategies are used in the event of stress, the person may not achieve a higher level of well-being. The relationship between psychosocial well-being and adaptation to a chronic illness, coping strategies and social support in women with insulin dependent diabetes (chronic illness) was studied and findings revealed that women who were less successful in adapting to the stressful event of the chronic illness used palliative coping strategies more frequently. Although results did not show that problem solving strategies were not significantly associated with successful adaptation to the illness, better health status and social support were (White et al. 1992). Palliative coping is an emotion-focused strategy that centers around using wishful thinking and behavioral attempts to avoid the problem. Avoidance strategies such as relaxation and jogging are healthy diversions to the stress event (especially if the stress cannot be removed) in that they can neutralize the difficult emotions surrounding the event. However if strategies take the individual away from dealing with stress, a beneficial effect from the strategy is

less likely (Lazarus & Folkman, 1991). White et al. (1992) used a reliable and valid measure that distinguished between the different types of coping strategies in their study population.

Other studies have used the Jalowiec Coping Scale to determine how a variety of patients cope with stressful life and illness related events. Fourty-seven percent of long term cancer survivors changed the way they coped and reported that they found supportant, confrontive, and optimistic strategies as most effective and respondents age 66 to 82 years found that optimistic, supportant, and palliative strategies were more useful to them that younger subjects (Halstead & Fernsler, 1994). Patients with inflammatory bowel disease (IBD) scored significantly higher on using problem oriented coping strategies and used these strategies for day to day coping, while depressed patients with IBD used significantly more emotion-focused attempts to cope (Kinash, Fischer, Lukie, & Carr, 1993). Buelow (1991) administered the Jalowiec Scale to Multiple Sclerosis (MS) patients and found a significant positive correlation between uncertainty about the future and fatalistic coping, and a negative correlation between depression and optimistic coping. The most frequently used coping strategy was self-reliance with using a sense of humour and trying to learn more as the most prevalent coping responses.

It is useful for health professionals to clarify how their clients are coping so that they can provide them with information that will help clients use more effective strategies. When recently discharged older patients encounter distressing situations at home, health professionals can assist them to learn useful coping strategies so that their quality of life can be maintained or improved.

Cognitive Status

Cognitive status should be assessed when studying subjects whose self-management at home may depend on remembering information acquired in the hospital prior to admission and discharge. Cognitive function is a complex behaviour that includes measurement of performance of short and long term memory, concentration, intelligence, ability to learn. Influences of personality, lifestyle, culture, and education affect cognitive function during a person's lifespan (Hayslip Jr. & Panek, 1993). The patient's ability to remember instructions for care at home after early discharge from hospital is a significant factor when determining how patients manage after they have left the hospital. An increasing number of patients at the acute care referral hospital, where the research study was conducted, received their pre and post operative instructions in the preadmission clinic. These individuals attended preadmission clinics 1 to 7 days prior to admission for surgery. They were usually discharged from hospital 24 to 72 hours after surgery. The ability of a patient to remember and understand instructions may have a significant impact on how well they manage at home after discharge.

Memory complaint and poor recall performance occurred in about 22% of the adult population in a study that tested 810 subjects in a large American urban area (Bassett & Folstein, 1993). The results of this study demonstrated that older subjects had higher percentages of memory complaint (88.3% for persons older than 85) as compared to younger subjects (15% for persons 18 to 44 years of age). Poor recall performance was significantly related to lower educational levels and increasing age (Bassett & Folstein, 1993). Clearly, cognitive impairment is a concern in terms of memory and recall of information for the older individual. This concern is of special significance for older

patients discharged following shortened hospital stays. Does the older patient have the ability remember the instructions for safe and effective self-care?

An issue of significance is the reliability of self-report in research studies which may be influenced by degrees of cognitive impairment (Dellasega & Morris, 1993). The ability of an older person to give informed consent to participate in a research study may be an issue when older persons are recruited as research subjects. The validity of research findings may be a concern if the study population consists of older persons and formal cognitive screening has not been done (Dellasega & Morris, 1993). This does not imply that subjects who score low on an mental status exam should be eliminated from the study but rather they should remain as subjects as their behaviours and subsequent data may provide unique insights into a specific population of older adults (Dellasega & Morris, 1993).

Formal assessment of mental status is important because not only is orientation addressed, but memory, concentration, and abstraction are also assessed (Lusis, Hydo, & Clark, 1993). Aske (1990) found a significant correlation between the ability to perform activities of daily living (ADL) and cognitive status with Alzheimer patients. Subjects in her study who had a poor performance in ADL scored low on the Mini-Mental State Exam (MMSE) (Aske, 1990).

The MMSE is a cognitive test that "separates patients with cognitive disturbance from those without such disturbances" (Folstein, Folstein, & McHugh, 1975, p.195). The MMSE is a quick and relatively easy test to administer to patients, which is one of its main advantages (Rovner & Folstein, 1987). The MMSE has concurrent validity with the Wechsler Adult Intelligence Scale (MMSE Vs Verbal IQ, Pearson r = 0.776 and MMSE

Vs Performance IQ, Pearson r = 0.660) (Folstein et al., 1975). It has test re-test reliability at 24 hours (Pearson $r = 0.887$) and 28 days using stable but depressed and demented elderly patients (Pearson $r = 0.98$) (Folstein et al., 1975). The MMSE has high inter-rater reliability and has shown that older household persons with less than nine years of education have lower MMSE scores (Folstein, Anthony, Parhad, Duffy, & Gruenberg, 1985). In a sample of 66 elderly patients Foreman (1987) reports internal consistency for the MMSE at 0.957, content validity for 8 out of 11 mental status components, and construct validity with three other mental status tests correlated at 0.83, 0.87, 0.88 (Pearson r) (Foreman, 1987). Foreman (1987) also found that the MMSE had reliability and validity in its ability to discriminate between impaired and not impaired subjects.

The main disadvantage of the MMSE is that it requires a face-to-face interview with a subject. Because of this, subjects who can only be reached by telephone are excluded from assessment with this instrument. In situations where research subjects are geographically dispersed (as in the case of patients discharged from a regional tertiary health care center) a reliable cognitive status screening test administered over the telephone would be useful. Telephone versions of the MMSE are becoming more promising as effective screening instruments for cognitive impairment. The Telephone Interview for Cognitive status (TICS) was used to assess 108 subjects with senile dementia via the telephone. Results showed high test-retest reliability with a face-to-face MMSE on the same subjects, about 6 weeks previously (Brandt, Spencer, & Folstein, 1988). Another telephone version of the MMSE had significantly high construct validity (Pearson $r = 0.85$) compared to the MMSE for 100 subjects undergoing a comprehensive geriatric assessment (Roccaforte, Burke, Bayer, & Wengel, 1992). The subjects in this

sample had the face-to-face MMSE and the telephone version of the MMSE administered to them an average of 8.7 days apart. These subjects were also community based and the results were significant for the cognitively intact, questionable for mild and moderately demented. Test re-test reliability and longitudinal stability has not yet been established for this instrument (Roccaforte et al., 1992). Even though reliability has not been established, the telephone version of the MMSE (Roccaforte et al., 1992) is a useful cognitive screening instrument for community based older persons because of its excellent construct validity.

Conclusion

Utilization of short stay surgical units and preadmission programs are newer and cost effective modes of health care delivery in Alberta and are being implemented at a rapid pace. The elderly are a group that may be at risk for increased dependence in caring for themselves after discharge because of different self-care demands that may develop with illness and recuperation in the post operative period. Elderly men who are to have a Transurethral Prostatectomy in Edmonton, Alberta are now being admitted to short stay units via preadmisson clinics. Even though this procedure requires only 1 to 2 days post operative care in hospital and patients are prescreened for their suitability to participate in this program, little is known about how they manage after they leave the hospital. There is a dearth of documented research that describes the characteristics of self-care practices and readmission in relation to social support, coping strategies, and cognitive function after discharge from short stay units. Measuring these concepts in this population will increase the knowledge that nurses have about how older people respond to this potentially stressful situation. Health care professionals will then be able to plan and

implement supportive programs that will ensure continued independence of older persons in their own homes after hospitalization.

CHAPTER III

Methods and Procedures

Research Design

A correlational design was utilized in this study to trace the interrelationships between the dependent variables of perceived ability to perform self-care and three month readmission rates and the independent variables of perceived adequacy of social resources, frequency and effectiveness of coping strategies and cognitive function. The target population was older men who experienced a shorter hospital stay following a transurethral prostatic resection. Nominal, ordinal, and interval quantitative data were collected through structured telephone interviews, and self-report structured questionnaires after the study participants were discharged from hospital and were managing in their non-institutional home environment. Analysis of data will describe the characteristics of the sample and reveal if there are relationships and the strength of those relationships between the variables. In other studies the variables have been examined independently and with other concepts, but have not been researched in this combination with a group of older patients directly affected by the rapid changes in the delivery of health care. The methodology has been assembled to further clarify how this cohort of patients is managing in a rapidly changing health care environment.

Setting of the Study

Subjects in the study attended the Pre-Admisssion Clinic (PAC) at an acute care referral hospital in Edmonton, Alberta prior to their Transurethral Prostatic Resection (TURP). Permission to recruit subjects for this study from this unit was provided by the Special Services and Research Committee (SSRC) at the hospital (see Appendix B). Subjects received their pre-operative preparation and teaching from health care professionals while at the PAC. Each subject had his TURP surgery at the hospital performed by one of four urologists. The majority of subjects had this surgery 1 to 7 days

following attendance at the PAC. Because the study hospital is a regional referral hospital for Edmonton metropolitan area and north, north-central Alberta, subjects returned to their homes located in small to large urban areas and rural regions of the province. For the purposes of the study, subjects were classified by the Regional Health Authority (RHA) where they maintained their homes.

Selection of Sample

All male patients 65 years and older who were scheduled to have TURP surgery at the study hospital and met the selection criteria were invited to participate in this study. Selection criteria for subjects included: TURP patients who were seen in the preadmission clinic (PAC) prior to their surgery; had planned admission to a short stay unit at the hospital on the same day as their surgery; had planned discharge from the short stay unit to their homes; had a telephone; and spoke, read and wrote English. Excluded from the study were TURP patients who were admitted as inpatients to hospital units prior to their operation, had complications and remained in hospital for extended treatment, and were transferred to other health care institutions to recover from surgery. Patients on short stay units at the hospital who had non-complicated TURP surgery were discharged 24 to 72 hours after their operation. Subjects who lived in the city of Edmonton usually stayed in hospital for 24 hours following their operation and those who lived outside of the city stayed in hospital 48 to 72 hours.

Initially fifty-nine subjects during the period of February 1995 to June 30, 1995 gave written informed consent to participate in the study when they attended the PAC prior to their operation (see Appendix D). Ten of these subjects left the study for the following reasons: surgery canceled by subject (2 subjects); surgery canceled because of pre-operative complications (3 subjects); complications following surgery (1 subject); subject who moved to seniors lodge on the day of interview withdrew consent (1subject); subject lost hearing aid and withdrew consent (1 subjects); subject unreachable by

telephone after at least five attempts 7 to 14 days after discharge (2 subjects). Consequently 49 subjects were contacted for the initial interviews 7 to 10 days following discharge from the hospital short stay unit. The number of these subjects who completed interviews and questionnaires varied during the data collection period. Differences occurred because of withdrawal of consent during telephone interviews (2 subjects), inability to contact subjects (4 subjects), death of one subject, failure to return mailed out questionnaire (8 subjects), and refusal to complete mailed out questionnaire (4 subjects). Table 3.0 summarizes the numbers of subjects for each data collection event in the study.

Table 3.0

Number of Subjects

Completed Interviews/Questionnaires	Number of subjects
Telephone version of the MMSE	47
OARS-SRS	47
OARS-ADLS	47
Readmission questionnaire	42
Revised Jalowiec Coping Scale	35

Data Collection

The researcher visited the PAC on clinic days for TURP patients from February 6, 1995 to June 30, 1995. Subjects were recruited for the study while in attendance at the PAC unit prior to their surgery. After subjects gave written informed consent, data pertaining to demographic information, dates in PAC, scheduled date of surgery, medical information, and previous hospitalizations was recorded on the demographic data form (see Appendix E). Before the subject left the PAC, the nurse researcher informed them that they would be contacted by telephone 7 to 10 days following their discharge from the

hospital to their homes for the first telephone interview. Daily telephone calls to health care contacts on the short stay units confirmed the actual dates of surgery and discharges from hospital. This data was retrieved from the study hospital's patient care record computing system and from unit census records by health care contacts. Any subjects who had their surgery canceled or had post-operative complications that prolonged hospitalization were identified through these daily telephone calls to health care staff. These subjects were then removed from the study as they no longer met the selection criteria.

Seven to ten days following discharge, subjects were contacted by telephone by the researcher, who then proceeded with the first interview. This interview lasted an average of 20 to 30 minutes and consisted of asking the subject questions from the Telephone Version of the MMSE, the OARS - SRS and the OARS - ADL questionnaires (see Appendixes F and G respectively). Two weeks after discharge subjects were sent the Revised Jalowiec Coping Scale questionnaire by mail with an accompanying letter of explanation and a stamped, addressed return envelope (see Appendixes H and I respectively). The letter of explanation had a telephone number that the subject could use to ask the researcher any questions about the questionnaire. Two subjects telephoned the researcher to state that they did not wish to complete the questionnaire. A reminder letter was mailed to subjects if they had not returned the questionnaire.

Three months after discharge subjects were again telephoned by the researcher who asked questions about readmission to a hospital or an emergency room (see Appendix J). The overall time period for recruiting subjects for the study was arbitrarily shortened when the TURP short stay program at the study hospital was moved to another hospital where the researcher did not have permission to conduct the study. Other factors would have prevented recruiting subjects from this facility - additional urologists performing TURP surgery and different PAC clinic staff and procedures from the study

Preadmission Clinic.

Instruments

The instruments utilized in this study included a demographic data form to collect information about demographic data, dates in PAC, date of surgery, dates of admission and discharge from short stay unit, additional medical information, surgical procedures, and previous hospitalizations (see Appendix E). Data regarding three-month readmission to hospital or an emergency room was obtained through a telephone interview and recorded on the readmission questionnaire (see Appendix J). The demographic and readmission questionnaires were constructed by the researcher. This data was obtained directly from subjects and their concurrent medical record. Other instruments used to obtain data from the subjects were: the Telephone Version of the Mini-Mental Status Exam (Tel-MMSE) (Roccaforte, Burke, Bayer, & Wengel, 1992); the OARS Multidimensional Functional Assessment Questionnaire - Part A: Social Resources Subscale (Fillenbaum, 1988); the OARS Multidimensional Functional Assessment Questionnaire - Part A: Activities of Daily Living Subscales (Fillenbaum, 1988); and the Revised Jalowiec Coping Scale (Jalowiec, 1988). Permission had been obtained to use these published questionnaires in the study (see Appendix L).

Telephone Version of the Mini-Mental Status Exam (Tel-MMSE)

This 22 item tool was used to assess the cognitive status of subjects via a telephone interview 7 to 10 days following discharge from hospital (see Appendix F). A second generation tool based on the original MMSE (Folstein, Folstein, & McHugh, 1975) this tool tests memory and concentration, and took from 3 to 5 minutes to administer over the telephone. Items on the telephone version of the MMSE are identical to the original MMSE except for the deletion of questions that ask what floor of the building the subject is on, a second set of three items that involve the subject reading and

obeying a sentence, and writing or copying a sentence or a geometric figure. A question was added that asks what the subject is speaking into during the telephone conversation (correct answer is a telephone). The questions which were read to the subjects over the telephone required one or two word answers. Each correct answer was scored as 1 and incorrect answers as 0. A summary score out of 22 was recorded. A higher score indicted better cognition, memory and concentration. Obtaining a score of 17 or less was used as the cut off score where a total score below 17 possibly indicated cognitive disturbances related to memory and concentration (Roccaforte et al., 1992).

Construct validity for this tool has been established in a study where it was administered to older community based individuals along with the original face-to-face MMSE. The telephone and face-to-face versions of the MMSE correlated for all 100 subjects with a Pearson's $r = -0.85$, ($p < 0.001$) for total scores and equivalent items (Roccaforte et al., 1992). In another measurement of validity, the tool had sensitivity of 67% and specificity of 100% with the Brief Neuropsychological Screening Test (BNPS) (Roccaforte et al., 1992).

Test re-test reliability and longitudinal stability has not yet been established for the Telephone Version of the MMSE, although the tool is closely based on the reliable MMSE. The original MMSE has concurrent validity with the Wechsler Adult Intelligence Scale (MMSE versus Verbal IQ, Pearson $r = 0.776$ and MMSE versus Performance IQ, Pearson $r = 0.660$) (Folstein et al., 1975). It has test re-test reliability at 24 hours (Pearson $r = 0.887$) and 28 days using stable but depressed and demented elderly patients (Pearson $r = 0.98$) (Folstein et al., 1975). The MMSE has high inter-rater reliability and has shown that older household persons with less than nine years of education have lower MMSE scores (Folstein, Anthony, Parhad, Duffy, & Gruenberg, 1985). In a sample of 66 elderly patients Foreman (1987) reports internal consistency for the MMSE at 0.957,

content validity for 8 out of 11 mental status components, and construct validity with three other mental status tests correlated at 0.83, 0.87, 0.88 (Pearson r) (Foreman, 1987). Foreman (1987) also found that the MMSE had reliability and validity in its ability to discriminate between impaired and not impaired subjects.

The Older Americans Resources and Services (OARS) Multidimensional Functional Assessment Questionnaire - Part A: Social Resources Subscale (OARS - SRS) and the Activities of Daily Living Subscale (OARS - ADLS)

The OARS - SRS and the OARS - ADLS are subscales of the 120 item OARS questionnaire. Questions from both subscales were read over the telephone to subjects following the administration of the telephone version of the MMSE. The completion of this portion of the interview required about 20 to 30 minutes. The **OARS - SRS** has 9 items that measure the perceived availability and amount of contact with friends, the quality and availability of close support, and the adequacy of contacts with loved ones (Fillenbaum, 1988) (see Appendix G). Subjects were asked to respond to 6 of the items and to verbally rate their level of functioning on a 3 - point scale where (2) indicated numerous friend and family resources or contacts; (1) only one contact with some help; and (0) represented no social contacts and minimal help at home. The 3 - point scale was also used in an item where the subject verbally responded to feeling lonely quite often rated as (0) to almost never feeling lonely rated as (2). Two of the OARS - SRS items had a 2 - point scale, which measured perceived presence of someone to trust and confide in and seeing friends and relatives as often as needed.

The **OARS - ADL** subscales include 7 instrumental ADL (IADL) items and 8 physical ADL (PADL) items which measure the perceived self-care capacity to do tasks needed to live independently within the community (see Appendix G). These items focus on the presence and use of a personal care helper and the individual's ability to use the

telephone, travel, shop, cook, do housework, take medicine, handle personal finances, to feed, dress, bathe and groom oneself and to walk, transfer, and remain continent (Fillenbaum, 1988). Subjects were asked to respond to each item and to verbally rate their level of functioning on a 3 - point scale where (2) indicated ability to do the task without help; (1) with some help; and (0) being completely unable to do the task.

Each of the OARS - SRS and OARS - ADL subscale scores were summarized using a statistically derived formula based on extensive factor analysis where a score range consisted of (1) indicating excellent social resources or the ability to independently complete tasks through to (6) indicating total impairment in availability and adequacy of social resources and level of independent functioning. The formula used to obtain the summary scores uses regression weights multiplied by the subject response for each item. Each sub-scale has its own unique summary formula (Fillenbaum, 1988). Mean scores for each item of the subscales were also tabulated.

Reliability and validity statistics for the entire OARS questionnaire and the individual subscales are good. Content and consensual validity for the subscales was assured with item construction while criterion validity for the OARS - ADL was established with Kendall's *tau* (0.83) and Spearman's *r* (0.89) using assessment by a physical therapist as the referent criterion (Fillenbaum, 1985). With the social resources scale a criterion external standard was not identified but several social workers agreed that they used the exact items for assessing social support resources (Fillenbaum, 1985). Discriminant validity was established with the ability of each of the OARS subscales to appropriately discriminate between diverse groups of elderly individuals: those living in the community, n = 2146; attending adult day care, n = 119; and residing in institutions, n = 100 (Fillenbaum, 1985).

Similarly the OARS - SRS measure was accurate in distinguishing social support differences between groups of stroke and Alzheimer disease caregivers and a group of

non-caregivers in comparison with other psychosocial measures (Perceived Social Support from Family, Perceived Social Support from Friends, Zung Self-Rating Depression Scale) (Reese, Gross, Smalley, & Messer, 1994). In this study a multivariate analysis of covariance was run to obtain a significant group effect ($p = 0.01$) after controlling for age and socioeconomic status.

Inter-rater reliability was established when eleven raters who administered the OARS questionnaire to 30 subjects were in complete agreement for 74 % of the ratings (Fillenbaum & Smyer, 1981). Intraclass correlations for the subscales ranged from 0.66 for physical health to 0.87 for self-care (Fillenbaum & Smyer, 1981). Test retest correlations for the OARS - ADL items were 0.71 to 0.82 (Fillenbaum & Smyer, 1981). More recently, Roberto and Bartmann (1993) have calculated Cronbach alpha of 0.87 for the OARS - ADL in a study of the physical ability, social support, and locus of control of 101 women who had sustained a fractured hip.

Revised Jalowiec Coping Scale

The revised Jalowiec Coping Scale (Jalowiec, 1988) consists of sixty self-report items (see Appendix H). This scale was used in the study to measure the coping strategies of the subjects after they were discharged home. The scale measures eight coping strategies: confrontive, evasive, optimistic, fatalistic, emotive, palliative, supportant, and self-reliant. Items from the scale corresponded to each coping style (see Appendix K).

The subject was asked to rate how often he used the strategy described in each item, using a 4-point scale (0 - 3) rating scale (ranging from never used to often used). For each item the subject was then asked to rate how helpful or effective the strategy has been using a 4-point scale where (0) means not helpful to (3) which means very helpful. Scoring for the scale includes adding raw scores for total use and total effectiveness scores and determining mean use and mean effectiveness scores for each coping style. Ranges

for raw scores for total use or effectiveness scales are 0-180, for mean use and effectiveness scores (0-3), and raw score ranges for each of the coping strategies: confrontive (0-30), evasive (0-39), optimistic (0-27), fatalistic (0-12), emotive (0-15), palliative (0-21), supportant (0-15), and self-reliant (0-21).

Interpretation of the scores can vary. A person can use many strategies very effectively or only a few effectively, or conversely use some minimally. Some strategies like the evasive tend to reflect a negative coping style when compared to healthy or positive coping styles like supportant and self-reliant. Generally a higher raw or mean score indicates that the strategy was use more often and was more effective (Jalowiec, 1991).

Reliability and validity for this scale is very good (Jalowiec, 1991). Empirical construct validity was obtained when a panel of 25 nurse researchers familiar with stress and coping literature independently classified the 60 items from the scale. Mean percentage agreement between the author and the panel ranged from 54% for the emotive scale to self-reliant items with 66%, fatalistic items (67%), evasive items (85%), confrontive items (86%), and supportant items (94%) (Grady &Jalowiec, 1992). In a study of heart transplant patients (n = 175) concurrent and predictive validity yielded a Pearson's *r* of 0.78 when the total use scores and effectiveness scores were correlated (Grady &Jalowiec, 1992). Test-retest reliability at two weeks yielded Spearman correlations of 0.79 for total coping scores and 0.85 and 0.86 for problem oriented and affective scores respectively (Jalowiec, Murphy, & Powers, 1984). Cronbach's alpha for the total coping score from 141 subjects was 0.86 and correlations between subscale scores ranged from 0.77 to 0.86 (Jalowiec et al., 1984). More recently Cronbach's alpha for the total use and total effectiveness scales from the heart transplant study supported internal consistency reliability with results of $r = 0.94$ and 0. 93 respectively (Grady & Jalowiec, 1992).

Readmission Questionnaire

The readmission questionnaire was conducted by telephone 3 months after the subject was discharged from hospital (see appendix J). This brief instrument was designed by the researcher and is based on the study definition of readmission. The subjects were asked questions about readmission to a hospital or a visit to an emergency room for reasons related to the TURP or problems with urination. This interview lasted 3 to 5 minutes.

Data Analysis

The characteristics of the study subjects were summarized using descriptive statistics. Frequency percentages, mean, range, and standard deviation scores were summarized for the subjects' age, time interval between admission to pre-admission clinic and date of surgery, length of hospital stay, and cognitive function. Frequency percentages were obtained for subjects' marital status, residence location by health authority region, living arrangements, highest level of schooling, employment status and lifetime occupation, previous hospitalizations, and existing medical problems in addition to prostate dysfunction. The mean and frequency percentage scores were summarized and reported for the variables of perceived ability to perform self-care and perceived adequacy of social support resources. The mean, standard deviation, and range were reported for the summary scores of the variables of perceived ability to perform self-care and perceived adequacy of social support resources. Mean, frequency percentage, and range associated with variables of coping strategies and readmission at three months were reported.

Correlational statistics were used to examine presence and strength of relationships between perceived adequacy of social support resources, perceived ability to perform self-care, cognitive status, coping strategies, and three month readmission. Specifically the Pearson Product Moment correlation statistic was used to examine the relationship between perceived ability to perform self-care, perceived adequacy of social support,

coping strategies and cognitive status. The Spearman Rho statistic was used to examine the correlation between readmission and perceived adequacy of social support, cognitive status, and coping strategies. Finally a Manova procedure was used to observe results between cognitive status and the independent variables.

CHAPTER IV

Results

Introduction

The data presented in this chapter was collected from elderly male subjects who had a Transurethral Prostatectomy followed by a shortened hospital stay during the time period of February 1995 to October 1995. Although 59 subjects provided written informed consent to participate in the study 47 subjects completed it. This represented a loss of 30.34% of subjects who were removed from the study because they no longer met inclusion criteria chiefly due to pre or post operative complications, inability to contact during the data collection period, or voluntary withdrawal of consent.

Demographic Characteristics

The mean age of the 47 male subjects was 73.68 years, with the youngest being 65 and the eldest 90 years of age. The highest percentage of subjects (15 at 31.9%) were from the 75 -79 age group while 14 (29.9%) were 65 -69 years old, 12 (25.5%) were 70 - 74 years old, and 6 (12.8%) were 80 years or older. Thirty five of the subjects were married, 2 were single, 4 were widowed, 4 were divorced, and 2 were separated. Although 46 (97.9%) of the subjects considered themselves as retired and 1 (2.1%) worked full-time, 7 (14.9%) stated that they worked part-time. The type of work that subjects were engaged in most of their life varied considerably amongst subjects. Data reflected the primary employment in occupation groups over a lifetime for each subject and did not include multiple changes in employment. The largest occupational group was that of farmer at 28.3% (n=13), followed by clerical, sales, technical at 26.1% (n=12), professional at 16.7% (n=8), skilled, foreman at 10.9% (n=5), semi skilled, operative

8.7% (n=4), manager, proprietor at 6.5% (n=3), and service worker at 2.2% (n=1). Fourty-one (87.2%) subjects lived in a house as their main residence and 6 (12.8%) lived in an apartment. Classification as to type of apartment was not made, although potential subjects who lived in health care institutions (nursing homes, extended care units) were excluded from the study. The data described how far each subject had progressed in their education. Nineteen (40.4%) individuals had completed high school and/or attended post secondary education. Twenty-eight (59.6%) had incomplete high school or fewer years of schooling with 14 (29.8%) attaining a grade 8 level or less (see Table 4.0).

Subjects' place of residence ranged from the Edmonton region to central and northern Alberta. Data for place of residence was classified according to the regional health authority where subjects lived. Eighteen (38.3%) subjects lived in the Capital Health Region which at that time consisted of the cities of Edmonton and St. Albert, and the remaining 29 (61.7%) lived in health regions adjacent to, south, and north of Edmonton (see Table 4.1). Some of the subjects who lived outside of the Edmonton area lived on farms but the data did not reflect this. Subjects listed their home or mailing address as their place of residence. Subjects in these areas lived on farms and in hamlets, towns, or small and medium sized cities.

Hospital Experience of the Study Participants

The study participants who were scheduled to have a Transurethral Prostatectomy (TURP) had their first contact with the study hospital's preadmission clinic (PAC) where they learned of their surgery date. Twenty (42.6%) patients had their TURP

Table 4.0

Demographic Characteristics

Total Sample n=47			
Age	Mean	SD	Range
	73.68	5.96	65-90

Marital Status	n	%
Single	2	4.3
Married	35	74.5
Widowed	4	8.3
Divorced	4	8.3
Separated	2	4.2

Occupation	n	%
Farmer	13	28.3
Clerical, Sales, Technical	12	26.1
Professional	8	17.4
Skilled, Foreman	5	10.9
Semi-Skilled, Operative	4	8.7
Manager, Proprietor	3	6.5
Service Worker	1	2.2
Not Answered	1	2.2

Current Type of Residence	n	%
House	41	87.2
Apartment	6	12.5

Education Grade Level	n	%	Cumulative %
0-4 years	1	2.1	2.1
5-8 years	13	27.7	29.8
High School Incomplete	14	29.8	59.6
High School Complete	6	12.8	72.3
Post High School Diploma	1	2.1	87.2
1-2 years University	4	8.5	97.9
University Completed	1	2.1	100.0

Table 4.1

Location of Residence by Regional Health Authority

Regional Health Authority n=47	n	%
Capital Health	18	38.3
David Thompson & East Central	8	17.0
Westview & Crossroads	3	6.4
Aspen & Lakeland	15	31.9
Mistahia, Peace & Keeweetinok Lakes	3	6.4
Northern Lights & Northwestern	0	0

Note: Capital Health Region includes the cities of Edmonton and St. Albert; David Thompson and East Central includes the towns, cities, and rural areas of east and west central Alberta; Westview and Crossroads - the towns, cities and rural areas immediately west and southwest of Edmonton; Aspen and Lakeland - the towns, cities and rural areas immediately north and northeast of Edmonton; Mistahia, Peace, & Keeweetinok Lakes - the towns and rural areas surrounding the cities of Grande Prairie, Peace River, and Slave Lake; Northern Lights & Northwestern - the towns and rural areas surrounding Fort McMurray and the far north of the province.

operation one day after visiting the PAC. For the remaining patients, the length of time varied from 2 to 14 days. For the total group of study participants (n=47) the mean number of days between admission in the PAC and the date of surgery was 2.51 days, the SD was 2.60, the range was 13, the minimum number of days was 1 and the maximum number of days was 14. There was a smaller range in the length of stay (LOS) in the hospital following the TURP. The mean LOS was 1.81 days, the SD was 1.08, the range was 4 days and the minimum and maximum stays were from 1 to 5 days. Twenty (51.1.0%) subjects spent 1 day in hospital recovering from the TURP, 14 (29.8%) had a LOS of 2 days, 9 (19.1%) stayed in the hospital after their TURP from 3 to 5 days (see Table 4.2).

Subjects' current health care records were screened while attending the PAC to provided data about pre-existing health problems diagnosed by a urology medical resident. This data was classified according to a body systems assessment used by the attending urology resident. The severity of those problems was not distinguishable in the data set, although if a patient had serious medical problems, he usually had further investigation, with a cancellation of his surgery and hence exclusion from the study. Fourty-five (95.7%) of the subjects had a previous hospitalization. Ten (21.3%) of subjects had evidence of genitourinary health problems other than prostate problems, 7 (14.9%) had respiratory health problems, 29 (61%) cardiovascular, 5 (10.6%) endocrine which includes diabetes, 25 (53.2%) gastrointestinal, 12 (25.5%) musculoskeletal, and 13 (27.7%) had neurological or psychiatric health problems (see Table 4.3).

Table 4.2

Time Intervals from Pre-admission Clinic to Day of Surgery and from Day of Surgery to Day of Discharge

Time Interval (Number of Days) Total Sample n=47			
Pre-admission Date to Day of Surgery	Mean	SD	Range
	3.15	2.60	13 days
Numbers of Days		n	%
1		20	42.6
2		5	10.6
3		1	2.1
4		8	17.0
5		5	10.6
6		5	10.6
7		2	4.3
14		1	2.1
Day of Surgery to Day of Discharge	Mean	SD	Range
	1.81	1.08	4 days
Number of Days		n	%
1		24	51.1
2		14	29.8
3		5	10.6
4		2	4.3
5		2	4.3

Table 4.3

Percentage of Health Problems of Subjects from Current Medical Record

Current Health Problem Classified by System	n	%
Respiratory	7	14.9
Cardiovascular	29	61.7
Endocrine	5	10.6
Gastrointestinal	25	53.2
Musculoskeletal	12	25.5
Neurological and Psychiatric	13	27.7
Genitourinary	10	21.3

Note. Although data was obtained from total sample (n=47) many subjects had more than one health problem.

Characteristics of the Dependent and Independent Variables

Perceived Ability to Perform Self-Care

The Older Americans Resources and Services Multidimensional Functional Assessment Questionnaire: the Activities of Daily Living Subscale (OARS - ADL) measured the perceived self-care capacity of the subjects to do tasks needed for independent living with in their own homes a week after discharge from hospital. The scale included 7 items related to instrumental activities of daily living (ADL) and 8 related to physical capacity to function. Included in the analysis of the measure is a summary score which is derived from selected scale items configured into a statistical formula based on extensive factor analysis. The items for the summary score relate to the instrumental and physical ADL tasks of housework, handling money, bathing preparing meals, getting places, getting to the bathroom, and using the telephone.

The summary score has a possible range of 1 through 6, where 1 indicates excellent ADL capacity without assistance and with ease, 3 rates the performance as mildly impaired where all but one to three tasks can be performed. Some help is required but not necessarily every day. Usually the subject can get through a day without help and is able to prepare meals. A rating of 6 suggests that the subject has complete impaired ADL capacity and requires throughout the day and/or night to carry out ADL.

The observed mean, SD, and range for the OARS-ADLS summary score (n=47) was 2.47, $\pm$ 0.88, and 2 to 5 respectively. While none of the subjects scored 1 for excellent ADL capacity or 6 for completely impaired, 34 (72.3%) had a rating of 2 for good ADL capacity, and 13 (37.7%) had ratings of 3, 4, or 5 which indicated mild to moderate impaired ADL capacity at home after discharge (see Table 4.4).

Table 4.4

OARS- Instrumental and Physical Activities of Daily Living Summary Rating(OARS-ADL)

Rating (n=47)	n	%
1	0	0.00
2	34	72.3
3	7	14.9
4	3	6.4
5	3	6.4
6	0	0.00

Mean	SD	Range
2.47	0.88	2 - 5

Note: The summary rating is derived from a 6 point scale where 1 indicates excellent ADL capacity, 2 - good ADL capacity, 3 - mildly impaired ADL capacity, 4 - moderately impaired ADL capacity, 5 - severely impaired capacity, and 6 indicates completely impaired ADL capacity.

The possible range of mean (M) scores for individual ADL items is 0 to 2 with zero meaning that the individual is completely unable to do the task, 1 meaning that some help is required as perceived by the individual, and 2 meaning that the task is completed without any help at all. The observed mean, SD, and range for each item is listed in Table 4.5. The tasks of using the telephone, taking medicine, eating, dressing, walking, getting in and out of bed, and taking care of personal appearance had the highest mean scores (>1.90) meaning that these tasks were completed mostly without assistance. Requiring slightly more help were the tasks of showering (M=1.87), getting to the bathroom on time (M=1.85), handling money (M=1.89), and getting about in a car (M=1.87). ADL tasks that suggested the most dependence were doing housework (M=1.28), meal preparation (M=1.66), and shopping for groceries (M=1.66) (see Table 4.5 again).

Cognitive Function

The telephone version of the mini mental state exam (Tel-MMSE) examines orientation to time and place, attention, recall, calculation, ability to name, and follow verbal commands which are cognitive aspects of mental functioning. The possible range for a total score for Tel-MMSE is 0 to 22 with scores below 17 possibly indicating cognitive disturbance. Fourty-one subjects achieved a score of 17 (89.4%) or more, while 6 (10.6%) subjects scored below this cut off value. Seventeen (36.2%) subjects achieved a perfect score of 22 (see Table 4.6).

The observed mean, SD, and highest possible score (mean ± SD, highest possible score) for each item are as follows: Where did you have your operation - which hospital, city, province, country? (orientation: place) (4.89 ± 0.31, 5); What is the year, season,

Table 4.5
Mean Scores for Items in the OARS- Instrumental and Physical Activities of Daily Living Scale (n=47)

Item	Mean	SD
Can you use the telephone?	2.00	0.00
Can you get to places out of walking distance, driving your own car or traveling alone on buses or taxis?	1.87	0.34
Can you go shopping for groceries or clothes?	1.74	0.61
Can you prepare your own meals?	1.66	0.64
Can you do your housework, clean floors etc.?	1.28	0.74
Can you take your own medicine, in the right doses at the right times?	1.93	0.25
Can you handle your own money, write cheques, pay bills?	1.89	0.38
Can you eat, are you able to feed yourself completely?	2.00	0.00
Can you dress and undress yourself?	1.98	0.15
Can you take care of your own appearance, for example combing your hair and shaving?	1.96	0.15
Can you walk without help (except for a cane)?	1.96	0.20
Can you get in and out of bed without any help or aids?	2.00	0.00
Can you take a shower without help?	1.87	0.34
[a] Do you ever have any trouble getting to the bathroom on time?	1.85	0.42

Note. [a] The score range for this item is 1 meaning having trouble getting to the bathroom on time, 2 - not having trouble getting to the bathroom on time, and 0 - having a catheter in place. Fourty one (87.2%) subjects did not have trouble getting to the bathroom on time, 5 (10.6%) subjects had trouble getting to the bathroom on time, and one (2.1%) subject had a catheter in place at time of data collection.

Table 4.6

Mean Scores for Items on the Telephone Version of the Mini Mental State Exam (n=47)

Items and Cognitive Mental Function	Mean	SD	Highest Possible Score
What is the year, season, date, day, month? (orientation: time)	4.89	0.31	5
Where did you have your operation - hospital, city, province, country? (orientation: place)	4.00	0.00	4
I am going to name 3 objects and I want you to repeat all three back to me. (attention)	3.00	0.00	3
I would like you to begin with the number 100 and count backwards by 7's. (attention, calculation)	3.89	1.62	5
Can you name the 3 objects I asked you to repeat in a question already asked? (recall)	2.33	0.90	3
Can you please tell me what is the object called that you are speaking into as you talk to me? (ability to name)	1.00	0.00	1
Would you please repeat the following: "No ifs, ands, or buts" (follow verbal command)	1.00	0.00	1

Total T - MMSE Test Scores (n=47)	Mean	SD	Range
	19.5	3.74	0-22

Score Range	n	%
0-16	6	10.6
17-22	41	89.4
22 (perfect score)	17	36.2

date, day, month? (orientation: time) (4.00 ± 0.00, 4); I am going to name 3 objects and I want you to repeat all three back to me. (attention) (3.00 ± 0.00, 3); I would like you to begin with the number 100 and count backwards by 7's. (attention, calculation) (3.98 ± 1.62, 5); Can you name the 3 objects I asked you to repeat in a question already asked? (recall) (2.33 ± 0.90, 3); Can you please tell me what is the object called that you are speaking into as you talk to me? (ability to name) (1.00 ± 0.00, 1) and; Would you please repeat the following: "No ifs, ands, or buts" (follow verbal command) (1.00 ± 0.00, 1). One subject refused to answer any of the items on the test and 2 other subjects refused to answer the fourth item which had a value of five. This type of data was handled as "user-missing" on the SPSS statistical program, thus percents quoted are "valid percents". If a subject answered the item incorrectly, the value scored for that specific item was zero. Observed SD scores reveal that subjects had the greatest difficulty in answering items related to attention, calculation, and recall (see Table 4.6 again)

Perceived Adequacy Social Support Resources

The results from the Older Americans Resources and Services Multidimensional Functional Assessment Questionnaire -: Social Resources Subscale (OARS - SRS) can be evaluated by observing the results from each item and the summarized score which is derived from the scale items configured into a statistical formula based on factor analysis. The summary score has a possible range of 1 through 6, with 1 meaning social relationships that are very satisfying and extensive and 6 meaning that social relationships are unsatisfactory, of poor quality, and few, with no help available. The observed mean for the summarized score (n=47) was 3.04, the SD was 1.06, and the range was 2 to 6. For

this group of subjects social relationships were fairly satisfactory with short term help available (see Table 4.7)

Looking at specific items, 32 (68.1%) of subjects knew five or more people well enough to visit with them in their own homes, 28 (59.6%) talked to friends, relatives, or others on the phone at least once a day in the week following their discharge from hospital Twenty one (44.7%) visited from 2 to 6 times with someone who did not live with them in the week following their discharge from hospital and 44 (93.6%) felt they had someone they could trust and confide in. Thirty (63.8%) almost never found themselves feeling lonely, while 12 (25.5%) felt this way, 30 (63.8%) saw their relatives and friends as often as they wanted to while 17 (36.2%) didn't see them as often as they wanted to, and 45 (95.7%) felt that someone, a spouse, member of the family, or a friend, would be able to help him if he became sick or disabled (see Table 4.8).

Coping Styles

The overall mean scores for the sixty items in the revised Jalowiec Coping Scale were classified into two scores: mean use of coping skills and mean effectiveness of those skills. The possible range of overall use and effectiveness of coping skills is 0 to 180 for both scores. The observed range for the coping use score was 81 with 36 as the minimum and 177 the maximum. The mean score for use of coping skills was 79.23. The observed range for the overall coping effectiveness score was 130, with the minimum at 10 and the maximum at 140. The observed mean for the overall effectiveness score was 75.06.

The Jalowiec scale is further classified into 8 coping styles which measure the frequency of useful and effectiveness of each style. The possible range of raw scores for

Table 4.7

OARS- Social Resources Summary Rating (OARS-SRS)

Rating (n=47)	n	%
1	0	0.00
2	18	38.3
3	16	34.0
4	7	14.9
5	5	10.6
6	1	2.1

Mean	SD	Range
3.04	1.08	2 - 6

Note. The summary rating score is derived from a 6-point scale where 1 means excellent social relationships, 2 means good social relationships, 3 means mildly socially impaired, 4 means moderately socially impaired, 5 means severely socially impaired, and 6 means totally socially impaired.

Table 4.8

Scores for Items in the OARS- Social Resources Scale (n=47)

Item	n	%
How many people do you know well enough to visit with in their own homes?		
5 or more	32	68.1
3 to 4	10	21.3
1 or 2	4	8.5
None	1	2.1
About how many times during the week after discharge did you talk to someone - friends, relative, or others on the telephone?		
Once a day or more	28	59.6
2 to 6 times	17	36.2
Once	1	2.1
Not at all	1	2.1
How many times during the week after discharge did you spend some time with someone who does not live with you: that is you went to see them or they came to visit you, or you went out to do things together?		
Once a day or more	11	23.4
2 to 6 times	21	44.7
Once	7	14.9
Not at all	8	17.0
Do you have someone you can trust and confide in?		
Yes	44	93.6
No	3	6.4
Do you find yourself feeling lonely quite often, sometimes, or almost never?		
Almost never	30	63.8
Sometimes	12	25.5
Quite often	5	10.6
Do you see your friends and relatives as often as you want to or not?		
As often as wants to	30	63.8
Not as often as wants to	17	36.2
Is there someone who would give you any help at all if you were sick or disabled, for example your wife, a member of your family, or a friend?		
Yes	45	95.7
No one willing and able to help	2	4.3

Table 4.8 continued

Is there someone who would take care of you as long as needed, or only for a short time, or only someone who would help you now and then (for example, taking you to the doctor, or fixing lunch occasionally, etc.)?		
As long as needed	21	44.7
For a short period of time	13	27.7
Only now and then	10	22.7
Not answered	3	6.4
Who is this person and their relationship to you?		
Spouse	23	48.9
Sibling	4	8.5
Offspring	10	21.3
Grandchild	1	2.1
Other kin	2	4.3
Friend	4	8.5
Not answered	3	6.4

each are: confrontive (0-30), evasive (0-39), optimistic (0-27), fatalistic (012), emotive (0-15), palliative (0-21), supportant (0-15), and self-reliant (0-21). The range for mean scores of each style is from 0 to 3 where 0 means that the it was never used and was not helpful to 3 indicating that the style was used often and was very helpful. The mean score is an adjusted score to take into account the unequal number of items in each coping style and is calculated by dividing the raw score for a given style by the total number of items possible for that coping style. This score allows for comparison between the coping styles.

The observed average raw scores (n=35) for the usefulness and effectiveness respectively of each style are: confrontive (13.7, 13.2), evasive (13.7,12.9), optimistic (18.1, 16.4), fatalistic (4.3,4.2), emotive (2.8, 2.8), palliative (8.9, 8.2), supportant (7.7, 7.8), and self-reliant (9.9, 8.9) (see Table 4.9). The observed mean scores (n=35) for the usefulness and effectiveness respectively of each strategy are: optimistic (2.00, 1.82), supportant (1.54, 1.56), self-reliant (1.42, 1.27), confrontive (1.37, 1.32), palliative (1.27, 1.27), fatalistic (1.08, 1.05), evasive (1.05, 0.99), and emotive (0.57, 0.55). Optimistic and supportant coping styles were reported as the most used and helpful strategies while fatalistic, evasive and emotive were the least effective. The self-reliant style was observed as being used more than confrontive but was less helpful as a strategy than confrontive (see Table 4.10).

Specific coping strategies that were most frequently rated as "often used" by subjects were: tried to think positively (n=21), tried to keep life as normal as possible and not let the problem interfere (n=20), thought about the good things in life (n=19), tried to keep feelings under control (n=17), tried to see the good side of the situation

Table 4.9

Revised Jalowiec Coping Scale Usefulness and Effectiveness

Average Raw Scores (n=35)

Strategy	Usefulness	Effectiveness	Highest Possible Score
Optimistic	18.1	16.4	27
Supportant	7.7	7.8	15
Self-reliant	9.9	8.9	21
Confrontive	13.7	13.2	30
Palliative	8.9	8.8	21
Fatalistic	4.3	4.2	12
Evasive	13.7	12.9	39
Emotive	2.8	2.8	15

Table 4.10

Revised Jalowiec Coping Scale Usefulness and Effectiveness Scores Mean (n=35)

Style	Usefulness (Mean ± SD)	Effectiveness (mean ± SD)
Optimistic	2.01 ± 0.59	1.82 ± 0.64
Supportant	1.54 ± 0.73	1.56 ± 0.76
Self-reliant	1.42 ± 0.61	1.27 ± 0.68
Confrontive	1.37 ± 0.55	1.32 ± 0.59
Palliative	1.27 ± 0.56	1.26 ± 0.63
Fatalistic	1.09 ± 0.47	1.05 ± 0.62
Evasive	1.05 ± 0.53	0.99 ± 0.56
Emotive	0.57 ± 0.49	0.56 ± 0.62

(n=16), tried to keep a sense of humour (n=15), told yourself not to worry because everything would probably work out fine (n=13), prayed or put trust in God (n=12), took medications (n=12), and depended on others to help out (n=11). These ten items reflect the optimistic, supportant, self-reliant, and palliative coping styles. The same items also had the highest ratings as "very helpful" but the order varied (see Table 4.11).

Readmission

Fourty two subjects were contacted by telephone 3 months after their discharge from hospital to ask questions about readmission back into a health care facility for reasons subjects perceived related to their prostate operation. Of the original 47 subjects who participated in the telephone interviews a week after discharge, the researcher was not able to contact 5 subjects after repeated telephone calls over a two week period. One subject had died, and it was assumed that the other four were not at their home address. Five (11.9%) subjects were admitted overnight into a hospital for urinary retention, infection, and/or other urinary tract problems (not including bleeding or pain) while 37 (88.1%) subjects did not experience a hospital readmission. Subjects were also asked if they visited a hospital emergency room which did not include admission, and 6 (14.3%) subjects stated that they had for post operative prostate problems related to bleeding, retention, and/or infection. Three (7.1%) subjects who had overnight hospital stays visited a hospital emergency department.

Correlational Analysis

Using the SPSS statistical analysis programme, correlations between study variables were examined. Because the number of cases amongst the variables varied, pairwise deletion of missing values was incorporated so that the calculation of the

Table 4.11

Specific Coping Strategies (n=35)

Coping Strategy	Category	Often Used (Subjects %)	Very Helpful (Subjects %)
Tried to think positively	Optimistic	60.0	51.4
Tried to keep life as normal as possible and not let the problem interfere	Optimistic	57.1	45.7
Thought about the good things in life	Optimistic	54.3	42.9
Tried to keep feelings under control	Self-reliant	48.6	34.3
Tried to see the good side of the situation	Optimistic	45.7	34.3
Tried to keep a sense of humour	Optimistic	42.9	51.4
Told yourself not to worry because everything would probably work out fine	Optimistic	37.1	31.4
Prayed or put trust in God	Supportant	34.3	31.4
Took medications	Palliative	34.3	31.4
Depended on others to help out	Supportant	31.4	42.9

correlation coefficients used all cases that had valid data for each analysis. The Pearson Product Moment Correlation Coefficient (*r*) and Spearman's Coefficient (rho) were used to examine the relationship between the variables of perceived self care ability, perceived social support resources, cognitive function, and coping strategies. Pearson's *r* was used because the data was mainly interval and this statistical test is appropriate for interval data. Spearman's rho was also used to in order to provide a conservative approach to the analysis because although the measurement scales used were ordinal and interval, the sample from which the data was drawn was a convenience sample and not all of the variables being correlated approximated a normal curve and consequently did not meet all the standard assumptions for using the Pearson Product Moment Correlation (Munro, 1993).

Relationship between Perceived Ability to Perform Self-care and Perceived Adequacy of Social Support Resources, Coping Strategies, and Cognitive Function

Pearson Product Moment Correlation. The data analysis revealed a significant relationship between the dependent variable of perceived self-care ability and the independent variable of cognitive function ($r = -.319$ $p < .05$, two-tailed). Subjects with lower scores on the telephone version of the mini mental state exam had higher scores on the OARS-ADL scale which measured functional and instrumental activities of daily living.). In this case subjects who had a low score on the telephone version of the MMSE (TEL-MMSE) cognitive test (poorer cognitive function) had a higher score (indicating greater dependence on others) on the self-care summary score. There were no further significant correlations between the main study variables (see Table 4.12).

Small correlations were found between perceived self-care ability and perceived adequacy of social support resources (r = .161) and length of hospital stay (r = -.201), although these were not significant. These values indicate that there is only a slight relationship between greater dependence in performing self-care tasks and poorer social support, and the shortest hospital stay and more independence in performing activities related to self-care respectively. The correlations between ability to perform self-care. and use and effectiveness of coping strategies, age and region of residence were all less than 0.1 and were too small to argue that a relationship exists between these variables.

The independent variable that showed strength though not significance in the analysis was TEL-MMSE (cognitive function). This variable demonstrated small linear relationships with perceived adequacy of social support resources (r = -226), use of coping skills (r = .318), effectiveness of coping skills (r = .217), and age (r = -.241) (see Table 4.12 again). The results indicate that there may be a slight relationship between inadequate social support resources, more advanced age and lower levels of cognitive function. Use and effectiveness of coping skills had a small positive correlation with higher scores on the TEL-MMSE.

Analyzing the relationship with specific coping strategies it was observed that The TEL-MMSE (cognitive function)was significantly correlated with the use (r = .363 p < .05, two-tailed) and effectiveness (r = .401 p < .05, two-tailed) of the supportant coping strategy. With this strategy subjects who had better TEL-MMSE scores more frequently used strategies that involved using professional, personal , and spiritual support systems to help them cope with a stressor. Subjects also found that these strategies worked effectively more times than other strategies.

Table 4.12

Pearson's Product Moment Correlation Coefficient between Perceived Ability to Perform ADL and Independent and Demographic Variables

Variables	1	2	3	4	5	6	7	8
1.ADL[a]	1.000	-.319*	.161	-.048	.088	-.077	.030	-.201
2.MMSE[b]		1.000	-.226	.318	.217	-.241	-.154	-.052
3.SSR[c]			1.000	-.001	.049	.079	-.042	.044
4.COPSE[d]				1.000	.772**	-.072	-.181	-.135
5.COPEFFEC[e]					1.000	-.068	-.198	-.028
6.AGE[f]						1.000	.156	.063
7.RES[g]							1.000	.120
8.LOS[h]								1.000

Note. 1. ADL refers to the OARS activities of daily living subscale and measures the perceived self-care ability; 2. MMSE refers to the telephone version of the mini mental state exam and measures cognitive function; 3. SSR refers to the OARS social support resources subscale and measures perceived adequacy of social support resources; 4. COPUSE and 5. COPEFFEC refer to the Revised Jalowiec Coping Scale and measure the use and effectiveness of overall coping strategies respectively; 6. AGE refers to the age of subjects at the time of data collection; 6. RES refers to the regional health authority where subjects were living at time of data collection; and 7. LOS refers to length of hospital stay for the transurethral prostatectomy surgery and was measured from date of operation to date of discharge from hospital.

[a] $n = 42$. [b] $n = 47$. [c] $n = 47$. [d] $n = 35$. [e] $n = 35$. [f] $n = 47$. [g] $n = 47$. [h] $n = 47$.

* $p < .05$, two-tailed.

** $p < .01$, two-tailed.

To provide more insight into how the cognitive function variable related to other variables, the total TEL-MMSE score was recoded into a dichotomized score where scores that had a total of 18 and more were assigned as high and scores 17 and below were assigned as low. This new variable was then correlated using Pearson's *r* with the dependent and independent variables. The observed result of this analysis yielded a significant correlation with the perceived adequacy of social support resources variable (Pearson's $r = -.318$ $p < .05$, two-tailed). This reveals the strength of the TEL-MMSE to highlight relationships with other variables. This result indicates that subjects who had lower TEL-MMSE scores had fewer social support resources. The extent of these resources is not explained by this particular relationship.

Spearman's rho. All the correlations were found to be low indicating only a small or slight relationship between the dependent and independent variables (see Table 4.13). There were no significant correlations between theses main variables. A small negative relationship was found between the variables of perceived ability to perform self-care at home after hospital discharge and level of cognitive functioning (Spearman's *rho* = -.171). In this case subjects who had a low score on the MMSE cognitive test (poorer cognitive function) had a higher score (indicating greater dependence on others) on the self-care summary score. A weaker linear relationship existed between self-care performance and availability of social support resources (rho =.167). This weak positive correlation may indicate a small relationship between increased dependency in self-care and more social impairment with less than adequate social resources. Use of coping strategies and effectiveness of those strategies had small positive correlations with ability to perform self-care tasks (rho = .122 and .236 respectfully) which may indicate a

relationship between use and effectiveness coping strategies as subjects experience more dependence in performing self-care tasks.

There were no significant correlations between the dependent variable of self-care ability and specific coping styles or strategies, although the styles of self-reliant, supportant, optimism, and evasive had correlations with self-care ability in the range of rho = .245 to .274. The strongest observed correlation was with effectiveness of supportant coping styles (rho = .274). This style uses strategies where support systems play a role in effective coping. This finding possibly indicates that there was a small relationship between increased dependency in performing self-care tasks and effectively using supportant coping strategies to deal with the situation. The direction of this weak relationship was also observed with use and effectiveness of self-reliant styles (rho = .245 & .270 respectively) where individuals depended more on themselves while dealing with a stressful situation (increased dependency), and effectiveness of optimistic strategies (rho = .269) where individuals use positive thinking and outlook to enable them to cope. The evasive style of coping incorporates strategies where individuals evade or avoid the stressful situation, and in this study the observed result (rho = .261) perhaps indicated that there may have been a slight relationship between increased dependence in doing self-care tasks and avoiding this stressful situation. Because these correlations were low, the possible relationships that existed between ability to perform self-care and cognitive function, adequacy of social support resources, and overall and specific coping strategies are weak for this sample of older men.

Table 4.13

Spearman's Rho Correlation Coefficient between Perceived Ability to Perform ADL and Independent and Demographic Variables

Variables	1	2	3	4	5	6	7	8
1.ADL[a]	1.000	-.171	.167	.236	.122	-.009	.057	-.158
2.MMSE[b]		1.000	.168	.118	.231	-.442**	-.141	-.123
3.SSR[c]			1.000	.082	.054	.078	.013	.030
4.COPEFFEC[d]				1.000	.777**	-.049	-.214	-.041
5.COPUSE[e]					1.000	-.098	-.212	-.205
6.AGE[f]						1.000	.166	.158
7.RES[g]							1.000	.222
8.LOS[h]								1.000

Note. 1. ADL refers to the OARS activities of daily living subscale and measures the perceived self-care ability; 2. MMSE refers to the telephone version of the mini mental state exam and measures cognitive function; 3. SSR refers to the OARS social support resources subscale and measures perceived adequacy of social support resources; 4. COPEFFEC and 5. COPUSE refer to the Revised Jalowiec Coping Scale and measure the effectiveness and use of overall coping strategies respectively; 6. AGE refers to the age of subjects at the time of data collection; 6. RES refers to the regional health authority where subjects were living at time of data collection; and 7. LOS refers to length of hospital stay for the transurethral prostatectomy surgery and was measured from date of operation to date of discharge from hospital.

[a] $n = 42$. [b] $n = 47$. [c] $n = 47$. [d] $n = 35$. [e] $n = 35$. [f] $n = 47$. [g] $n = 47$. [h] $n = 47$.

** $p < .01$, two-tailed.

The demographic variables of age (AGE), residence (RES), and length of hospital stay (LOS) were also analyzed to determine if there were any significant relationships with the dependent variable. Self-care ability (ADL) had a weak negative relationship with LOS, which may indicate a slight relationship between a shorter LOS of one day with increased dependence in performing tasks related to ADL.

Although not a relationship with the dependent variable of perceived ability to perform self-care, a significant relationship existed between age and cognitive function (rho = -.442, $p < .01$, two tailed), where the oldest subjects possibly had lower mental status exam scores (see Table 4.13 again). Lower mental state exam scores may indicate problems with orientation to time and place, attention, recall, calculation, ability to name, or ability to follow verbal commands which are all cognitive aspects of mental functioning.

A significant negative relationship was observed between residence in health regions and effectiveness of optimistic coping styles (rho = -.363, $p < .01$, two tailed). This result may indicate that there was a slight relationship between living in the urban Edmonton health region and using optimistic coping strategies.

The relationship between hospital LOS and age was small but positive (rho = .158), which possibly indicates that there is a weak link between increasing age and a longer LOS for this type of operation. Similarly small positive relationships (rho = .222 & .166) exist respectively between a longer LOS and increasing age and living in health regions outside of the urban area of Edmonton, Alberta (see Table 4.13 again).

Relationship between Readmission at Three Months and, Cognitive Function, Perceived Adequacy of Social Support Resources, and Coping Strategies

Spearman's rho correlational coefficient was used to examine the relationship between readmission at three months and, perceived social support resources, cognitive function, and coping strategies. Spearman's rho was suitable for this data because the readmission at three months was nominal data (Munro, 1993). Readmission at three months included the sum of admissions back into hospital and or an emergency room for reasons related to the Transurethral Prostatectomy surgery. There were no significant correlations between readmission at three months and the independent variables. A small positive correlation existed between cognitive functioning and readmission, which describes a slight relationship between a higher score on the MMSE and being readmitted to hospital or emergency. A similar but curious correlation occurred between age and the dependent variable (rho = -.249) which may indicate a weak relationship between readmission and younger subjects in the sample. These findings are weak and do not indicate anything more than a slight or chance relationship amongst these variables (see Table 4.14).

There were no significant correlations between three month readmission and specific coping strategies. The coping scale specifically used coping with early discharge following prostate surgery as the stressful situation in relation to use of coping strategies, and not the stress of readmission back to hospital or emergency. In addition the coping questionnaire was completed prior to the three month readmission data collection. Finally reflecting back to the cognitive function variable, to determine if there were any significant differences between the two dependent variables of perceived ability

Table 4.14

Spearman's Rho Correlation Coefficient between Readmission at Three Months and Independent and Demographic Variables

Variables	1	2	3	4	5	6	7	8
1.READMIT[a]	1.000	.284	.055	-.017	-.001	-.249	.047	-.075
2.MMSE[b]		1.000	~	--	--	--	--	--
3.SSR[c]			1.000	--	--	--	--	--
4.COPEFFEC[d]				1.000	--	--	--	--
5.COPUSE[e]					1.000	--	--	--
6.AGE[f]						1.000	--	--
7.RES[g]							1.000	--
8.LOS[h]								1.000

Note. 1. READMIT refers to readmission at three months and includes the sum of hospital and emergency room admission; 2. MMSE refers to the telephone version of the mini mental state exam and measures cognitive function; 3. SSR refers to the OARS social support resources subscale and measures perceived adequacy of social support resources; 4. COPEFFEC and 5. COPUSE refer to the Revised Jalowiec Coping Scale and measure the effectiveness and use of overall coping strategies respectively; 6. AGE refers to the age of subjects at the time of data collection; 6. RES refers to the regional health authority where subjects were living at time of data collection; and 7. LOS refers to length of hospital stay for the transurethral prostatectomy surgery and was measured from date of operation to date of discharge from hospital.
~ Data excluded in this table include correlations between the MMSE, SSR, COPEFFEC, AGE, RES, AND LOS variables. This data is contained in Table 4.13.
[a]n = 42. [b]n = 47. [c]n = 47. [d]n = 35. [e]n = 35. [f]n = 47. [g]n = 47. [h]n = 47.

to perform ADL and readmission at three months with a dichotomized cognitive function variable as a factor, a MANOVA was performed. The results were disappointing, with the cognitive function variable recoded in to high value (total scores of 18 and above) and low value (total scores 17 and below). The MANOVA yielded a ratio F = 1.095 with 2,39 degrees of freedom ($p = < 0.345$. The criteria for the high/low score was altered to include total scores of 18 to be part of the low or fail group (high group 19 and above) because there was a small cluster of scores where 18 was the total score. MANOVA scores improved for this test improved with a ratio of F =0 2.436, and 2,39 degrees of freedom ($p = < 0.101$), but they were still not significant

The results of the analysis of data showed that the cognitive function variable was able to yield the most significant relationships with other variables. It consistently had the highest and strongest relationship for this sample of older subjects. The ability of the subjects to independently perform activities of daily living was high. Subjects also had adequate social support resources. However this variable revealed slightly more dependency than performing activities of daily living. Scores from the Revised Jalowiec Scale indicated that subjects used the positive strategies of optimistic, supportant and self-reliant more frequently than the more negative fatalistic, evasive, and emotive strategies. Readmission at three months revealed the weakest results with most of the subjects maintaining their post-operative health status without having to be readmitted back into hospital or an emergency department.

CHAPTER V

Discussion

The individuals who consented to be subjects in this study actively participated in decisions about their own health care by assuming responsibility for their care after a very short hospital stay. Participation by members of the public in their health care is one aspect of Primary Health Care that is rapidly occurring because of massive changes to the provision of health in the Province of Alberta and elsewhere. How successfully members of the public manage to maintain or improve their health status at home after discharge from hospitals will determine the efficacy of Primary Health Care as a strategic conceptual foundation for the evolving health care system. Information about three key components of participation - self-care, support, and coping, may give nurses more insight into how adequately patient population are managing in the home after early discharge.

Data was collected about the subjects' perceived ability to care for themselves after early discharge following a TURP operation, and its relationship to the use and effectiveness and of coping strategies, adequacy of perceived social support resources, and cognitive function. Cognitive function assessment was included as a independent variable because although loss of cognitive function is not always present with advancing age, temporary or irreversible forms of cognitive impairment are more prevalent in older persons (McDougall, 1990; Dellasega & Morris, 1993). Readmission back to hospital or an emergency room at three months was also studied in its relationship to the use and effectiveness and of coping strategies, adequacy of perceived social support resources, and cognitive function.

Cognitive Function: A Significant Result

A significant relationship was found between the main dependent variable of perceived ability to manage self-care after discharge and cognitive function (r = -.319 $p < .05$, two-tailed). The observed results showed a relationship between higher performance on the telephone version of the MMSE (TEL-MMSE) and more independence in performing activities of daily living (ADL) or the reverse, poorer cognitive skills and more dependence in performing self-care activities. Aske (1990) found a significant correlation (r = -.76) between dependent functional ability and lower MMSE scores, which reflect the findings of this study. Similarly Mor-Barak, Miller, and Syme (1991) found a strong significant positive correlation between instrumental ADL and mental status in a large convenient sample of poor, frail elderly which is consistent with the findings of this study.

The observed result in this study is important because it may indicate that subjects who performed poorly on the cognitive test may also have had some difficulty in managing at home after their TURP operation. The tasks the subjects had the most difficulty with in performing self-care were handling money, getting to the bathroom on time, shopping for groceries, and getting about in a car. The items on the TEL-MMSE that caused the most difficulty were the questions related to attention and calculation (counting backwards from 100 by 7's) and recall and memory (asking the subject to recall the names of three objects repeated at the beginning of the test). Focusing on the latter item Bassett and Folstein (1993) found that 11% of a study sample (n=810) had poor recall performance. In this present early discharge TURP study 19.2% of the subjects had poor recall performance on this item. In Bassett and Folstein's much larger study, functional disability along with age,

education, and current illnesses predicted poor recall performance. Clearly the relationship between cognitive impairment and functional ability was observed in other studies and it continues to be an important one to focus on.

The independent variable of cognitive function (CF) was also more robust than the other variables in the study. CF was significantly correlated with use and effectiveness of the supportant coping strategies ($r = .363$. & .401 $p < .05$, two-tailed respectively). Cognitive function correlations with the other independent variables, although not significant, were among the highest of the study ; CF vs. perceived social support resources, $r = .226$; CF vs. use of coping strategies, $r = .217$, CF vs. effectiveness of coping strategies, $r = .318$, and CF vs. the demographic variable of age, $r = -.241$. With the Spearman's rho test of correlation CF was negatively correlated with age (rho =-.442 $p < .01$, two-tailed) where test results were poorer with increasing age. Bassett and Folstein (1993) had similar results in their community sample of adults, but Ailinger, Dear, and Holley-Wilcox (1993) found that age CF did not decline with age in a longitudinal study of older community Hispanic immigrants When the total TEL-MMSE score was dichotomized into high scores (above 17) and low scores (below 17) a significant correlation with perceived adequacy of social support resources was observed in the data (Pearson's $r = -.318$ $p < .05$, two-tailed). In a study that analyzed social networks of poor frail elderly, a positive correlation between high mental status and larger social networks was observed, a result that is similar to the present study's observed results (Mor-Barak et al., 1991).

These findings centering on the cognitive function variable indicate the importance of studying this component in the study. However the results from this study only suggest

small relationships and do not imply cause and effect. Furthermore because the sample (n = 47) was small and not randomly selected the findings must be viewed conservatively and cannot be extrapolated to any other population other than the sample. This caution also applies to the significant results which can be still considered as small or weak. Nevertheless, there is evidence that cognitive function is a factor in how the study subjects managed self-care after early discharge from hospital. Adequate cognitive functioning is an important ability for patients who are managing their own care after short hospital stays. Often patients are required to follow new instructions or protocols after discharge. The subjects in this TURP study had to manage in indwelling catheter at home albeit with intermittent support from a home care nurse or their physician. To learn this task patients would have received instruction prior to discharge and may have incorporated the cognitive domains of memory recall, psychomotor ability, judgment, concentration, and problem solving in learning and executing this new skill. These cognitive functions can easily be assessed prior to discharge using mental status screening tools, like the TEL-MMSE (McDougall,1990).

It is worthwhile to investigate the relationship between cognitive function and factors pertinent to patient populations who are being discharged early so that it will be come clearer what constitutes determinants of successful management after discharge. Answering these questions will help health professionals realize the goals of Primary Health Care where patients and their families become actively involved in decisions about their care. This finding may give health care professionals more insight to identify factors that can lead to successful participation by patients in managing their health care needs.

There were no significant correlations observed between the main dependent variable of perceived ability of perform self-care and the remaining independent variables, perceived adequacy of social support resources, and frequency of use and effectiveness of coping strategies. Furthermore there were no significant correlations between the secondary dependent variable of readmission at three months and the independent variables, although the correlation with cognitive function was stronger than other variables. The power of the correlation findings of this study were diminished most likely because of the small sample size. A larger random sample would yield more accurate results, although obtaining a large enough pool for a random sample would be difficult. Studying the interrelationship between the variables of ADL performance (self-care ability), coping and support are important to consider as discussed by Ploeg and Faux (1989) who found that social support had a strong and direct relationship with health where elderly who had better levels of social support and higher perceived levels of health. Ploeg and Faux also found that problem-oriented coping skills, like setting goals and trying to maintain control were indirectly but significantly related to positive psychological well-being. And Mor-Barak et al (1991) found that having more social networks were related to health and independence in performance of instrumental ADL.

A lower return rate (74.46% of total sample) for the Revised Jalowiec Coping Scale was also a concern. The unknown question is why did the subjects not return the questionnaire. A small percentage of subjects contacted the researcher and stated that they did not wish to or refused to complete the questionnaire. Perhaps subjects felt uncomfortable answering this type of survey. Certainly the low return rate may have affected the study results.

Discussion of Descriptive Characteristics

Although the variable, perceived ability to perform self-care was only correlated with cognitive function the descriptive characteristics are noteworthy. The characteristics of the sample vis-à-vis this variable are similar to those in other research studies which had community living elderly as subjects. Ailinger et al., (1993) found that for community living seniors the mean summary score for ADL from the OARS questionnaire was 4.74 and the SD was 1.04. The Ailinger study reversed the rating score so that 1 meant completely impaired ADL capacity and 6 indicated excellent ADL capacity. When the observed scores in this study are recoded as in Ailinger's study, the mean and SD scores are 4.5 and 0.88 respectively with the subject's average self-care capacity between mildly impaired to good.

In the original reliability and validity studies of the OARS questionnaire, Fillenbaum (1988) found that 9% of subjects had excellent self-care capacity, 46% had good, 21% were mildly impaired, 12% were severely impaired and 3% were totally impaired. In this study the percentages for good were much higher at 72.3% although there was 0% for the excellent rating. The ratings for mildly , moderately, severely, and totally impaired were14.9%, 6.4%, 6.4% and 0% respectively. Approximately eighty-seven percent (87.2%) of the subjects in this study were in the mildly impaired to excellent self-care capacity group as compared to 76% in the Fillenbaum sample, which indicates that the study subjects had similar or better self-care capacity. The comparison with the Ailinger sample shows that the study subjects had slightly lower mean scores but were again similar.

The ADL tasks of using the telephone, taking medicine, eating, dressing, walking, getting in and out of bed, and taking care of personal appearance had the highest mean scores (>1.90) meaning that these tasks were completed mostly without assistance. Requiring slightly more help were the tasks of showering, getting to the bathroom on time, handling money, and getting about in a car. ADL tasks that suggested the most dependence were doing housework, meal preparation, and shopping for groceries. Generally the data reveals that the subjects had minimal difficulty in managing their own care at home and had only slightly more difficulty with instrumental ADL, which is comparable to research completed by Lough And Schank (1996). Their sample was observed to have minimal difficulty with functional ADL, although some required assistance with bathing and ambulation. The very old in their study also required slightly more assistance with instrumental ADL particularly with transportation and needing assistance with shopping. Difficulties with transportation and food shopping were problems for 32% of subjects who were recently discharged from a home healthcare agency (Hellman & Stewart, 1994).

As previously discussed the variable of perceived adequacy of social support resources had a small significant correlation with a dichotomized cognitive function score. Summary scores from the scale measuring perceived adequacy of social support resources (Mean = 3.96, SD = 1.08, with the rating scale reversed) were similar to those in the longitudinal study by Ailinger at al., (1993), whose mean and SD scores were 4.01, 1.18 in 1983 and 3.96, 1.36 in 1988. Subjects had fairly adequate social relationships and resources and 95.7% had help available when it was required. Subjects in this study faired better than those who were released from a home healthcare agency (Hellman & Stewart,

1994), but were worse off in comparison to Fillenbaum's sample who had 51% in the excellent to good categories compared to 38.3% in the same category in this study.

Slightly fewer than one half of the subjects in this study (40.4%) talked on the telephone less than once a day in the week following their discharge. While 93.6% of subjects felt that they had some they could trust and confide in, 36.2% found themselves feeling lonely and the same percentage felt that they didn't get to see relatives and close friends as often as they wanted. Badger (1993) discovered that older subjects with moderate to severe physical impairment reported fewer interactions with others, greater loneliness and less dependable help than less impaired subjects while Hellman and Stewart (1994) reported that the greatest support came from family and friends for recently ill older individuals. The elements of interaction, emotional state and support from family and friends may be significant for individuals and their families recovering from illness and are worthwhile exploring in research.

The experience of rural and urban subjects may be another thread that may shed light on the reported lower scores - that is the difference in the post-operative experience between the urban and rural subjects. Subjects in urban areas who had TURP surgery and were discharged from the short stay unit had their post-operative follow-up care managed by home care nurses who utilized a city wide TURP care map. Subjects from rural areas had this care managed by various health professionals - family physician, emergency room personnel, home care nurses. The difference in post-operative follow-up care may represent an extraneous variable in the study. Johnson (1996) found that rural elders in the western United States had fewer people in their social networks and decreased levels of social support. Craig (1994) also studied rural elders in an American mid-western

state, and found through ethnographic analysis that older rural individuals valued independence and did not want to be a burden on anyone else. They were either fiercely independent where they refused help from any source or more comfortably independent where they allowed help from family and friends (Craig, 1994). They viewed independence as a health behaviour. The question that this study was unable to answer was the relationship between social support and rural living. In this study the variable coded "residence" was recoded into a dichotomous variable that represented urban and rural dwellers and this new variable was correlated with the study variables. There were no significant findings, but that may be a factor related to the small size of the sample. With a larger sample from the same population, significant differences may be revealed.

The cognitive function variable was the most robust of the variables in the study. The variable was measured using a telephone version of the MMSE (TEL-MMSE). The original MMSE is a reliable, valid and frequently used measure in the health care field. The mean score for this study (Mean = 19.5) was higher than the mean score in the TEL-MMSE validation studies (Mean = 14.6) (Roccaforte et al., 1992). The high mean score indicates a high level of satisfactory cognitive function in study subjects. These results are consistent with normative data from community living adults in the same age group (Rovner & Folstein, 1987). This particular test for cognitive function has excellent sensitivity and specificity for multiple cognitive functions and is well tolerated by subjects (Rovner & Folstein, 1987; McDougall, 1990; & Dellasega & Morris, 1993). The importance of cognitive screening of elderly research subjects will provide a common basis for comparing results amongst studies on older persons (Dellasega & Morris, 1993) and will help clarify the relationship between variables so that researchers can assist health care

providers to plan effective programs. In this study cognitive function proved to be a significant factor in reaffirming the position of ability to perform self-care as a valid study variable for this population of patients.

The supportant coping strategy had a significant relationship with cognitive function. This strategy is one of the more frequently used and effective strategies reported in studies that examine relationship of coping to stress and ADL (Buelow, 1991), and older long term cancer survivors (Halstead & Fernsler, 1994). Understanding how patients cope is useful because often individuals alter their strategies when experiencing illness and hospitalization (Halstead & Fernsler, 1994). Further studies with larger samples are justified to see if different coping strategies are used more frequently by this age group and also if there are differences in use of strategies between urban and rural groups. A larger sample may also reveal linkages to ADL which have been revealed indirectly in other studies (Ploeg & Faux, 1989).

Readmission at three months was not related to any variable in the study. One of the reasons may be that the patients were adequately screened by the healthcare professionals prior to their surgery, so that if patients were expected to experience complications they were admitted to hospital into a longer stay and more intense program. In this study, several patients who initially volunteered to be subjects dropped out of the study, because of medical complications. Therefore these patients who may have had readmission were dropped from the data set.

Implications for Nursing

Although the results of this study should be interpreted conservatively because of the small, non-random sample , it did establish relationships between perceived ability to

perform self-care and cognitive function, cognitive function and age, and cognitive function and supportant coping strategies. One can see that the study findings established several linkages between study variables, although because this was a correlational study, cause and effect was not established. Furthermore the results of this study only apply to the study sample.

There are several implications for nurses as a result of the findings of this study. While screening candidates for an early discharge programme, nurses could consider formal cognitive assessment to determine which patients would require more attention to helping them meet their post-operative needs at home. Such patients may require a more in depth teaching prior to discharge so that they will more effectively meet their needs. For example if the cognitive test reveals that memory recall is a concern, then patients can be provided with written instruction regarding new self-care practices that they may need to implement when they leave the hospital. Although the findings did not reveal significant differences between urban and rural subjects in their levels of social support, nurses should investigate those resources available to rural patients so that patients can access support services themselves during the postoperative recovery period. New ADL tasks may need to be incorporated into a patient's existing repertoire of practices when recovering at home from illness after early discharge, and nurses have the responsibility of ensuring that patients practice these before assuming responsibility for their care. Elderly patients need to be well prepared in all aspects daily living so that they can recover and regain their full potential after hospitalization. Patients need to be aware that health care providers can be seen as another type of support in addition to families and friends during

the recovery period.

CHAPTER VI

Conclusions and Recommendations

This study has provided insight into factors that affect how individuals manage at home after early discharge from hospital following surgery. Cognitive function was seen as a factor to consider and remained the strongest variable in the study. This highlights the importance of formal cognitive screening for older patients before they are discharged from hospital when their medical regime is still in progress. This will allow nurses in the community to more accurately assess the needs of their clients.

Social support and coping are valid factors that have influenced how other patient populations have managed their own care at home and may be significant factors on how future patients manage in the evolving health care system. In order to determine the strength of these variables in new patient populations, further research is necessary. It would be timely to investigate how rural individuals and families are coping with the rapid health care changes occurring in Canada. With declining resources and centralization of services it is not known how this segment of the population is managing. A study of this type would be challenging because of the setting, but the use of telephone surveys may expedite data collection.

Recommendation for Future Study

A larger, random sample should be drawn to increase reliability and validity of results. Only a randomly drawn sample will address the issue of generalizability, although with specific populations this would be difficult. The study should be replicated with other patient populations experiencing early discharge perhaps with more complicated illnesses. Larger samples of rural residents should be included in studies to understand the

relationships between the study variables. With elderly subjects, it is advantageous to have direct researcher contact to ensure that questionnaires like the coping scale are understood and completed as appropriately as possible. This may allow the researcher to confirm or clarify the subject's response, thus increasing the reliability of the study. Finally incorporating a matched comparison group of community dwelling older individuals so that differences can be assessed, would enhance the reliability of such a study.

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APPENDIX A

University of Alberta
Edmonton
Canada T6G 2G3

Faculty of Nursing
3rd Floor Clinical Sciences Building

Certification of Ethical Acceptability for Research Involving Human Subjects

---

NAME OF APPLICANT(S): **Marilyn E. Woolley, MN Candidate**

TITLE OF PROJECT: **"Self-Care Abilities of Older Men After Transurethral Prostatectomy"**

The members of the review committee, having examined the application for the above-named project, consider the procedures, as outlined by the applicant, to be acceptable on ethical grounds for research involving human subjects.

January 5, 1995
Date

M. Ruth Elliott
M. Ruth Elliott, PhD
Chair
Ethics Review Committee

APPENDIX B

university of Alberta hospitals

Special Services and Research Committee
Research Office WMC 1J2.67
Tel: (403) 492-8007/1372

memorandum

SPECIAL SERVICES AND RESEARCH COMMITTEE

NOTICE OF APPROVAL

Meeting Date: January 16, 1995

Name(s) of Principal Investigator(s): Ms. Marilyn Woolley, School of Nursing

Department: Nursing

Project Title: Self-care abilities of older men after transurethral prostatedomy

Project Number: W-03

The Special Services and Research committee has reviewed and approved the above research project.

Comments: Approval is granted subject to the following conditions: you obtain written consent in the pre-admission clinic from the subjects to participate in the study, and, if in the course of the data collection a problem is identified, you must make appropriate referrals.

P. M. Olley

Dr. P. Olley, Acting Chair
Special Services and Research Committee

This approval is valid for one year.

Copy: Department Chair
Accounting
Hospitals Foundation

3830-05758-JULY84-STORES

APPENDIX C

Letter of Introduction

Hello, my name is Marilyn Woolley. I am a Master of Nursing student at the University of Alberta. I would like to study how patients care for themselves at home after they have had prostate surgery. I am also interested if patients who have had prostate surgery have to return to a hospital or emergency room after the operation. Having this information will help nurses to plan care for patients when they leave the hospital.

About a week after you have had your operation I will telephone you. I will explain the study in more detail. If you agree to be part of the study, I will ask you some questions. Some of the questions will be about memory and concentration. The rest of the questions will be about caring for yourself at home. Our conversation will take from 20 to 30 minutes to complete. I will also mail you a questionnaire that will take you 20 to 30 minutes to complete. I will supply a stamped and addressed return envelope.

In about three months I will phone again. I will ask if you have had to go back to a hospital or an emergency room for reasons related to your prostate operation. This conversation will take from 3 to 5 minutes.

Any information you give me is confidential. Your name will not appear in the study report. You are free to refuse to participate in the study at any time. Thank you for reading this letter.

APPENDIX D

Consent

Project Title: Self-care Abilities of older Men Following Transurethral Prostatectomy

Investigator:
Marilyn Woolley, RN
MN Candidate
Faculty of Nursing
Edmonton, Alberta, T6G 2E1
Phone:1-403-454-5208

Supervisor:
Dr. Dana Hames Wertenberger, Ph.D., RN
Director of Nursing, University of Alberta Hospital
Associate Professor, University of Alberta
Edmonton, Alberta, T6G 1E1
phone: 1-403-492-4851

The reason I am doing this study is to understand the self-care abilities of men 65 years of age and older who have had Transurethral prostatectomy surgery. These patients are seen in the preadmission clinic at the University of Alberta Hospitals before their operation. They are admitted to hospital on the day of their surgery. They are discharged to their homes from the University Hospitals 24 to 72 hours after their operation.

If you consent to be in this study, I will phone you 7 to 10 days after you are discharged from the hospital and ask you some questions. First, I will ask you some questions about memory and concentration. I will then ask you some questions about your support network and how you are able to care for yourself at home. A few of these questions may be personal to you. This telephone call will take about 15 to 20 minutes. When I am asking the questions, I will write your answers on a questionnaire form. I will also mail you a questionnaire that will take you about 20 minutes to complete.

In about three months I will phone you again. I will ask questions about going back to a hospital or an emergency room during those three months for reasons related to your operation.

You do not have to be in this study if you do not wish to be. If you decide to be in the study, you may drop out at any time by telling me. You do not have to answer any questions or discuss any subject in the interview if you do not want to. Taking part in this study or dropping out will not affect

you care.

There are no known risks for you if you participate in this study. Every effort will be made to ensure that your privacy is maintained. Your name will not appear in this study. Only a code number will appear on any forms or question sheets. All the data from the interview forms will be put on a computer disk. All records and computer disks will be kept in a locked cabinet separate from consent forms or code list. All records and computer disks will be destroyed seven years after the study is finished.

You will not benefit directly from this study. But results from this study may help nurses to plan teaching programs for patients who are having an operation. This may help to improve the care that nurses give to patients.

The information from this study may be used in another study that has received approval from the appropriate ethical review committee. The information and findings of this study may be published or presented at a conference. Your name or any material that may identify you will not be used for these studies. If you have questions or concerns about this study you can call me at 1-403-492-4851, my Thesis Supervisor, Dr. Dana Wertenberger at 1-403-492-4851, or Dr. Janet Ross Kerr, who is a member of my thesis committee, at 1-403-492-6253.

_____ _____

Subject's Signature Date

_____ _____

Investigator's Signature Date

If you wish to receive a summary of the study when it is finished, please include your mailing address:

_____

APPENDIX E

Demographic Data Form

1. Subject Code #_____

2. Location of residence (town, city/HA-region): _____
   1. Capital Health Region
   2. David Thompson & East Central
   3. Westview & Crossroads
   4. Aspen & Lakeland
   5. Mistahia, Peace, & Keeweetinok Lakes
   6. Northern Lights & Northwestern Regional Health
   7. Other

3. Date of birth:_____

4. Date in preadmission clinic:_____

5. Date of surgery in short stay unit:_____

6. Date of discharge from hospital to home:_____

7. Inpatient unit:
   1. 1A2 (day ward)
   2. other inpatient unit

8. Previous hospitalization:
   1. yes
   2. no

9. Number of hospitalizations:_____

10. Date of most recent previous hospitalization: _____

11. Current medical problems in addition to prostate:
    1. yes
    2. no

12. Type of medical problem:_____

13. Reasons for previous hospitalization.:

yes (1)	no (0)	
___	___	1. genito-urinary
___	___	2. respiratory
___	___	3. cardiovascular
___	___	4. endocrine
___	___	5. gastrointestinal
___	___	6. musculoskeletal
___	___	7. neurological, psychiatric
___	___	8. other _____
___	___	9. not answered

APPENDIX F

Telephone Version of the MMSE

Before I ask you about how you have been managing since you have been home, I would like to ask you some questions to check your concentration and memory.

1. Can you tell me what is the day of the week? ___
   Can you tell me what is the day of the month? ___
   Can you tell me what is the month? ___
   Can you tell me what is the year? ___
   Can you tell me what is the season of the year? ___ Score: ___/5

2. Can you tell me the name of the hospital where you had your surgery? ___
   What city is this hospital in? ___
   What province is this hospital in? ___
   What country is this hospital in? ___ Score: ___/4

3. I am going to name 3 objects and I want you to repeat all three back to me.
   HORSE: ___ CHAIR: ____ RAIN: ____

   Will you repeat all three back to me? Score: ___/3

4. I would like you to begin with the number 100 and count backwards by 7's. I will tell you when to stop.
   Can you begin now? 100 ___ ___ ___ ___ ___
   93 86 79 72 65

   Alternate question: Please spell the word " WORLD" backwards.
   D L R O W Score: ___/5.
   ___ ___ ___ ___ ___

5. Can you name the three objects I asked you to repeat in a question I have already asked you?
   HORSE: __ CHAIR: __ RAIN: __
   Score: ___/3

6. Can you please tell me, what is the thing called that you are speaking into as you talk to me?
   PHONE:_____ Score: ___/1

7. Would you please repeat the following:
   "NO, IF, ANDS, OR BUTS" Score: ___/1

Total score:___/22

Note: Roccaforte, W. H., Burke, W. J., Bayer, B. L., & Wengel, S. P. (1992). Validation of a telephone version of the mini-mental state examination. Journal of the American Geriatrics Society, 40, 697-702. (Used with permission. See Appendix L).

APPENDIX G

OARS Multidimensional Functional Assessment Questionnaire
(Includes the OARS-SRS and the OARS-ADL)

1. Subject Code Number:_____
2. Date of interview:_____
3. Time interview began:_____
4. Subject's residence:
   1. House
   2. Apartment
   3. Lodge

5. Racial origin of subject:
   1. White (European)
   2. Black (African)
   3. Asian - Indian Subcontinent
   4. Asian - Western Oriental
   5. Asian - Eastern Oriental
   6. Aboriginal (First Nations)
   7. Other _____
   9. Not answered

6. How far did you go (have you gone) in school?
   1. 0-4 years
   2. 5-8 years
   3. High school incomplete
   4. High school completed
   5. Post high school, business or trade school
   6. 1-2 years university or college
   7. 3 years university completed
   8. post graduate university
   9. Not answered

Now I'd like to ask you some questions about your work situation.

7. Are you presently:

Yes 1	No 0	
_____		employed full time
_____		employed part-time
_____		retired
_____		retired on a disability
_____		not employed and seeking work
_____		not employed and not seeking work
_____		full-time student
_____		part-time student

8. What kind of work have you done most of your life?
   State specific occupation:_____
   1. Professional
   2. Manager, proprietor
   3. Farmer (50 + acres)
   4. Clerical, sales, technical
   5. Skilled, foreman

Note: OARS/MFAQ. Duke University, Center for the Study of Aging and Human Development, 1978. Instrument used with permission (See Appendix L). Modifications have been made to items 5 &6 to suit the Canadian milieu.

6. Semiskilled, operative
7. Service worker
8. Unskilled, farm labourer
9. Not answered
Other: _____

9. Does your wife work or did she ever work? (question only applies to spouse to whom married the longest.)

1 Yes
0 No
2 Never married
[if "Yes" Ask 10.]

10. What kind of work did or does she do?

State specific occupation:_____

1. Professional
2. Manager, proprietor
3. Farmer (50 + acres)
4. Clerical, sales, technical
5. Skilled, foreman
6. Semiskilled, operative
7. Service worker
8. Unskilled, farm labourer
9. Not answered
Other: _____

Now I'd like to ask you some questions about your family and friends.

11. Are you single, married, never married, widowed, divorced or separated?

1. single(never married)
2. Married
3. Widowed
4. Divorced
5. Separated
9. Not answered
Other: _____

12. Who lives with you?

Yes 1	No 0	
_____		No one
_____		Wife (legal /common-law)
_____		Children
_____		Grandchildren
_____		Parents
_____		Grandparents
_____		Brothers & Sisters
_____		Other relatives [Does not include in-laws covered
_____		Friends in the above categories]
_____		Non-related paid* helper [*includes free room and
_____		Other. [Specify.] board]

_____

Social Support Resources

13. How many people do you know well enough to visit with in their homes?

3 Five or more
2 Three to four
1 One or two
0 None.
9 Not answered

14. About how many times did you talk to someone-friends, relatives, or others on the telephone in the past week (either you called them or they called you)?

3 Once a day or more
2 2-6 times
1 Once
0 Not at all
9 Not answered

15. How many times during the past week did you spend some time with someone who does not live with you: that is you went to see them or they came to visit you, or you went out to do things together?

3 Once a day or more
2 2-6 times
1 Once
0 Not at all
9 Not answered

16. Do you have someone you can trust and confide in?

1 Yes
2 No
9 Not answered

17. Do you find yourself feeling lonely quite often, sometimes, or almost never?

0 Quite often
1 Sometimes
2 Almost never
9 Not answered

18. Do you see your relatives and friends as often as you want to, or not?

1 As often as wants to
0 No as often as wants to
9 Not answered

19. Is there someone who would give you any help at all if you were sick or disabled, for example your wife, a member of your family, or a friend?

1 Yes
0 No one willing and able to help
9 Not answered

[If "yes" ask 20 and 21]

20. Is there someone who would take care of you as long as needed, or only for a short time, or only someone who would help you now and then (for example, taking you to the doctor, or fixing lunch occasionally, etc.)?

3 Someone who would take care of subject indefinitely (as long as

possible)

2 Someone who would take care of Subject for a short time (a few weeks to six months)
1 Someone who would help the subject now and then (taking him to the doctor or fixing lunch, etc.)
9 Not answered

21. Who is this person and their relationship to you?

Relationship _____
Code: Spouse = 1, Sibling = 2, Offspring = 3, Grandchild = 4, Other Kin = 5, Friend = 6, Other = 7

Activities of Daily Living

Now I'd like to ask you about some of the activities of daily living, things that we all need to do as a part of our daily lives. I would like to know if you can do these activities without any help at all, or if you need some help to do them, or if you can't do them at all.

[Be sure to read all answer choices if applicable in questions 22 through 39 to respondent]

Instrumental Activities of Daily Living

22. Can you use the telephone ...
2 without help, including looking up numbers and dialing:
1 with some help (can answer phone or dial operator in an emergency, but need a special phone or help in getting the number or dialing); or
0 are you completely unable to use the telephone?
9 Not answered

23. Can you get to places out of walking distance...
2 without help (drive your own car, or travel alone on buses or taxis);
1 with some help (need someone to help you or go with you when traveling); or
0 are you unable to travel unless emergency arrangements are made for a specialized vehicle like an ambulance?
9 Not answered

24. Can you go shopping for groceries or clothes (assuming s. has transportation)...
2 without help (taking care of all shopping needs yourself, assuming you had t transportation);
1 with some help (need someone to go with you on all shopping trips); or
0 are you completely unable to do any shopping?
9 Not answered

25. Can you prepare your own meals...
2 without help (plan and cook full meals yourself);
1 with some help (can prepare some things but unable to cook full meals yourself);
0 or are you completely unable to prepare any meals?
9 Not answered

26. Can you do your housework...
2 without help (can clean floors, etc.);
1 with some help (can do light housework but need help with heavy work); or
0 are you completely unable to do any housework?

9 Not answered

27. Can you take your own medicine...
2 without help (in the right doses at the right time);
1 with some help (able to take medicine if someone prepares it for you and/or reminds you to take it); or
0 are you completely unable to take your medicines?
9 Not answered

28. Can you handle your own money...
2 without help (write checks, pay bills, etc.);
1 with some help (manage day-to-day buying but need help with managing your chequebook and paying your bills): or
0 are you completely unable to handle money?
9 Not answered

Physical Activities of Daily Living

29. Can you eat...
2 without help (able to feed yourself completely);
1 with some help (need help with cutting, etc.); or
0 are you completely unable to feed yourself?
9 Not answered

30. Can you dress and undress yourself...
2 without help (able to pick out clothes, dress and undress yourself);
1 with some help: or
0 are you completely unable to dress and undress yourself?
9 Not answered

31. Can you take care of your own appearance, for example combing your hair and shaving...
2 without help;
1 with some help; or
0 are you completely unable to maintain your appearance yourself?
9 Not answered

32. Can you walk...
2 without help (except from a cane);
1 with some help from a person or with the use of a walker, or crutches, etc.; or
0 are you completely unable to walk?
9 Not answered

33. Can you get in and out of bed...
2 without any help or aids;
1 with some help (either from a person or with the aid of some device); or
0 are you totally dependent on someone else to lift you?
9 Not answered

34. Can you take a shower...
2 without help;
1 with some help (need help getting in and out of the shower, or need special attachments in the shower); or
0 are you completely unable to bathe yourself?
9 Not answered

35. Do you ever have trouble getting to the bathroom on time?

2 No
1 Yes
0 Have a catheter
8 Have a colostomy
9 Not answered

[IF "YES" ASK 36]

36. How often do you wet or soil yourself (either day or night)?

1 Once or twice a week
0 Three times a week or more
9 Not answered

37. Is there someone who helps you with such things as shopping, housework, bathing, dressing, and getting around?

1 Yes
0 No
9 Not answered

[IF "YES" ASK 38 & 39]

38. Who is your major helper and what is their relationship to you?

Relationship _____
Code: Spouse = 1, Sibling = 2, Offspring = 3, Grandchild = 4, Other Kin = 5, Friend = 6, Other = 7

39. Who else helps you and what is their relationship to you?

Relationship _____
Code: Spouse = 1, Sibling = 2, Offspring = 3, Grandchild = 4, Other Kin = 5, Friend = 6, Other = 7

APPENDIX H

Jalowiec Coping Scale

The material on pages 123 to 131 (the Jalowiec Coping Scale, Copyright Dr. Anne Jalowiec, 1987) has been removed because of copyright restrictions. Information on these pages comprise the Jalowiec Coping Scale (Jalowiec, 1987). Permission had been obtained to use the scale for the purposes of this study (see Appendix L).

APPENDIX I

Letter to Subjects Explaining the Revised Jalowiec Coping Scale

Dear _____,

I am the nurse who is doing a study about how patients who had prostate surgery manage at home after their operation. This questionnaire is about how you are able to cope with stress and tension in your everyday life. This information is useful for nurses who plan care for patients who have been discharged early from the hospital.

The instructions on how to fill in the questionnaire are listed on the front page. Use a pencil to answer each question. This questionnaire should take 20 to 30 minutes to complete. If you have any questions about the questionnaire you can phone me collect at this number: 1-403-454-4372.

I have included a stamped, addressed return envelope in the packet. When you have finished, place the completed questionnaire in the envelope. Please place this envelope in a mail box or have someone do it for you if you are not able to get to a mail box.

Thank you for answering this questionnaire.

Yours sincerely

Marilyn Woolley

APPENDIX J

Readmission at Three Months

1. Subject Code # _____

2. Date:_____

3.At any time in the last 3 months have you been admitted overnight into hospital?
1. yes
2. no

4.How often? _____

6.Location of hospital (by HA region): _____

7.Reason:

yes(1)	no(2)	
____	____	bleeding
____	____	urinary retention
____	____	pain
____	____	infection
____	____	other

8.At any time in the last 3 months have you visited a hospital emergency room?
1. yes
2. no

9.How often? _____

10.Location of hospital (by HA region): _____

11.Reason:

yes(1)	no(2)	
____	____	bleeding
____	____	urinary retention
____	____	pain
____	____	infection
____	____	other

APPENDIX K

Revised Jalowiec Coping Scale Sub Scales

Sub-Scale Category	Corresponding Item Number
Confrontive	4, 13, 16, 25, 27, 29, 33, 38, 43, 45
Evasive	7, 10, 14, 18, 20, 21, 28, 35, 40, 48, 55, 56, 58
Optimistic	2, 5, 30, 32, 39, 47, 49, 50, 54
Fatalistic	9, 12, 23,60
Emotive	1, 8, 24, 46, 51
Palliative	3, 6, 26, 34, 36, 44, 53
Supportant	11, 15, 17, 42, 59
Self-reliant	19, 22, 31, 37, 41, 52, 57

Jalowiec, A. (1988). Changes in the 1987 revised version of the Jalowiec coping scale. Unpublished supplementary materials, Loyola University Medical Center, School of Nursing, at Maywood, Il.

APPENDIX L

Letters of Permission

DUKE UNIVERSITY MEDICAL CENTER
CENTER FOR THE STUDY OF AGING AND HUMAN DEVELOPMENT

Office of the Director

January 19, 1996

Marilyn Woolley
11711-136 Street
Edmonton, Alberta, CANADA
T5M 1M7

Dear Ms. Woolley:

You have our permission to reproduce and use the OARS/MFAQ for the purposes stated in your letter. We have one requirement and one suggestion. The requirement is that the Duke Center copyright appear on the face of all reproductions of the instrument and that any modifications of the instrument must also be noted on the face page, reported to us, and noted in publication of results.

The suggestion is that you keep in touch with us as your work progresses. There are over 150 users of the OARS/MFAQ nationwide. You may want to be in touch with other users with interests similar to your own.

The person with whom you would correspond in the future about OARS is Dr. Gerda Fillenbaum. You can write to her at Box 3003, Duke University Medical Center, Durham, NC 27710.

Sincerely,

Harvey Jay Cohen, MD
Professor of Medicine,
Aging Center Director and
Chief, Geriatrics Division
Associate Chief of Staff for
Geriatrics and Extended Care,
and Director, GRECC, VAMC

HJC/msc

C:\WPWIN60\OARS\PERMISS\WOOLLEY.196

PERMISSION FOR USE OF JCS

PERMISSION IS HEREBY GRANTED TO

Marilyn Woolley

TO USE THE JALOWIEC COPING SCALE

IN A STUDY OR PROJECT

Anne Jalowiec

ANNE JALOWIEC, RN, PHD

LOYOLA UNIVERSITY OF CHICAGO

DATE: 6/27/95

To: Mrs. Marilyn Woolley, RN, MN student
11711 - 136 Street
Edmonton, Alberta, Canada
T5M 1M7.
Fax Number: 1-403-492-6029
Telephone: 1-403-492-8319 (work)
1-403-454-5208 (home)

Re: Letter of Permission

This is to confirm that Marilyn Woolley RN, MN student has permission to use the instrument "Telephone Version of the Mini-Mental State Exam (MMSE)" as described in the following journal article of the Journal of the American Geriatrics Society in her research study "Self-care abilities of older men at home following Transurethral Prostatectomy (TURP)" :

Roccaforte, W. H., Burke, W. J., Bayer, B. L., & Wengel, S. P. (1992). Validation of a Telephone Version of the Mini-Mental State Examination. Journal of the American Geriatrics Society, vol. 40, no. 7.

Signed,

Copyright and Permissions Department
Journal of the American Geriatrics Society
Williams & Wilkins
428 East Preston Street
Baltimore, MD