INFORMATIONAL NEEDS OF POST-SURGICAL PATIENTS FOLLOWING DISCHARGE

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by

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Dedicated to

my mother, Mamie

and to the memory of my father,

Thomas Mitchelmore

Abstract

This study evolved from changes in the health care system resulting in early discharge of patients from hospital and the need for information by surgical patients in order to manage their care at home. Since professionals and patients often do not perceive the same priorities for teaching content, the informational needs as perceived by patients, were explored in this study. The relationship between personal and illness-related factors and informational needs was examined. Patient reports of information given and satisfaction with information were also explored.

A questionnaire was mailed to patients who were discharged home from hospital following appendectomy, inguinal hernia repair or cholecystectomy. Data were collected using the Patient Learning Need Scale. Subjects were asked to rate each item according to how important the information was in order to manage their care at home. For each item in the scale, subjects were also asked to indicate if the information was given and, for information given, to indicate how satisfied they were with this information. Demographic and illness-related data were collected from subjects and hospital records. Analysis was completed for a sample of 45 subjects.

Highly rated informational items for the subjects in this study were those related to physical activity, complications, wound care, pain management, elimination and guidelines for bathing. Age, education and gender were not related to total informational needs. However, subjects with a lower level of education needed more information about community resources. Type of surgical procedure, length of hospital stay, and medications were not related to total informational needs. Subjects who were discharged with a prescription for medications needed more information in two areas--medications and community resources.

Information which was rated as important and identified as given by the subjects in this study was also reported as satisfactory. Information considered as important and reported as not given by at least 40% of the subjects related to complications, elimination and recommendations for rest and physical exercise. Approximately 30% of subjects perceived that information about pain control, prevention of complications and guidelines for bathing were not given.

Implications for nursing practice and education include suggested content for developing teaching programs for short term surgical patients or for setting teaching priorities for patients in preparation for discharge. Areas for further research are outlined.

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CHAPTER I

Introduction

Advanced technological changes and economic factors have contributed to a shortened length of hospital stay for surgical patients. One of the consequences of a shortened stay is that there is limited time for patients to learn to manage their own care prior to discharge, therefore, health professionals are challenged to prepare patients to assume this responsibility. In preparation for discharge, it is necessary to address teaching content which is of most importance to patients. Additionally, it is important to know patients' level of satisfaction with what is taught.

Problem Statement

Traditionally, teaching content has often been determined by the professional, based on available literature. Research studies which explore the content to be included for patient teaching demonstrate that there is often a discrepancy between what professionals and patients believe the content should be (Gerard & Peterson, 1984; Goddard & Powers, 1982; Karlik & Yarcheski, 1987; Lauer, Murphy, & Powers, 1982; Waters, 1987). It is necessary to explore desired teaching content through research in order to determine what patients perceive to be important.

According to Whitman (1992a), teaching content should be specific to the illness and its management and vary with the patient's health status, developmental stage and value system. While the informational needs of medical surgical patients and patients with specific disease processes have been explored, the information perceived to be important to short term surgical patients has not been delineated. These patients are now often admitted to hospital on the day of surgery and are responsible for their own care following an early discharge. Immediately following surgery, patients have limited energy to learn about self care. They become motivated to learn when their physical condition improves and they begin to return to their normal level of functioning (Whitman, 1992b). However, during most of this time, patients are recovering at home and may not have access to professionals when information is needed. Baker (1989) found that patients felt that they could only contact the surgeon in emergencies, and that information about symptoms could be clarified on their scheduled follow-up appointment. A knowledge of the information needed by surgical patients on discharge would provide a basis for discharge planning, directed toward meeting these needs.

Various factors are addressed in the literature as possibly affecting the amount of information desired by patients. Personal factors include age, education and gender

(Bubela & Galloway, 1990; Leyder & Pieper, 1986). The factor age was also explored by Boyle, Nance and Passu-Buck (1992) and Kromminga and Ostwald (1987) and gender by Boyle et al. (1992). Illness-related factors include diagnosis/procedure, discharge medications (Bubela & Galloway, 1990) and length of hospital stay (Boyle et al. 1992; Bubela & Galloway, 1990). In research studies which explored the relationship of these factors to informational needs, findings have been inconsistent. There is a need to further explore these variables in relation to informational needs.

A further problematic area in patient teaching is that little is known about patient satisfaction with teaching and, therefore, health professionals have limited feedback about whether the information they are giving meets the expectations of the patient. Patient satisfaction is a component of quality of care, and communication of health care information is considered to be a contributor to overall satisfaction with care (Oberst, 1984). Information about patient satisfaction with teaching gives direction to health professionals as to possible changes which could be made in order to meet patients' expectations in relation to education.

Significance of the Problem

There are several reasons why the informational needs of surgical patients warrant attention. First, a large number of people are affected by surgery and its outcomes. Approximately 140,000 patients per year are admitted to Canadian hospitals for cholecystectomy, appendectomy, or herniorrhaphy surgery (Statistics Canada, 1993). Second, new technologies, such as laparoscopic procedures, have revolutionized surgical procedures, such as cholecystectomy, and patients who were previously hospitalized for three to six days are now often discharged on the day of surgery (Matthews, 1990). Therefore, less time is available to assess and meet teaching needs. Third, a number of studies have supported the benefits of patient education. These benefits include increasing patients' knowledge (Gregor, 1981; Lamb, 1984; Milazzo, 1980; Minton, 1983) decreasing length of post-surgical hospital stay (Johnson, Rice, Fuller & Endress, 1978; O'Connor, Devine, Cook, Wenk & Curtin, 1990), decreasing anxiety postoperatively and increasing psychological well being (Felton, Huss, Payne & Srsic, 1976) and increasing rate of recovery and ambulation (Johnson et al., 1978). A decrease in use of analgesics post-operatively was found by Johnson et al. (1978) and a decrease in use of antiemetics, sedatives and hypnotics by post-operative patients was found by O'Connor et al. (1990). Improved performance of self care activities was demonstrated in a study of surgical patients who were hospitalized for hysterectomy or mastectomy, and who were given structured preoperative and postoperative teaching (Williams et al. 1988). These studies demonstrate the many benefits of patient teaching and support the need to develop teaching programs for these patients. A knowledge of teaching content desired by patients could contribute to the development of teaching programs aimed at achieving these benefits for patients.

The nurse has a professional and legal duty to provide discharge instructions for patients, and patients have a right to be informed. Since patients will not always express questions or concerns, and time is limited, it is important to identify informational needs of patients prior to discharge home. This information will help professionals become aware of the range of information perceived to be important and prioritize information given to patients.

The study of patient satisfaction with information gives valuable feedback to health professionals as to whether their expectations for information were met and possible changes which could be made to increase their level of satisfaction. Patients who are satisfied are considered to be more likely to follow the recommendations of health professionals and more likely to use health services again (Donabedian, 1980; Doering, 1983).

Purposes of the Study

The purposes of the study are to explore (1) patient perceptions of information needed to manage care following discharge (2) patient reports of information given or not given prior to discharge (3) satisfaction of patients with information given and (4) personal and illness-related factors that might influence information needed.

Research Questions

The research questions are:

1. What is the importance of selected information items to adult patients in managing their care at home when discharged from hospital following surgery?
2. Which information items, perceived by patients to be needed in order to manage their care at home, are identified by patients as having been given prior to discharge from hospital?
3. What is the level of satisfaction among patients with information which was identified as given to them prior to discharge from hospital?
4. What is the relationship between selected personal and illness-related variables and informational needs identified by surgical patients following discharge?

Definition of Terms

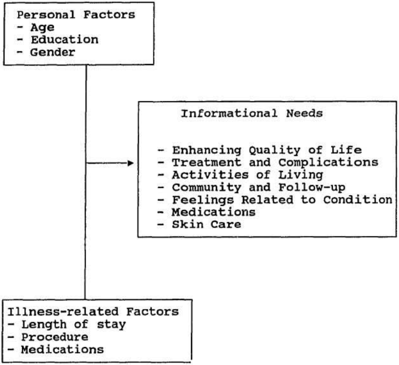
Informational need is defined as knowledge or skill identified by patients as necessary in order to manage their care when they return home from hospital following selected surgical procedures--open cholecystectomy, laparoscopic cholecystectomy, appendectomy or inguinal herniorrhaphy surgery. In this study, informational need is operationally defined as the score on the Patient Learning Needs Scale (PLNS).

Satisfaction with information is defined as a report by patients of the degree to which their expectations for information were met by health care providers. In this study, level of satisfaction with information given in hospital was identified by patients for each item on the PLNS according to a five point scale from 1 "very dissatisfied" to 5 "very satisfied".

Conceptual Framework

The conceptual framework for this study is based on studies in the literature that explored the concept of patient informational needs, as shown in Figure 1.

Informational needs, as identified in this framework, consist of the seven categories which were identified in the study by Bubela et al. in 1990. These categories refer to information which was identified by patients as needed in



<u>Figure 1.</u> The relationship of personal and illness-related factors to informational needs

order to manage their care at home following discharge from hospital.

In this model, selected variables are considered to be related to informational needs and possibly influence the amount and content of information perceived by patients as important. These variables include personal factors such as age, education, gender, and illness-related factors such as length of hospital stay, illness/procedure, medications.

CHAPTER II

Literature Review

A review of the literature on patient education is presented in three sections. The first section includes information related to the assessment phase of the teaching-learning process. The second section includes a review of research literature related to informational needs, and the relationship between personal and illness-related variables and informational needs. The third section consists of a review of literature related to patient satisfaction, including satisfaction with information.

Assessment Phase of Teaching-learning Process

Patient education has been described as a process of teaching-learning (Bille, 1981; Boyd, 1992; Rankin & Stallings, 1990; Redman, 1993a; Whitman, 1992b). The initial phase, assessment, is considered to be the most important since it influences all of the phases which will follow (Boyd, 1992). During this phase, the nurse collects data to determine what the patient knows and what he/she wants and needs to learn (Boyd). This study focuses on assessment of teaching content desired by surgical patients. Theory related to the assessment phase of the process is presented in this section.

Authors consider evaluation of readiness to learn to be an integral part of the assessment phase. The patient's readiness to learn is affected by his/her health status (Whitman, 1992b). Health status is considered in relation to three categories--wellness, chronic and acute illness, with each affecting experiential and motivational readiness to learn. Experiential readiness relates to the patient's ability and energy to learn. Motivational readiness relates to the patient's willingness to learn.

During the acute and post-acute stages of illness, energy is needed to cope with the demands of the illness (Whitman, 1992b). At this time, pain and fatigue often decrease the energy to learn. In one study by Chan (1990), patients who had experienced a myocardial infarction were found to need similar teaching content prior to discharge and during early convalescence. However, the information was rated as significantly more realistic to learn during the convalescent period. Chan concluded that, during hospitalization, patients may have needed their available energy to deal with the illness experience and may not have been ready to learn about the illness and its management. During the post-acute stage of illness, patients are motivated by their improving physical condition and the need to return to normal (Whitman, 1992b). Due to an early discharge, patients spend much of this stage at home and may not have access to professionals for information. Discharge teaching is therefore considered essential in preparing patients to safely manage their care when they are discharged home (Klis, 1981).

The second area outlined by Whitman (1992c) as influencing readiness for learning is the individual's developmental stage, which influences ability to learn and willingness to learn a subject at a specific time. For adults, readiness to learn is determined, in part by their developmental tasks, and they are motivated to learn when there is a problem to be solved. Furthermore, there are age-related implications for the adult learner. Studies of the relationship between age of patients and desired teaching content have yielded inconsistent results (Boyle et al., 1992; Bubela & Galloway, 1990; Kromminga & Ostwald, 1987; Leyder & Pieper, 1986).

An individual's value system also affects readiness to learn (Gleit, 1992). Traditionally, the role of the health professional "has been perceived as telling patients or clients what to do, how to do it, how frequently, and why" (Gleit, p. 103). When patients do not learn or follow the directions outlined, they are often labelled as noncompliant, but patients who are noncompliant are often asserting their right to be responsible for their own health (Gleit). Patients' values influence the decisions that they make.

According to Redman (1993a), the perceived dominance of the health care provider in the patient-provider relationship influences the patient's motivation to learn and participation in the decision making process. In the past, the professional often made judgements on what the patient needed to know. Research studies that have compared the perception of professionals with that of patients have demonstrated that the perceptions are often not congruent (Gerard and Peterson, 1984; Goddard & Powers, 1982; Karlik & Yarcheski, 1987; Lauer et al., 1982; Waters, 1987). Lauer et al. (1982) found the need for patients to learn about disease, treatment (except for chemotherapy), and related information was rated as significantly more important by nurses than by patients with cancer. In this study, patients and nurses also did not perceive the same priorities for patients to learn general information addressed by 20 items. Thirty-three nurses and 27 patients were asked to rank 36 items in order of importance to learn. Patients with cardiac conditions ranked risk factors as most important to learn, while nurses ranked medications as most important (Gerard & Peterson, 1984; Karlik & Yarcheski, 1987). The samples in both studies included 30 patients and 30 nurses. Nurses in a rehabilitation center ranked prevention of complications, muscle spasms and interpersonal relationships significantly higher in importance to learn than paraplegics ranked these items (Waters, 1987). Nurses also rated interpersonal relationships, communication (typing and tape recording) and financial assistance as significantly higher in importance than did quadriplegics. In this study, only one area, "learning to walk or stand", was rated as significantly more important by quadriplegics than by nurses. The study included 10 nurses and 24 patients. The time interval between the onset of injury and the interview was not controlled in this study.

In a study by Goddard and Powers (1982), patients on hemodialysis ranked information about fistula safety--prevention of injury to site and avoidance of constriction to arm--and avoidance of infection as highest in importance of 31 items, while nurses considered information related to diet and fluid restrictions to be of most importance. The study included 24 patients and 9 nurses. Dilorio, Faherty, and Manteuffel (1993) found nurses, physicians and persons with epilepsy ranked major learning categories similarly, but there were differences in relation to how persons with epilepsy and health care providers ranked individual learning needs. The sample included 59 patients, 85 nurses and 38 physicians.

The findings in the above mentioned studies suggest incongruencies between the perceptions of professionals and patients and demonstrate the need to assess the teaching content desired by the patient. It is, therefore, important for the provider to determine what the patient wants to learn and then build on the area the patient is willing to learn (Redman, 1993a). According to Redman (1993b), the real goal of patient teaching is "discovery of what fits best the unique experienced needs and aspirations of a particular person, working through shared decision making" (p 728).

Informational Needs

There is a variety of research studies which explore the informational needs of patients. Since informational needs are conceptualized differently in various studies, and different research instruments are used, comparisons of research findings are difficult. Since the present study is a partial replication of the study by Bubela and Galloway (1990), a review of that study is initially presented. The studies by Bostrom, Crawford-Swent, Lazar and Helmer (1994) and Galloway, Bubela, McKibbon, McCay and Ross (1993), who conceptualized informational needs in the same way, are also presented. In these studies, informational needs were measured using the PLNS, a 50 item self-administered tool whereby patients rated each item on a scale of 0 "does not apply" to 5 "extremely important" according to how important it is to know in order to manage their care at home.

Following review of these studies, specific informational needs which are identified in the research literature as important to patients are discussed.

Bubela and Galloway (1990) explored person and illness-related factors which influenced patients' informational needs at the time of discharge from hospital. Areas of most importance to patients included information about treatments and complications, medications, quality of life issues and activities of living. The sample included 301 adult medical and surgical patients who were within 72 hours of discharge.

Bostrom et al. (1994) expanded on the work of Bubela and Galloway (1990) and surveyed 76 hospitalized and 89 recently discharged medical surgical patients. Informational needs were ranked similarly in both studies. Information about medications was ranked first in importance in the study by Bostrom et al. (1994) and second in importance in the study by Bubela and Galloway (1990). This order was reversed for information related to treatments and complications, which was ranked second in the study by Bostrom et al. (1994) and first in the study by Bubela and Galloway (1990). In both studies, information related to quality of life was ranked third and information related to activities of living was ranked fourth. In the study by Bostrom et al. (1994), recently discharged patients were surveyed by phone within two weeks following discharge, using a condensed version of the PLNS that contained 16 of the 50 items in the original scale. Items on the condensed version of the PLNS were ranked higher by recently discharged patients than by hospitalized patients, except for two areas--"which complications to seek treatment for" and "how to manage pain".

A third study by Galloway et al. (1993) investigated the information perceived to be needed by 40 patients following open thoracotomy surgery for primary lung cancer and the effect of symptoms on activities after surgery. Subjects were surveyed prior to discharge and again 8 to 65 days following discharge. The information related to treatments and complications and quality of life was considered to be of most importance both prior to discharge and following discharge. While information about skin care was ranked third prior to discharge, it was ranked sixth following discharge. This may be due to the time of data collection post-discharge when incision care would no longer be a priority for patients. While Galloway et al. (1993) found a significant decrease in the mean scores for information related to treatment and complications, quality of life, and skin care when patients were discharged, Bostrom et al. (1994) found patients who were discharged rated the importance of 8 of the 16 items in the shortened version of the PLNS significantly higher than hospitalized patients rated these items. The findings of these studies may not be comparable for two reasons. First, Bostrom et al. (1994) collected data within 2 weeks following discharge and Galloway et al. (1993) surveyed patients 8 to 65 days following discharge. Second, Bostrom et al. (1994) used a second study group for post discharge data collection, while Galloway et al. (1993) interviewed the same subjects prior to and following discharge.

Diagnosis

The importance of information about diagnosis varies with the type of illness. In a study by Lauer et al. (1982), 27 patients with cancer ranked information about diagnosis as most important to learn in a list of 20 general information items. Knowing what they would experience during diagnostic tests was ranked third in importance. The sample included patients with cancer who were receiving or had received chemotherapy and/or radiotherapy and were readmitted at least once but not more than three times since diagnosis.

In exploring the informational needs of patients following a myocardial infarction, information about risk factors was ranked highest by 15 patients in the Coronary Care Unit (CCU) and also by 15 patients who were post discharge (Gerard & Peterson, 1984). This finding was the same as that found in a replication study by Karlik and

Yarcheski (1987). In both studies, knowing what to do for chest pain was ranked highest of the 43 items in the scale. Using 37 items of the instrument developed by Gerard and Peterson (1984), Chan (1990) found 30 patients who had recently experienced a myocardial infarction ranked risk factors as third in importance in seven categories prior to discharge and as first in order of importance during early discharge. Subjects were mostly concerned about having another myocardial infarction. Information about anatomy and physiology was ranked as second in the seven categories prior to discharge, with the most important concern being to know what caused a myocardial infarction (Chan, 1990).

Dilorio et al. (1993) found a sample of 59 persons with epilepsy rated seizure information as second in importance to learn, with knowing what to do to lower the chance of having a seizure as highest in this category. The items in the tool were grouped into five major categories and the subjects rated each item according to the level of importance on a ten-point Likert scale. Informational needs were not differentiated for persons with various types of seizures or for length of time since diagnosis.

Richardson (1991), in a non probability sample of 40 young adults with asthma, found 28% (n = 11) wanted to know the cause of asthma and 20% (n = 8) wanted to know what happened to the body during an asthma attack. Of the 10 subjects (25% of the sample) who wanted to know if asthma is heredity, 8 had children and 2 did not. Twenty-three percent of the sample (n = 9) wanted to know about the long-term effects of asthma. Goddard and Powers (1982) found patients who were on hemodialysis for 6 to 18 months had minimal interest in knowing why the kidney failed.

While information about diagnosis was found to be important for patients who were newly diagnosed such as patients with cancer, information about management of symptoms was important to patients with chronic conditions who were responsible for managing reoccurring symptoms related to the illness, such as persons with epilepsy and cardiac conditions. There is some support for the proposition that information which patients perceive to be most important to learn relate to what they intend most to do in their medical program or to the activities to which they actually adhered (Karlik, Yarcheski, Braun & Wu, 1990). The researchers studied 15 inpatients with angina and 15 post-discharge patients who had been previously admitted for cardiac catherization. The categories rated as most important by inpatients were also rated as the categories to which they most intended to adhere. Likewise, post discharge patients reported that the areas that they actually adhered to in their medical regimen were the same areas that they identified as most important to learn.

Complications

Information related to complications is considered important by surgical patients following discharge. Information perceived as important includes knowing how to recognize a complication, how to prevent problems from occurring, and when to consult a physician if a complication occurs.

In the study of 40 post-operative patients by Galloway et al. (1993), mentioned previously, knowing how to recognize and how to prevent complications were rated highest in a scale of 50 items. These items were rated of most importance by 39 patients prior to discharge, and by 33 of these patients who were surveyed following discharge. Knowledge about what complications might occur and which complications they should seek immediate help for was also considered important.

In a study of surgical patients by Leyder and Pieper (1986), knowing about normal and abnormal signs was ranked fourth in importance prior to discharge and first one week following discharge by the subjects in this study. Patients also wanted to know what a physician should be contacted about, and ranked this concern as sixth prior to discharge and tenth one week following discharge. Knowing when to consult a physician was also identified as a concern following hospitalization by 73 medical surgical patients

(49% of sample) in a study by Boyle et al. (1992). Medical surgical patients ranked knowing about which complications might occur and how to recognize and prevent complications as higher in importance to learn following discharge (2-3 weeks) than patients who ranked these items prior to discharge from hospital (Bostrom et al., 1994). The researchers suggested that patients may be attempting to regain independence in their health care at that time.

Treatments

Information about treatments has been found to be important to medical patients. In a study of 36 patients with cancer, knowing about the treatment plan was ranked second in importance in a list of 20 general information items (Lauer et al., 1982). For 9 patients receiving radiotherapy only and 8 patients receiving both radiotherapy and chemotherapy, the need to know about radiotherapy was high, with knowing the purpose of radiotherapy ranked first of eight items. Derdiarian (1986) found 60 patients with cancer who had been diagnosed from 1 to 15 days ranked the need to know about treatments first in the four areas identified in the disease category. Patients on hemodialysis ranked knowing the importance of medical orders as fourth in a list of 31 items (Goddard & Powers, 1982).

Medications

Although medications are part of a patient's treatment plan, they are often discussed separately in research studies, and the information is often considered by patients as very important to learn, especially by medical patients. Bubela and Galloway (1990) found medical patients were prescribed significantly more medications than surgical patients and also needed more information in this area.

In the study by Richardson (1991), knowing the functions and side effects of asthma medications was identified as a learning need most often by young adults with asthma (33% of sample, n = 13). Thirty-four subjects took medications for asthma on a daily basis or when symptoms were exacerbated. Information about medications was also rated as the area of most importance to learn by persons with epilepsy (Dilorio et al., 1993).

Boyle et al. (1992) explored the concerns of medical surgical patients following hospitalization, and found 52% of the sample (n = 78) were concerned about what to expect from medications and 31% of the sample (n = 47) were concerned about knowing how to take prescribed medications. Concerns were not differentiated for medical or surgical patients.

Ten patients who were receiving chemotherapy and 8 patients who were receiving both radiotherapy and chemotherapy rated the importance of knowing about chemotherapy medications highly (Lauer et al., 1982). Patients on chemotherapy ranked knowing the purpose of medications as highest of eight items, and those on combined therapy considered knowing the schedule and length of time to receive chemotherapy to be of first importance.

Several studies were conducted to explore the informational needs of patients following myocardial infarction. Chan (1990) found a sample of 30 patients ranked information about medications as first prior to discharge and second during early convalescence. In a total of eight areas, information about medications was ranked as second by patients in CCU and fourth by patients following discharge (Gerard & Peterson, 1984). Karlik and Yarcheski (1987) replicated this study and information about medications was ranked as third by patients in CCU and second by patients following discharge.

Patients receiving hemodialysis for 6 to 18 months (n = 24) perceived that the information about medications which was of most importance was the action and the number of times per day the medications were to be taken (Goddard & Powers, 1982).

For surgical patients, information about medications seems to be of lesser importance. Leyder and Pieper (1986) found surgical patients who had experienced cholecystectomy or herniorrhaphy surgery ranked knowing what medications to take as 12th prior to discharge and 11th following discharge in a list of 25 concerns. How to take pain medications was ranked 15th prior to discharge and 13th following discharge by the subjects in this study. In a study by Galloway et al. (1993), patients who were post-operative following open thoracotomy surgery rated information about medications as fourth in seven categories. Knowing the reactions to medications was rated higher following discharge than prior to discharge. At that later time, patients may have felt more responsible for observing reactions to the medications that they were taking.

Activity

Information about activity has been found to be more important for surgical patients than for medical patients with the importance to surgical patients decreasing over time.

Boyle et al. (1992) found 66% of a sample of 150 recently diagnosed medical surgical patients were concerned about knowing how much activity they should have. This was more of a concern for surgical patients than for medical patients. Subjects were surveyed up to 4 months after hospitalization and were asked to respond to 12 items and to indicate whether or not each was a concern.

In a study by Leyder and Pieper (1986), surgical patients were concerned about how active they should be following cholecystectomy or herniorrhaphy surgery. A sample of 30 subjects rated each of 25 items on a 7-point scale according to the level of concern. Prior to discharge, activity was ranked second in level of importance, and one week after discharge, it was ranked as fifth. They were also concerned about doing too much at home, and ranked this as fifth prior to discharge and ninth following discharge. Activity guidelines were considered very important by patients who were post-operative following open thoracotomy surgery (Galloway et al., 1993). When ranking the importance of 50 items in the scale, knowing restrictions for physical activity was ranked among the four most important items following discharge and knowing recommended exercise was ranked fifth prior to discharge.

In studies of patients with specific medical conditions, information needed concerning activity was specific to the disease process. In a study of individuals in a rehabilitation setting following spinal cord injuries, who rated their perception of their own learning needs, mobility was ranked third out of a total of nine categories by persons with paraplegia and ranked eighth by persons with quadriplegia (Waters, 1987). There was no control for time intervals between the onset of injury and the interview for the sample of 24 subjects in the study.

In a sample of 40 young adults with asthma, 25% (n = 10) wanted to know how to pace themselves when participating in sports, and 13% (n = 5) wanted to know which sports would be beneficial and appropriate for persons with asthma (Richardson, 1991).

Information about activity was considered to be of minimal importance by patients on hemodialysis (Goddard & Powers, 1982), and by patients following a myocardial infarction (Gerard & Peterson, 1984; Karlik & Yarcheski, 1987).

Self Care

Self care aspects are important for patients who assume responsibility for their own care at work or at home. Young adults with asthma (25% of sample, n = 10) wanted to know how to protect themselves from environmental allergens (Richardson, 1991). Patients with cancer (n = 27) felt knowing how to care for themselves at home or work was important, ranking this area as 3.5 in a list of 20 items (Lauer et al., 1982). For patients with spinal cord injuries, personal care was ranked as first in importance to learn by both persons with paraplegia and persons with quadriplegia (Waters, 1987). In a study by Galloway et al. (1993), prior to discharge, patients who had open thoracotomy surgery felt it was important to know how to care for their incisions. When interviews were conducted 8 to 65 days post-operative, this was not an area of importance. At that time, wound care would no longer have been needed by most patients.

Psychosocial Concerns

Psychosocial concerns were evident in several studies of patients who had to adapt to living with a chronic illness. In a study of young adults with asthma, 25% (n = 10) wanted to know how to relax and 20% of subjects (n = 8) wanted to learn about the perceptions of others with asthma and ways which they used to cope with health problems associated with asthma (Richardson, 1991). Dilorio et al. (1993) found persons with epilepsy rated psychological factors as third in importance to learn in five categories, with a positive attitude about living with seizures considered as most important in this area. Patients who had open thoracotomy surgery due to cancer felt it was important to know how their illness would impact on their lives at present and in the future. Of the 50 items in the scale, these items were identified as two of the ten most important items both prior to discharge and following discharge (Galloway et al., 1993).

Diet

The importance of information about diet varies according to diagnosis. Leyder and Pieper (1986) found patients who had cholecystectomy or herniorrhaphy surgery ranked their first area of concern prior to discharge to be about foods which upset the stomach. This area was ranked third one week following discharge. Knowing what to eat was ranked seventh prior to discharge and sixth one week after discharge. Understanding the diet to follow was identified as a concern by 43 medical surgical patients (29% of sample) in a study by Boyle et al. (1992). Patients with cancer were interested in knowing which foods would help them maintain weight, ranking this area as fifth in importance from a list of 20 items (Lauer et al., 1982).

Richardson (1991) found 20% of a sample of young adults with asthma (n = 8) wanted to learn about specific diets for individuals with asthma, and 13% of subjects (n = 5) wanted to know how to maintain a weight loss diet. Patients on hemodialysis wanted to know what fluids and foods were restricted, but not the reasons for the restrictions or about meal planning (Goddard & Powers, 1982). Information about diets was of minimal importance for patients who had experienced a myocardial infarction (Chan, 1990; Gerard & Peterson, 1984; Karlik & Yarcheski, 1987).

Pain

Pain has been reported as a concern for surgical patients. Boyle et al. (1992) found controlling pain was more of a concern for surgical patients than for medical patients following discharge. Leyder and Pieper (1986) found surgical patients were concerned about what to do for discomfort and ranked this information as third in importance prior to discharge and fourth one week after discharge. Incisional discomfort was ranked as eighth prior to discharge and second one week following discharge. Galloway et al. (1993) found that 40 post-operative surgical patients experienced moderate pain 48 to 72 hours prior to discharge, and that pain positively correlated with total informational needs, including the areas medications, feelings, treatments and complications, and quality of life. Pain was one of the symptoms which most affected subjects' ability to do their usual activities prior to and following discharge.

Personal and Illness-related Variables

Age

According to Whitman (1992c), there are age-related implications for the adult learner. Although age seems to be related to specific informational needs, the findings of studies have been inconsistent. Leyder and Pieper (1986), who studied discharge concerns rather than informational needs, found older patients identified fewer concerns than younger patients. In contrast, Bubela and Galloway (1990) did not find a relationship between age and total informational needs.

There were age-related concerns reported in several studies. Kromminga and Ostwald (1987) found a significant relationship between age and the need for information about activity. Bubela and Galloway (1990) found a significant positive relationship between age and the need to know about community resources. Boyle et al. (1992) found patients who were younger than 45 years were more concerned about pain control than those who were older. Subjects who were younger than 25 years and older than 65 years were concerned with understanding the progress they were making.

Education

The relationship between educational level and informational needs is not clear. Leyder and Pieper (1986) found people with more education had greater discharge concerns. In contrast, Bubela and Galloway (1990) found subjects with high school education reported significantly greater need for information than subjects who had gone to community college or university. Galloway et al. (1993) found no difference in the overall mean scores on the basis of education.

Gender

Research findings related to gender are also inconsistent. Several studies found that males did not differ significantly from females in their concerns or need for information (Galloway et al., 1993; Lauer et al., 1982; Leyder & Pieper, 1986). In contrast, Bubela and Galloway (1990) found females had a significantly higher need for information than males. Two areas contributed to the overall higher mean scores for females--activities of living and quality of life. Boyle et al. (1992) found women were more concerned than men about knowing when insurance would pay and about getting help with the cooking or housekeeping.

Length of Stay

The relationship between informational needs and length of hospital stay is also unclear. Bubela and Galloway (1990) found a significant positive correlation between number of days in hospital and total informational needs ($r = 0.22$, $p < 0.001$). Patients with a longer hospital stay needed more information in the areas of medications, activities of living, quality of life and community and follow-up. It should be noted that medical patients in the study had a longer hospital stay than surgical patients. In contrast, Galloway et al.(1993) did not find a significant relationship between length of hospital stay and total informational needs. The informational needs for long and short term patients were described by Boyle et al. (1992), and patients who were hospitalized for one week or longer were more concerned with having a nurse visit to give them care at home than patients with a shorter hospital stay. These patients may have been more in need of community services.

Type of Illness

Research studies which compare the informational needs of patients with specific diagnoses are limited. Bubela and Galloway (1990) found that medical patients needed significantly more information than surgical patients. Medical patients had longer hospital stays and were prescribed more medications which were also associated with increased informational needs. There was no significant difference between the information needed by patients with chronic disease and that needed by patients with acute illness. Short term surgical patients, therefore, may need the same amount of information as patients with long term illnesses, but have less time available for learning prior to discharge due to a shorter hospital stay. They may also have fewer opportunities to obtain information following discharge than patients with chronic illnesses have. Patients with cancer, when compared with patients with benign conditions, had higher total PLNS scores and higher scores for three subscales--Activities of Living, Community and Follow-up, and Feelings Related to Condition (Bubela & Galloway, 1990). Patients with cancer would likely be more in need of community resources and coping methods to help them deal with the illness.

Patient Satisfaction

There has been increased emphasis on the measurement of patient satisfaction in recent years, consistent with the trend toward holding health professionals accountable to the consumer and the recognition of the rights of individuals to participate in decisions which affect them. There is also increased recognition of the need to include the patients' perceptions of care in the measurement of quality of care (Oberst, 1984).

Patient satisfaction is recognized as one component of quality of care (Donabedian, 1980), and is conceptualized as the degree to which patients' expectations for care are met by health care providers. Patients who are satisfied are considered to be more likely to cooperate with health care providers and adhere to recommendations and more likely to use health care services again (Donabedian, 1980; Doering, 1983).

Patients have expectations about the care they will receive when they enter a health care facility (Courts, 1988). These expectations of care are based on prior experiences, relationships and attitudes and are influenced by reports from others (Oberst, 1984; Greeneich, Long & Miller, 1992). Patient expectations of care may be low if their knowledge of services and practice is limited (Bond & Thomas, 1992). Expectations of care may be high and rarely able to be met by health care providers (Oberst, 1984). Donabedian (1980) acknowledges that unrealistically high expectations may indicate that the patient has not been educated by the health care provider. Patients may also have specific expectations of care which are not considered by the professional to be in the best interest of the patient or cannot be provided for social or professional reasons (Donabedian, 1980). The author acknowledges that a well informed patient should be able to determine what is in his/her best interest. While patient dissatisfaction may or may not reflect the level of competence of health care professionals or the quality of health care provided, "it does reflect a serious failure of the health care delivery system to fulfill expectations in some important way" (McMillan, Younger & DeWine, 1986, p. 21).

Donabedian (1980) discussed measurement of patient satisfaction for two domains of care--technical management of care and interpersonal aspects. Patients may not be able to accurately assess technical aspects of care as their level of understanding may be limited in this area (Donabedian, 1980; Greeneich et al., 1992; Oberst, 1984). They may judge this aspect of care indirectly by assessing the amount of concern and interest demonstrated by the provider (Donabedian, 1980). Patients are thought to be more qualified to assess interpersonal aspects of care than technical aspects. Measuring patient satisfaction "gives information on the provider's success at meeting those client values and expectations which are matters on which the client is the ultimate authority " (Donabedian, 1980, p. 25).

Research studies often use a global or single measure of overall satisfaction (McMillan et al., 1986). Since satisfaction is a multidimensional concept, these measures are inadequate for assessing the whole concept and may not necessarily reflect aspects of care which are related to quality (Cleary & McNeil, 1988; Oberst, 1984). One experience may leave a lasting impression and would likely influence the overall rating of satisfaction (McMillan et al., 1986). Lewis and Woodside (1992) explored the level of satisfaction with care in an emergency department and found about a 46% match between overall satisfaction scores and the scores for satisfaction with specific aspects of the visit. An overall satisfaction score may be beneficial if satisfaction levels with individual attributes are also attained (McMillan et al., 1986). Measures of satisfaction should address specific issues related to patient's experiences (Carey & Posavac, 1982; Cleary & McNeil, 1988). These measures would give feedback to professionals as to changes which could be made in order to meet the expectations of the patient.

In exploring factors in health care which influence patient satisfaction, nursing care has been found to be the major contributor to overall satisfaction (Abramowitz, Coté, & Berry, 1987). Other factors include food quality, noise, physical surroundings and medical care. Adequacy of information is also considered to be related to overall satisfaction (Oberst, 1984).

Satisfaction with Information

The interpersonal relationship between the professional and the patient represents one component of the process of health care (Donabedian, 1982). In this area, patients "contribute very heavily to the definition of quality with their values and expectations" (Donabedian, 1980, p. 24). Patient reports of satisfaction with information give feedback concerning whether or not their expectations for information are met.

There are a number of factors which may affect the communication process between the patient and the professional (O'Sullivan, 1983). First, the terminology used may not be familiar to the patient, and fear and anxiety may limit understanding of explanations given. Second, while patients may want to be well informed, the information provided may not be information which was desired, or it may be less positive than expected.

There is some support for the hypothesis that patients' satisfaction with information increases with information given. Derdiarian (1989) found that an experimental group of recently discharged male patients with cancer and their spouses who were given individualized information gained more information and were more satisfied with that information when compared with their control group. In contrast, Steptoe, Sutcliffe, Allen, and Coombes (1991) found factual knowledge was greater among patients who were less satisfied with information provided. Further, they concluded that the way in which patients coped with stress, by seeking out or by avoiding information, had an impact on patients' level of satisfaction with information. Patients who reported the highest level of satisfaction with information were more avoidant in their coping style than the remainder, and were less anxious. Derdiarian (1989) found that patients with cancer who were given individualized information demonstrated increased coping, but there was not a significant difference between the experimental and control groups.

Although research findings cannot be compared across studies, patients are often not satisfied with the information they are given. Engstrom (1984), in a study of 120 medical, surgical and neurological patients, found 74% of the sample had a high need for information in relation to prognosis, but over half of the group (51%) was dissatisfied with this information. Thirty-five percent of the group considered information given about diagnosis to be inadequate. The researcher used test retest procedures for a group of 60 patients and had a control group of 60 patients. The study explored patients' need for information and their perception of the adequacy of information given in relation to general and medical information. Charles et al.(1994) surveyed 4599 medical and surgical patients about their concerns and satisfaction with care in Canadian hospitals, and one of the outcome measures was satisfaction with patient-provider communication, including information given. Telephone interviews were conducted to explore patients' perceptions of possible problems about their hospital care. In relation to discharge planning, which was found to be problematic, 39% of patients reported they had not been told what danger signs related to their illness they should watch for at home, 32% reported that they were not told when normal activities could be resumed, and 29% reported they were not given recommendations for activities at home.

Bostrom et al. (1994) concluded that recently discharged patients reported a high level of satisfaction with information. The authors explored the perceived informational needs of medical surgical patients following discharge, using 16 of the 50 items in the Patient Learning Needs Scale developed by Bubela et al. (1990). In a telephone survey of 89 patients, they were asked to indicate how satisfied they were with the information which was given. Overall satisfaction with information given was high with a mean score of 62 (SD = 17) and range of 0 to 80.

There is limited study of patient satisfaction with information, and conclusions cannot be drawn across studies. Although results have been inconsistent, research findings demonstrate that patients' expectations for information are often not met.

Summary

Patient education is an ongoing process of teaching and learning. The initial step, assessment, forms the basis for the steps which follow. Assessment focuses on the content of learning and the patient's readiness to learn, which may be experiential or motivational. Readiness to learn is affected by the patient's health status, developmental stage and value system. Teaching content is specific to the illness and its management and varies with the stage of illness.

Research studies which explore what patients want to learn focus on the assessment phase of the teaching-learning process. Since research studies demonstrate that there is often a discrepancy between what professionals and patients believe should be included in patient teaching, it is necessary to determine what information patients perceive to be important.

The informational needs identified by patients in research studies are varied. While common concerns fall under the broad headings of diagnosis, activity, medications, treatments, complications, and self care, these needs often vary according to diagnosis. Informational needs identified by medical patients are often different from those identified by surgical patients.

The relationship between personal and illness-related factors and informational needs has been found to be inconsistent in the literature.

Patient satisfaction is a component of quality of care and represents the degree to which patients' expectations for care are met by health care providers. While the measures of patient satisfaction may include both technical and interpersonal aspects of care, patients are considered to be more qualified to assess interpersonal aspects than technical aspects of care.

While the findings from research studies demonstrate that patients are often not satisfied with information given, inconsistent results are reported.

CHAPTER III

Design and Method

This study was designed to describe the informational needs of a group of post-surgical patients following discharge, and to explore the relationship between those needs and selected personal and illness-related variables. Patient reports of satisfaction with information were also examined in this study. With consent of the subjects, questionnaires were mailed to them to complete at home following discharge from hospital.

Design

This descriptive study involved the use of a mailed questionnaire. The purpose was to describe information perceived by patients as necessary and to describe the level of satisfaction with information given. The portion of the study related to informational needs is a partial replication of a study by Bubela and Galloway (1990). Descriptive statistics were used to analyze informational needs and satisfaction with information. Correlational procedures were used to examine the relationship between personal and illness-related variables and perceived informational needs.

Sample

The population for this study consists of patients from two surgical units of an acute care teaching hospital who undergo inguinal hernia repair, appendectomy, laparoscopic or open cholecystectomy. The sample consisted of all patients from these units who underwent these surgical procedures between February 22, 1994 and May 4, 1994, and who agreed to participate in the study.

All individuals who met the criteria during the time selected for data collection were approached to be included in the sample. Criteria for selection of the sample included patients who (1) would be returning home following open cholecystectomy, laparoscopic cholecystectomy, appendectomy, or inguinal herniorrhaphy surgery (2) were oriented to person, place and time, and (3) could read, write and understand English. In order to determine if patients would have any difficulty reading and understanding how to complete the questionnaire, subjects were given a copy of the questionnaire to examine. Potential subjects who felt they would have difficulty completing the questionnaire were excluded from the study. Patients who were hospitalized for extended periods due to medical conditions not resulting from the surgical procedure were not included in the study.

Sixty-five patients met the criteria for inclusion into the study. Two patients did not wish to participate. One of these patients was not interested when the nurse asked if he was willing to discuss participation in a research study. The second patient was given an explanation of the study by the researcher and was not interested in participating. Two patients were discharged home before the researcher was able to obtain consent to mail the questionnaire. They were not able to be contacted by phone to obtain a verbal consent. Sixty-one questionnaires were mailed. One was returned due to incomplete address. The complete address was not available to forward the questionnaire.

Since one of the difficulties associated with mailed surveys is a low response rate, several actions suggested by Jackson (1988) were taken to increase the rate of return. Memorial University of Newfoundland was identified as the sponsoring agency in order to increase the legitimacy of the survey. Further, the researcher made personal contact with potential subjects in order to explain the study and possibly increase the salience of the project. One follow-up contact was made if the questionnaire was not returned in two weeks.

Setting

Patients are admitted to the surgical units by emergency or elective admission. Many of the patients who are scheduled for elective procedures attend a preadmission clinic and are prepared for surgery at that time. These patients are admitted to the surgical unit following the surgical procedure. A number of beds are allocated for short stay admissions on each unit. Discharge teaching is completed by the nurses on the unit prior to the patient's discharge home.

Patient teaching, including documentation of teaching, has been outlined as one of the primary objectives for the surgical units. In response to this need, the nursing staff has developed a patient teaching booklet incorporating information on discharge teaching. This booklet is presently being prepared in its final form. Earlier drafts were available during the data collection period of this study and were given to patients at that time. Some, but not all, of the subjects in this study received a draft version of the booklet.

Instruments

The Patient Learning Need Scale (PLNS), developed by Bubela et al. (1990), was used for data collection (see Appendix A). Permission from the researchers to use this instrument is included in Appendix B. The tool is a 50 item self-administered questionnaire, and subjects were asked to rank, on a Likert scale, each item according to how important it is to learn before discharge in order to manage their care at home. The scale ranged from 1 "of minimal importance" to 5 "extremely important". Subjects could also select a rating of 0 for "does not apply". Face and content validity were established. The tool was initially evaluated with a sample of 301 adult medical and surgical patients and beginning construct validity was demonstrated when factor analysis suggested a seven-factor structure, including Medication, Activities of Living, Feelings Related to Condition, Community and Follow-up, Treatment and Complications, Enhancing Quality of Life, and Skin Care. These seven factors accounted for 56.1% of the variance in the scale. Reliability of the total scale in the study by Bubela et al.(1990) was alpha 0.95, with a range of 0.79 to 0.88 for six subscales and 0.69 for the seventh subscale. In the present study, an open ended question was added to give the subjects an opportunity to add informational needs that were not addressed by the tool.

Since informational needs were measured by the PLNS total scale and subscales, it was assumed that satisfaction with information could be measured in relation to the same items. Subjects were asked to indicate if the information in each item was given. If the information was given, subjects were asked to rank the item, on a 5-point Likert scale, according to how satisfied they were with the information which was given. The scale ranged from 1 "very dissatisfied" to 5 "very satisfied", and a rating of 0 referred to "was not given".

The subjects were asked to complete additional personal information. Data were also collected from the subject's hospital records by the investigator (see Appendix C). This data included factors which were examined for their relationship to informational needs.

Procedure

After the Human Investigation Committee and the agency granted permission to conduct this study, the researcher met with the nurse manager on each unit where the study was to be conducted in order to explain the study and data collection procedures. A letter describing the study was then given to the nursing staff on each unit (see Appendix D). Nurses on the unit identified patients meeting the criteria for inclusion in the study and asked these patients if they were willing to discuss participation in a study with the researcher (see Appendix E). This contact was made following surgery at a time when the subject was comfortable and had recovered from anesthesia or other medication. When verbal consent was given, the researcher further explained the study. A copy of the questionnaire was available to address any concerns of the subject relating to reading or completing the required forms. The researcher obtained written permission to mail the questionnaire to the subject when he/she was discharged home (see Appendix F). Six patients, who were discharged early, gave verbal consent by telephone to participate in the study. A consent form was forwarded by mail to be signed and returned with the questionnaire. A self-addressed stamped envelope accompanied the questionnaire for return mail directly to the researcher. If there was no response, one follow up contact was made in two weeks and a second questionnaire was included.

Data Analysis

Data analysis were conducted using SPSS 6.1 for Windows. Descriptive statistics were used to describe sample characteristics according to the demographic data collected. The relationship between informational needs of subjects and the variables age, gender, education, procedure, number of discharge medications, and length of stay was examined using appropriate non parametric tests. The responses to the open-ended question were grouped and analyzed.

The PLNS was designed to obtain an individual item score, which was considered to be ordinal, but would be treated as interval data when summed as a total score (Bubela et al., 1990). According to Kerlinger (1973), ordinal measurements may be treated as interval, but the researcher should be alert to the possibility that the intervals may not be equal.

Since the variables in this study do not have a normal distribution, nonparametric tests were used in data analysis. Kerlinger (1973) discussed the use of parametric statistics when the basic assumptions are violated. Kerlinger recommended using parametric tests with an awareness of the assumptions behind these procedures and the potential violation of these assumptions. Incorrect conclusions can be drawn if the assumptions are seriously violated (Kerlinger, 1973).

Missing data is a common problem in survey research (Anderson, Basilevsky, & Hum, 1983). In this study, the percentage of responses missing from the data was 0.5% in part 1 (informational needs) and 0.35% in part 2 (satisfaction). On examination of the data, responses missing from the questionnaire seemed to be random. There were no single items which were omitted by a large number of people, suggesting that items were not omitted because of sensitivity of any topic.

One strategy commonly used to deal with random missing data is estimation (Anderson et al., 1983). The missing observations are estimated and then the analysis is completed. This may be done by comparing individuals or by comparing variables. In a random sample, the individuals represent independent sample points (Anderson et al., 1983). Therefore, in this study, the missing observations for each individual were estimated by the mean of the non-missing observations for that variable (subscale).

Limitations

This study is limited in several respects. There is evidence of the validity and reliability of the Patient Learning Needs Scale (PLNS) to examine the informational needs of medical and surgical subjects (Bubela et al., 1990). This instrument may not be as valid and reliable to explore the informational needs of the surgical subjects in this particular study. Polit and Hungler (1991) recommended computing reliability estimates whenever data are collected. This is especially important for self-report measures, which are susceptible to measurement errors.

The study is also limited by its small sample size. A larger sample may have resulted in more variability of the personal and some of the illness-related factors which were analyzed for their relationship to informational needs. The study is further limited by excluding from the sample patients who could not read or write. Therefore, it does not address the informational needs of those who are illiterate.

A third purpose of this study was to explore patients' perceptions of satisfaction with information which was given. The instrument was adapted from the PLNS and the validity and reliability of this instrument as a measure of satisfaction is unknown. Considering the retrospective nature of this question, the subjects may have had difficulty remembering whether or not the information was given.

Ethical Considerations

The rights of the subjects in this study were protected in several ways. Initially, the Human Investigation Committee approved the proposal. This was followed by a review of the study and approval by the agency. Subject participation in the study was voluntary. The investigator visited the patient during hospitalization, explained the purpose of the study and obtained written consent. In order to maintain confidentiality, the questionnaires were coded by number.

There were minimal risks to the participants involved. There were no direct benefits to the subjects. However, results from the study may be used to guide discharge planning for surgical patients and establish priorities in planning care which is focused on meeting the needs of surgical patients.

CHAPTER IV

Results and Discussion

Analysis was completed for a sample of 45 subjects. A total of 47 questionnaires were returned for a response rate of 77% of mailed questionnaires. Two of the questionnaires returned had a large amount of missing data and were, therefore, not included in the analysis. The findings of this study are presented in four sections and include a discussion of relevant literature. First, the characteristics of the sample are presented. The second section includes a description of information perceived by subjects to be needed in order to manage their care at home, as measured by the PLNS. Reliability estimates for the data collection instrument are also included. The third section includes a description of information which subjects perceived was given to them prior to discharge from hospital and their level of satisfaction with the information. The fourth section includes a presentation of findings of qualitative data recorded by subjects in response to the open ended question.

Characteristics of the Sample

The sample included 20 males and 25 females, with a mean age of 38.8 years. A large number of subjects were young, with over one quarter of the subjects in the sample less than 23 years of age. The mean number of years of schooling was 13.4 years. Over half of the subjects had education beyond high school. The mean length of hospital stay was 4.5 days. A summary of characteristics of the sample is presented in Table 1.

Informational Needs

Subjects perceived a range of information as necessary in order to manage their care at home, with a mean total score of 106.2 (SD = 48.6) from a possible score of 250 on the PLNS. This total score was lower than the total mean score of 164.3 reported by Galloway et al. (1993) for surgical patients with cancer. It was also lower than the total scores reported by Bubela and Galloway (1990) and Bostrom et al. (1994) for medical surgical patients, which were 157 and 152 respectively.

Reliability analysis was completed for the present study and demonstrated an alpha coefficient of 0.89 for the total scale. Alpha coefficients for the subscales were: Medications, 0.94; Feelings Related to Condition, 0.85; Enhancing Quality of Life, 0.85; Community and Follow-up, 0.83; Treatments and Complications, 0.79; Skin Care, 0.76; Activities of Living, 0.75. Reliability coefficients reported by Bubela et al. (1990) were previously included in

Table 1

Characteristics of the Sample (N = 45)

Characteristic	n	%
	Personal Variables	
Gender		
Male	20	44
Female	25	56
Age (years)		
<25	14	31
25-34	6	13
35-44	8	18
45-54	8	18
55-64	6	13
≥65	3	6
Schooling (years)		
5-12	15	33
13-16	25	56
17-23	5	11
Number of Members in Household		
1-2	9	20
3-5	31	69
6-7	5	11

Table 1 continues

Characteristics	n	%
Illness-related Variables		
Procedure		
Appendectomy	16	36
Inguinal hernia	12	27
Cholecystectomy		
Laparoscopic	11	24
Open	6	13
Length of Stay (days)		
1-3	17	38
4-6	21	47
7-15	7	15
Medications on Discharge		
0	21	47
1 or more	24	53

the discussion of this instrument, and alpha coefficients were similar to coefficients in the present study.

Descriptive information is provided for each subscale of the PLNS followed by a summary discussion. A rating of three or more on an item represents the information perceived by subjects to be important.

Activities of Living

This subscale included guidelines for physical activity, rest, bowel elimination and nutrition, and was ranked highest in level of importance with a mean of 26.8 (SD = 8.6), and a range of 8 to 45 from a possible range of 0 to 45.

When comparing the results of this study with the findings by Bubela and Galloway (1990) and Bostrom et al. (1994), the mean scores for this subscale were similar. Bostrom et el. reported an identical mean score of 27 and Bubela and Galloway reported a mean score of 28. However, this subscale ranked fourth of the seven categories in both of these studies, and first in the present study. This difference in ranking may be due to the inclusion of both medical and surgical patients in previous studies and only surgical patients in this study. These findings demonstrate the high need for information about activities of living by surgical patients. Boyle et al. (1992) found that surgical patients were more concerned about activity than medical patients.

The surgical patients in the study by Galloway et al. (1993) ranked the information in this subscale as fifth in importance. The lower ranking in this study may be due to the differences in the surgical procedures experienced by the subjects in the two studies. The subjects in the study by Galloway et al. (1993) were recovering from surgery for lung cancer, and as expected, other information related to management of complications and quality of life were highly important. In contrast, the subjects in the present study had experienced short term surgical procedures and were likely concerned about returning to their usual level of activity and thus, guidelines for physical activity were important.

Descriptive data related to individual items in this subscale are presented in Table 2. Guidelines for physical activity were most important for the subjects in this study. Knowing restrictions for physical activities was identified as the most important information, with this item having the highest mean score of the 50 items in the scale. This is consistent with the findings in other studies that included surgical patients in their samples. Leyder and Pieper (1986) found that patients, who were recovering from cholecystectomy or herniorrhaphy surgery, ranked information about activity as important both prior to discharge and following discharge. In the study by Galloway et al. (1993), patients who were recovering following open thoracotomy surgery considered recommendations for physical exercise as important prior to discharge and considered information about restrictions as important following discharge.

Table 2

Activities of Living: Mean Scores for Informational Needs (N = 45)

Item	*M* (±SD)
What physical activities I cannot do such as lifting	4.5 (±0.9)
When I can start to do household activities safely	3.6 (±1.5)
What to do if I have trouble with my bowels	3.3 (±1.6)
What physical exercise I should be getting	3.1 (±1.8)
How much rest I should be getting	3.0 (±1.6)
What to do if I cannot sleep properly	2.9 (±1.7)
How to change my activities to save energy	2.7 (±1.5)
Which foods I can and cannot eat	2.2 (±2.1)
How to prepare the foods I am allowed to eat	1.5 (±2.0)
Total subscale	26.8 (±8.6)

Information concerning which foods are permitted and how food should be prepared was also included in this subscale, and was considered to be of lesser importance than other information represented in this subscale. In contrast, Leyder and Pieper (1986) found that surgical patients were concerned about dietary guidelines and restrictions both prior to and following discharge. The difference in the findings of the two studies may be due to the number of laparoscopic procedures now being done, where the patient can sometimes resume a normal diet on the operative day (Eccleston, 1992). A large number of subjects in this study (24% of the sample) had a laparoscopic cholecystectomy performed.

Treatment and Complications

The subjects in this study ranked information concerning treatment and complications as the second area of importance with a mean score of 24.8 (*SD* = 9.4), and a range of 3 to 45 from a possible range of 0 to 45.

In comparing these findings with the findings from other studies of medical surgical patients, the information in this subscale was ranked first in importance by the patients studied by Bubela and Galloway (1990) and, like in the present study, second by the subjects in the study by Bostrom et al. (1994). Surgical patients, studied by

Galloway et al. (1993), also ranked this subscale first of the seven subscales. However, the mean subscale scores were higher in both of the studies of medical surgical patients than in the present study. Bubela and Galloway reported a mean score of 33 and Bostrom et al. reported a mean score of 34. The medical surgical patients in both of these studies may have had more treatments following discharge and would have needed more information in this area. These findings suggest that information about treatments and complications is a priority for both medical and surgical patients.

The mean scores for individual items in this category are presented in Table 3. Subjects rated information about complications as more important to learn than information about treatments. This may be due to the fact that the subjects in this study had few treatments following discharge.

Information about complications has been important to patients in various studies of surgical patients (Galloway et al., 1993; Leyder & Pieper, 1986). In the present study, subjects ranked four items concerning complications as within the ten most important items in the total scale--recognition and prevention of complications, knowing which complication should be reported and what complications might occur. In the study by Galloway et al. (1993), surgical patients who were recovering from open thoracotomy surgery

Table 3

Treatment and Complications: Mean Scores for Informational Needs (N = 45)

Item	M (±SD)
How to recognize a complication	4.1 (±1.3)
Which complication I should seek immediate help for	3.8 (±1.6)
What complications might occur from my illness	3.5 (±1.8)
How to prevent a complication from occurring	3.4 (±1.8)
Who I will see at my follow-up appointment	3.0 (±1.5)
What to do if I have trouble urinating	3.0 (±2.1)
What the possible side effects of my treatments are	1.8 (±1.9)
Who my family can call about questions of my illness	1.3 (±1.7)
What the purposes of my treatments are	1.0 (±1.7)
Total subscale	24.8 (±9.4)

rated these same four items as within the ten most important items in the scale both prior to discharge and following discharge. These findings support the need for information about complications by surgical patients experiencing various surgical procedures.

Skin Care

This subscale included various aspects of skin care and was ranked third in importance by the subjects in this study. The mean score for the information in this subscale was 11.8 (SD = 5.9), with scores ranging from 3 to 25 from a possible range of 0 to 25.

The mean score for this subscale was identical to the means in the studies by Bubela and Galloway (1990) and Bostrom et al. 1994. However, both in the current study and in the study of surgical patients by Galloway et al. (1993), this subscale was ranked third in importance, and it was ranked sixth in both of the studies of medical surgical patients (Bubela & Galloway, 1990; Bostrom et al., 1994). This finding seems to reflect a greater need for information about skin care for surgical patients.

The mean scores for individual items is presented in Table 4. Information related to caring for the incision was ranked highest in this subscale and second highest in the total scale. This item was also found to be important for

Table 4

Skin Care: Mean Scores for Informational Needs (N = 45)

Item	M (±SD)
How to care for my wound or incision	4.4 (±1.1)
When I can take a bath or shower	3.1 (±1.7)
How to prevent my skin from getting sore	1.9 (±1.9)
How to prevent my skin from getting red	1.7 (±1.9)
How to care for my feet properly	0.7 (±1.5)
Total subscale	11.8 (±5.9)

surgical patients who had open thoracotomy surgery (Galloway et al., 1993). This finding reflects the need for information about wound care by surgical patients. In the present study, knowing when bathing or showering was permitted was also considered to be important to subjects.

Enhancing Quality of Life

This subscale included information about pain management, other symptoms which might be experienced, stress management, and effect of the illness on their lives at present or in the future. This subscale was ranked fourth in importance by subjects and the mean score was 16.8 (SD = 10.1) with a range of scores from 0 to 40 in a possible range of 0 to 40.

This subscale ranked third in studies by Bubela and Galloway (1990) and Bostrom et al. (1994), with mean scores of 26 and 27 respectively, and was ranked second in the study by Galloway et al., 1993. These findings suggest that quality of life issues are important for medical surgical patients and highly important for patients with cancer. This information is of lesser importance for short term surgical patients.

The mean scores for individual items are presented in Table 5. Pain management was considered the most important information in this subscale and was ranked sixth in importance in relation to the total scale. This finding is consistent with the concerns reported by surgical patients in the study by Leyder and Pieper (1986). Boyle et al. (1992) found information about pain control was more important for surgical patients than for medical patients. In a study by Galloway et al. (1993), patients who had surgery for primary lung cancer ranked knowing how their illness would affect their lives now or in the future within the ten most important items in the total scale of 50 items.

Table 5

Quality of Life: Mean Scores for Informational Needs (N = 45)

Item	M (±SD)
How to manage my pain	3.5 (±1.6)
How to manage the symptoms I might experience	2.6 (±1.8)
What symptoms I may have related to my illness	2.6 (±2.0)
How this illness will affect my future	2.2 (±2.0)
How I can avoid stress	1.8 (±1.9)
How to manage stress	1.8 (±1.9)
How this illness will affect my life	1.2 (±1.8)
Which vitamins and supplements I should take	1.1 (±1.6)
Total Subscale	16.8 (±10.1)

Information related to stress management and effect of illness on their lives are likely to be of lesser importance for short term surgical patients than for longer term surgical patients who are dealing with cancer.

Medications

This subscale included various aspects related to self-administration of medications and was not of great importance for the subjects in this study. The mean score for this subscale was 12.4 (SD = 12.3) with a range of 0 to 35 from a possible range of 0 to 35.

This subscale was ranked fifth in importance by the subjects in the present study. Similarly, patients who were post-operative following open thoracotomy ranked information about medications fourth out of the seven categories (Galloway et al., 1993). In contrast, the medical surgical patients in the studies by Bubela and Galloway (1990) and Bostrom et al. (1994) ranked the information in the Medication subscale second and first respectively. The mean scores in studies of medical surgical patients by Bubela & Galloway (1990) and Bostrom et al., (1994) were 25 and 27 respectively. Since almost half of the subjects in the present study were discharged without a prescription for medications, the lower mean score in this study is not surprising. Bubela and Galloway found medical patients were ordered significantly more medications on discharge than surgical patients, and patients who were prescribed more medications needed more information in this area.

The mean scores for individual items are presented in Table 6.

Table 6

Medications: Mean Scores for Informational Needs (N = 45)

Item	M (±SD)
What to do if I have a reaction to a medication	2.6 (±2.3)
How each medication works	1.9 (±2.1)
When to stop taking each medication	1.7 (±2.1)
The possible reactions to each medication	1.7 (±2.1)
How to take each medication	1.6 (±2.0)
When to take each medication	1.5 (±2.0)
Why I need to take each medication	1.4 (±1.8)
Total subscale	12.4 (±12.3)

Information about medications has been found to be important for subjects whose medical treatment includes a medication regimen--young adults with asthma (Richardson, 1991), persons with epilepsy (DiIorio et al., 1993), patients with cardiac conditions (Chan, 1990; Gerard & Peterson, 1984; Karlik & Yarcheski, 1987), and patients with cancer (Lauer et al., 1982).

Feelings Related to Condition

This subscale included psychosocial aspects of coping with illness and had a mean score of 6.4 (SD = 6.5) and a range of 0 to 25 from a possible range of 0 to 25. This subscale was ranked sixth in importance by the subjects in the present study and also by the surgical patients in the study by Galloway et al. (1993). Similarly, medical surgical patients in studies by Bubela and Galloway (1990) and Bostrom et al. (1994) ranked the information in this subscale fifth and seventh respectively. However, Bubela and Galloway (1990) and Bostrom et al. (1994) reported higher mean scores of 13 and 11 respectively. Again the different samples included in these two studies may have contributed to the differences in these mean scores. Patients recovering from a short term surgical procedure would likely have less concern about coping methods than medical surgical patients or patients who are living with a chronic illness. The mean scores for individual items in this subscale are presented in Table 7.

Table 7

Feelings Related to Condition: Mean Scores for Informational Needs (N = 45)

Item	M (±SD)
What caused my illness	2.3 (±2.0)
How to talk to my family/friends about my illness	1.4 (±1.5)
How to recognize my feelings toward my illness	1.0 (±1.6)
Where I can get help in handling my feelings	1.0 (±1.5)
Who to talk to about my concerns about death	0.8 (±1.6)
Total subscale	6.4 (±6.5)

Community and Follow-up

The information represented by this subscale referred to community resources and was not perceived as important by the subjects in this study. The mean score for this category was 7.2 (SD = 7.5), with a range of 0 to 35 from a possible range of 0 to 35.

This category was ranked seventh out of seven categories in this study and also in studies by Bubela and Galloway (1990) and Galloway et al. (1993), and was ranked fifth in the study by Bostrom et al. (1994). Bubela and Galloway (1990) and Bostrom et al. (1994) reported means for this subscale as 16 and 17, respectively. The difference in the samples may account for the higher mean scores in these other studies. The medical surgical patients would likely have included patients with chronic conditions and may have needed more follow-up after discharge, and therefore, needed more information about community resources than the short term surgical patients in this study needed.

The mean scores for individual items are presented in Table 8.

Relationship of Personal Factors to Informational Needs

Based on non parametric Kendall's Correlation Coefficient, age was not significantly related to the total PLNS score ($\tau = -.09$, $p = .81$) or to any of the subscale scores. Although age has not been related to total informational needs in previous studies, Leyder and Pieper (1986) found older patients identified fewer concerns than younger patients. Bubela and Galloway (1990) found a significant relationship between age and the subscale Community and Follow-up. The subjects in both of these

Table 8

Community and Follow-up: Mean Scores for Informational Needs (N = 45)

Item	M (±SD)
How to get through "red tape" in the health care system	1.6 (±1.9)
What a Home Care program provides	1.4 (±1.7)
Where I can get help for family to deal with illness	1.2 (±1.8)
How to get through "red tape" to get services	0.9 (±1.5)
Where I can get my medications	0.8 (±1.5)
How to contact community groups for my illness	0.7 (±1.2)
How to arrange transportation to follow-up appointments	0.5 (±1.0)
Total subscale	7.2 (±7.5)

studies were older--a mean age of 53.8 in the study by Bubela and Galloway (1990), and mean age of 51.8 in the study by Leyder and Pieper (1986). In this study, almost half of the subjects were between the ages of 18 and 34. With a fewer number of subjects in the older age group, the results may not be comparable to other studies. A larger sample size would possibly result in increased variability of ages in the sample.

Mean scores of males and females were compared using the non parametric Mann-Whitney U test, and scores were not significantly different. For the total scale, mean ranks were 24.15 for males and 22.08 for females. These results were consistent with the results in studies by Galloway et al. (1993), Lauer et al. (1986) and Leyder and Pieper (1986). In contrast, Bubela and Galloway (1990) found females had a significantly greater need for information than males ($t = 2.09$, $p < 0.05$). The difference in findings may be related to the differences in samples. Bubela and Galloway included medical surgical patients in their study, while other studies included patients with cancer (Lauer et al.) and, like in the present study, surgical patients (Galloway et al.; Leyder & Pieper).

Using Kendall's Correlation Coefficient, the relationship between education and informational needs was examined and there was no significant relationship between the variables ($\tau = -.06$, $p = .55$). A significant negative relationship was found between the number of years of schooling and the subscale Community and Follow-up but the relationship was not a strong one ($\tau = -0.22$, $p < .05$). This relationship has not been demonstrated in other studies. In studies which have examined the relationship between educational level and informational needs, findings have been inconsistent. While Galloway et al. (1993) did not find a difference in overall mean scores on the basis of education groups, other studies demonstrated contrasting results. Leyder and Pieper (1986) found people with more education had greater discharge concerns, while Bubela and Galloway (1990) found that people with less education (high school) reported significantly greater learning needs than subjects who had gone to community college or university. Since more than half of the subjects in the present study (67%) had education beyond high school, the results may not be comparable to other studies which included subjects with a wider range of education.

Relationship of Illness-related Factors to Informational Needs

Based on Kendall's Correlation Coefficient, length of hospital stay was not found to be related to informational needs ($\tau = .02$, $p = .84$). These findings were consistent with the results of the study of surgical patients by Galloway et al. (1993). While Bubela and Galloway (1990) found patients with a longer hospital stay needed more information in the areas of medications, activities of living, quality of life, and community and follow-up, both medical and surgical patients were included in the study.

Medical patients had a longer hospital stay than surgical patients, and also needed significantly more information than surgical patients. The findings reported by Bubela and Galloway (1990) may reflect the increased need for information by medical patients rather than the needs of patients with longer length of stay. The mean length of hospital stay of 4.5 days in the present study was considerably shorter than in the study by Galloway et al. (1993) and by Bubela and Galloway (1990), in which the means for length of hospitalization were 21 days and 14 days, respectively.

There were no differences in the informational needs of subjects who experienced different surgical procedures, based on the Kruskal-Wallis test ($\underline{H} = 1.6$, $p = .66$). While the relationship between type of illness and informational needs has been explored in previous studies, the information needed by patients who have various surgical procedures has not been differentiated. Since all of the subjects in this study experienced short term surgical procedures, perhaps it is not surprising that their needs for information are similar.

The informational needs of patients who were discharged on medications were compared with those who were discharged without medications using the Mann-Whitney U test. Subjects who were discharged with a prescription for one or more medications rated the importance of information in the subscale Medications (mean rank = 28.44) significantly higher than those who were discharged without a prescription for medications (mean rank = 16.79), p = .003. Subjects who were discharged on medications also rated the importance of information in a second subscale, Community and Follow-up, as significantly higher (mean rank = 29.0) than subjects who were discharged without medications (mean rank = 16.14), p = .001. Bubela and Galloway (1990) found a significant positive relationship between informational needs and the number of medications on discharge in both of these subscales as well as the total scale and two additional subscales--Feelings Related to Condition and Skin Care. Both medical and surgical patients were included in the study by Bubela and Galloway (1990) and medical patients were prescribed significantly more medications than surgical patients. While it is expected that patients who are discharged on medications would need information related to these medications, the relationship between prescribed medications and the need for information about community resources is difficult to interpret.

Discussion of Informational Needs

In relation to total informational needs, the subjects in this study needed less information in order to manage their own care following discharge from hospital than medical surgical patients needed (Bubela & Galloway, 1990; Bostrom et al., 1994), and also less than the surgical patients recovering from thoracotomy needed (Galloway et al., 1993). While the total informational needs were less for the subjects in this study than for the subjects in other studies, the short term surgical patients in this study had a high need for information in specific areas and the priorities for information were different from the priorities identified by the samples in other studies, especially in three areas.

First, the information of highest priority for the short term surgical patients was in relation to activities of living, notably physical activity. This information was ranked lower in priority by medical surgical patients and also by patients recovering from surgery for lung cancer. The surgical patients in the present study would likely be increasing their level of activity following discharge and be returning to their pre-surgical level of functioning. They are likely experiencing fatigue and need to know how to balance rest and activity in preparation for return to work or to continue their studies.

Second, information about skin care was of different priority for medical surgical and for surgical patients. In both the present study and in the study of surgical patients by Galloway et al. (1993), information about skin care was ranked third in importance of the seven subscales, with information about caring for the incision being the most important item in this area. This finding emphasizes the importance of information on incision care for all surgical patients. The medical surgical patients ranked this subscale to be of lesser importance than the information represented in other subscales.

Third, medical surgical patients in the study by Bubela and Galloway (1990) and Bostrom et al. (1994) ranked information about medications highly. In comparison, this information was of lesser importance for the subjects in this study and for the surgical patients in the study by Galloway et al. (1993). These findings reflect the differences in the number of prescribed medications for medical patients compared with surgical patients and the differences in priorities for information about medications.

Information about treatments and complications was ranked highly by the subjects in this study and in studies of medical surgical patients (Bubela & Galloway. 1990; Bostrom et al. 1994) and in a study of longer term surgical patients (Galloway et al. 1993). These findings reflect the need for information about treatments and complications by all patients and the need for health care professionals to consider this topic an area of priority in preparing patients to manage their own care and assume responsibility for monitoring and reporting any problems which occur.

In the study by Galloway et al. (1993), information about quality of life, specifically the impact of illness, was ranked higher in importance by the patients recovering from lung cancer than by the subjects in the present study. This is understandable, since the short term surgical patients in this study would likely expect minimal long term changes in their lives due to their surgery. Bubela and Galloway (1990) found patients with cancer needed more information in preparation for discharge than patients with benign conditions.

Subjects in the present study had a much shorter length of hospital stay than subjects in the studies by Galloway et al. (1993), Bubela and Galloway (1990) and Bostrom et al. (1994). These findings have implications for nurses who teach patients. There is less time to prepare patients for discharge home and less time for patients to learn to manage their own care. A knowledge of the priorities for information needed by short term surgical patients gives direction for teaching content to be included when preparing these patients for discharge.

The relationship between personal and illness-related factors and informational needs has been explored in previous research and the findings have been inconsistent.

satisfaction with information was completed for subjects who reported that information was given and rated their level of satisfaction with information on the Likert scale from one to five. A rating of three or more represents satisfaction by the subjects with the information received.

Sixteen of the items from the PLNS were included in the modified instrument used by Bostrom et al. (1994) to explore patient satisfaction with information. However, the results may not be comparable with the results of this study for two reasons. First, information is not available about how the items were scored in the study by Bostrom et al. (1994). Second, data collection procedures were different in the two studies. Patients may respond with a higher level of satisfaction when asked directly (by telephone) by a member of the hospital staff, as in the study by Bostrom et al. (1994), than when responding to a self-administered questionnaire, as in the present study. There was limited variability in mean scores of items reported by Bostrom et al., with mean scores of above four on 13 of the 16 items.

Activities of Living

This subscale included items about activity, rest, sleep, nutrition, and bowel elimination. A summary of information which was reported as not given and mean scores for satisfaction with information are presented in Table 9.

Considering the above discussion, patients with different diagnoses, such as patients with cancer, may have increased informational needs. Other factors may impact on the informational needs of patients. In relation to short term surgical patients, previous surgical experience may influence the amount of information needed by patients. It seems likely that patients who are experiencing surgery for the first time would need more information than patients who have experienced surgery previously. Patients who have resource people at home to help them manage their care may also need less information provided in the hospital setting prior to discharge.

Satisfaction with Information

Descriptive analysis of satisfaction with information related to each subscale of the PLNS is provided, followed by a discussion summary. For this section of the questionnaire, subjects were asked to indicate whether or not the information in each item was given. For information given, they were asked to indicate on a Likert scale how satisfied they were with the information. Items which were reported by subjects as "not applicable" on Part I of the questionnaire (PLNS) were omitted from the analysis and, therefore, the number of subjects for each item on the satisfaction scale varies accordingly. The analysis for

Table 9

Activities of Living: Information Reported as Not Given and Mean Scores for Satisfaction with Information

Item	Was Not Given n (%)	Satisfaction M
What physical activities I cannot do (n = 45)	7(15.6)	4.1
How much rest I should be getting (n = 39)	14(39.9)	3.6
When I can start to do household activities safely (n = 42)	9(21.4)	3.5
What physical exercise I should be getting (n = 38)	17(44.4)	3.5
What to do if I cannot sleep properly (n = 39)	27(69.2)	3.3
Which foods I can and cannot eat (n = 27)	16(59.2)	3.1
What to do if I have trouble with my bowels (n = 41)	22(53.6)	3.1
How to change my activities to save energy (n = 40)	21(52.5)	2.8
How to prepare the foods I am allowed to eat (n = 21)	13(61.9)	2.8

In reference to the previous discussion of informational needs, the items which were rated as important were also rated as satisfactory. These items related to information about restrictions for physical activity, resumption of household activities, recommendations for physical exercise and rest, and guidelines for problems with bowel elimination. Two items were rated as unsatisfactory--guidelines for pacing activities and food preparation.

Considering the subjects in this study ranked the information in this subscale to be of most importance, it is noteworthy that a large percentage of subjects reported that they did not receive information on most of these items. The information reported as given by most subjects related to physical activity restrictions and resumption of household activities. The patients in this study may have been more motivated and ready to learn the information in these items and health care providers may consider this information to be priority when teaching patients. A large percentage of subjects (40% or more) perceived that information about recommendations for physical exercise and rest, and guidelines for problems with bowel elimination was not given. The findings in the present study are comparable to the findings by Charles et al. (1994) who reported that more than one third of the sample of 4599 medical surgical patients perceived that they were not informed about when normal activities could be resumed, and more than one quarter of the subjects reported that they were not given recommendations for activities at home.

Considering the high need for information concerning activities of living reported by the subjects in the present study, these findings have implications for nurses who prepare patients for discharge home. Recommendations for exercise, rest and pacing activities may need to be individualized according to each patient's lifestyle and responsibilities. According to Baker (1986) surgical patients had difficulty interpreting instructions from health professionals in order to guide activity. After discharge, patients may experience problems associated with decreased activity, such as problems with bowel elimination or difficulty with sleeping. Patients may perceive this information as not given if the information does not meet their needs.

More than half of the subjects reported that they did not receive information related to nutrition. This information may be seen as less relevant by health care professionals for the short term surgical patients in this study since they are usually expected to resume their regular diet soon after recovery from surgery.

Treatment and Complications

Information about treatments and complications was rated as satisfactory by the subjects in this study, with the highest level of satisfaction relating to purposes of treatments. The number of subjects who reported that information was not given and the mean scores for satisfaction with information are presented in Table 10.

The information in this subscale which was identified as important by the subjects in this study related to complications, urinary elimination, and follow-up appointment. These items were also rated as satisfactory by the subjects in this study.

Six of the items in this subscale were assessed for patient satisfaction in the study by Bostrom et al. (1994). These items referred to information relating to possible complications, recognition of and prevention of complications, knowing which complications they would need immediate help for, and purposes and side effects of treatments. A high level of satisfaction with information (mean > 4.0) was reported for each item. In comparison, the scores in the present study, while considered to be satisfactory, were lower, with only one of these items--knowing the purpose of treatments--rated above four on the scale. The difference in mean scores may be due to the

Table 10

Treatment and Complications: Information Reported as Not Given and Mean Scores for Satisfaction with Information

Item	Was Not Given n(%)	Satisfaction M
What the purposes of my treatments are (n = 16)	4(0.25)	4.6
Who I will see at my follow-up appointment (n = 39)	1(0.02)	4.3
Which complication I should seek immediate help for (n = 41)	18(43.9)	3.6
How to prevent a complication from occurring (n = 38)	11(28.9)	3.6
What the possible side effects of my treatments are (n = 24)	10(41.7)	3.6
How to recognize a complication (n = 44)	19(43.2)	3.5
Who my family can call about questions of my illness (n = 20)	14(70.0)	3.5
What to do if I have trouble urinating (n = 33)	15(45.4)	3.4
What complications might occur from my illness (n = 39)	17(43.6)	3.2

different samples in the studies. Medical surgical subjects in the study by Bostrom et al. (1994) had longer hospital stays, and therefore may have had more time to ask questions and resolve areas of concern. The surgical subjects in the present study had an early discharge and may not have been ready to learn during the early post-operative period due to pain and fatigue. The time available to teach this information may also have been limited.

Almost one half of the subjects in this study reported that they were not informed about what complications might occur, which complications should be reported, how to recognize complications and how to manage potential problems with urinary elimination. More than one quarter of the subjects reported that information about prevention of complications was not given. Similar findings were reported by Charles et al. (1994) who found that more than one third of a sample of 4599 subjects perceived that they were not given information about potential problems following discharge.

Patients may have an increased need for information about complications following discharge, and may be more motivated to learn this information when they are at home and assuming responsibility for their own care than when they are in hospital with the nurse assuming most of this responsibility. Research findings indicate that patients are more concerned about complications following discharge than prior to discharge (Leyder and Pieper, 1986; Bostrom et al., 1994). During hospitalization, patients may not be ready to learn this information. These findings indicate that patients may be at risk for potential problems following discharge.

The information reported as given by almost all subjects concerned the follow-up appointment. This can be attributed to the practice of providing all patients on these units with appointment information, in writing, prior to discharge.

Enhancing Quality of Life

This subscale included information about management of pain and symptoms and coping with illness. A summary of information reported as given and mean scores for satisfaction with information are presented in Table 11.

The information in this subscale which was identified as important by subjects related to pain management. Information about management of pain and symptoms was rated as satisfactory overall.

Three of the items in this subscale were included in the scale used by Bostrom et al. (1994) to assess patient satisfaction with information: pain management; symptoms related to illness; and effect of illness on future.

Table 11

Quality of Life: Information Reported as Not Given and Mean Scores for Satisfaction with Information

Item	Was Not Given n(%)	Satisfaction M
How to manage the symptoms I might experience (n = 34)	17(50.0)	3.9
How to manage my pain (n = 43)	13(30.2)	3.7
What symptoms I may have related to my illness (n = 33)	16(48.5)	3.5
How this illness will affect my future (n = 29)	15(51.7)	2.9
How to manage stress (n = 29)	20(70.0)	2.8
How I can avoid stress (n = 25)	17(68.0)	2.8
How this illness will affect my life (n = 18)	9(50.0)	2.6
Which vitamins and supplements I should take (n = 19)	11(57.9)	2.6

Means of greater than four were recorded for each item except one--how the illness would affect their future. The lower mean scores in the present study may reflect the different samples in the studies and may also reflect an increased need for information about pain control for surgical patients at a time when activity level is increased and patients are attempting to return to their usual routines.

Almost one third of the subjects reported that they were not given information about pain control and approximately one half of the subjects perceived that they were not given information about symptoms. Following discharge, patients may be increasing their level of activity and may experience more pain than expected. Leyder and Pieper (1986) found that surgical patients were more concerned about incisional discomfort after discharge than prior to discharge. They may need information about appropriate timing of analgesics in relation to activity and about other comfort measures. They may also experience other symptoms such as fatigue and need information in managing these feelings.

Items related to stress management and effect of illness were rated as less than satisfactory and perceived as not given by over half of the subjects. This information may be perceived as not relevant by health care professionals for short term surgical patients who would not be expected to require long term management of their illness.

Medications

The information in this subscale related to self administration of medications. A summary of information reported as not given and the mean scores for satisfaction with information are reported in Table 12.

The information in this subscale was considered relevant to a limited number of subjects, since almost half of the subjects were discharged without a prescription for medications. The highest mean scores for satisfaction with information related to reasons for and timing for taking medications. All items were rated above the satisfactory level of three. These findings are comparable to the findings by Bostrom et al. (1994) who reported that all items had a mean score of above four, except for two areas--possible reactions to medications and actions to take if a reaction occurred. Possible reactions to medications may be of more concern to patients when they assume responsibility for managing their own care, since reactions to medications would be monitored by the nurse in the hospital setting. As more medications would likely have been prescribed for the medical surgical patients in the study by Bostrom et al. (1994) than for the surgical subjects in the present study, there may have been more teaching related to medications, accounting for the higher mean scores reported by Bostrom et al. (1994).

Table 12

Medications: Information Reported as Not Given and Mean Scores for Satisfaction with Information

Item	Was Not Given n(%)	Satisfaction M
Why I need to take each medication (n = 19)	7(36.8)	4.2
When to take each medication (n = 17)	5(29.4)	4.0
What to do if I have a reaction to a medication (n = 28)	19(67.8)	3.9
How to take each medication (n = 19)	7(36.8)	3.9
When to stop taking each medication (n = 20)	8(40.0)	3.8
The possible reactions to each medication (n = 21)	11(52.4)	3.5
How each medication works(n = 25)	11(44.0)	3.1

Information about reactions to medications was reported as not given by over half of the subjects. In the study by Bostrom et al. (1994), this information was rated as less satisfactory than other information about medications was rated. Information concerning reactions to medications may not have met the needs of subjects following discharge and this information may have been perceived as not given.

Skin Care

The items in this subscale included information concerning wound care, recommendations for bathing, and other aspects of skin care. A summary of information reported as not given and the mean scores for satisfaction with information are presented in Table 13.

Two items in this subscale were rated as important by the subjects in this study. These items referred to information about caring for the incision and guidelines for bathing or showering. Subjects reported a high level of satisfaction with this information. Other aspects of skin care such as foot care and information related to prevention of problems with skin were rated by subjects as less than satisfactory, and may be considered by health care professionals as less relevant for short term surgical patients who are ambulatory and resuming normal activity.

One quarter of subjects reported that they were not informed about when they could take a bath or shower, and five subjects (11.1% of the sample) reported that they were not informed about wound care. While it is expected that this information was given to all of the subjects in

Table 13

Skin Care: Information Reported as Not Given and Mean Scores for Satisfaction with Information

Item	Was Not Given n(%)	Satisfaction M
When I can take a bath or shower (n = 39)	10(25.6)	4.2
How to care for my wound or incision (n = 45)	5(11.1)	4.0
How to care for my feet properly (n = 11)	8(72.7)	3.0
How to prevent my skin from getting sore (n = 26)	13(50.0)	2.8
How to prevent my skin from getting red (n = 24)	13(54.2)	2.7

preparation for discharge, subjects may have needed more information about wound care and personal care as they assumed these responsibilities.

Community and Follow-up

Items in this subscale referred to information about community resources and follow-up care. A summary of information reported as not given and mean scores for satisfaction with information are presented in Table 14.

Information about community resources was considered applicable to a small number of subjects. While most of the items about follow-up care were rated as satisfactory, over half of the subjects perceived that the information was not given. Information about community supports and services and coping methods for family may not be considered relevant by health care professionals for many of the short term surgical patients in this study.

Table 14

Community and Follow-up: Information Reported as Not Given and Mean Scores for Satisfaction with Information

Item	Was Not Given n(%)	Satisfaction M
Where I can get my medications (n = 13)	7(53.8)	4.7
How to contact community groups (n = 15)	11(73.3)	3.5
How to get through "red tape" to get services (n = 15)	9(60.0)	3.3
What a Home Care program provides (n = 25)	15(60.0)	3.2
Where I can get help for family to deal with illness (n = 20)	15(75.0)	2.6
How to arrange transportation to follow-up appointments (n = 14)	9(64.3)	2.4
How to get through "red tape" in the health care system (n = 24)	18(75.0)	2.3

Feelings Related to Condition

The items in this subscale related to coping with illness. A summary of information reported as not given and the mean scores for satisfaction with information given are presented in Table 15.

Most of the subjects did not consider the information in this subscale as relevant to them. The information which was considered applicable to most of the subjects was knowing the cause of illness, and a satisfactory mean score was reported for this item. Other items are related to coping with feelings related to illness and were rated as unsatisfactory by the subjects in this study. Health professionals may not have considered such information as relevant for short term surgical patients since they are unlikely to experience long term problems following recovery from the surgical procedure.

Table 15

Feelings Related to Condition: Information Reported as Not Given and Mean Scores for Satisfaction with Information

Item	Was Not Given n(%)	Satisfaction M
What caused my illness (n = 33)	12(36.4)	3.7
Who to talk to about my concerns about death (n = 10)	6(60.0)	3.0
Where I can get help in handling my feelings (n = 19)	14(73.7)	2.8
How to talk to my family/friends about my illness (n = 26)	22(84.6)	2.8
How to recognize my feelings toward my illness (n = 17)	13(76.5)	2.5

Discussion of Satisfaction with Information

This study extended the study of informational needs of surgical patients to include their perceptions of information given. This information gives feedback to health care professionals as to whether the priority informational needs of patients were met. The findings can be used by health professionals to consider specific aspects of teaching which could be targeted when preparing short term surgical patients for discharge from hospital.

In this study, satisfaction with information was measured for subjects who reported that the information was given. This information may also be considered as applicable to other subjects who reported that it was not given. A range of satisfaction scores were reported, indicating that subjects were more satisfied with information in some areas than in others. While their expectations are likely to vary, the findings of this study give information about a standard of satisfaction.

Considering the information which was rated as important by subjects in order to manage their care at home, items which were rated as important by subjects were also rated as satisfactory. These items referred to guidelines for activity, recommendations for rest and sleep, complications, elimination, management of pain and symptoms, incision care and guidelines for bathing. This may mean that patients were attentive to the information that they perceived to be important or that they actively sought this information.

Except for one item, information which was rated as unsatisfactory related to long term management of illness, such as quality of life issues and various coping methods.

This information was considered applicable to a limited number of subjects and may be seen as less relevant by health professionals for short term surgical patients and may not be addressed for all patients unless there is an identified need. One item, related to pacing activities, was considered applicable to most of the subjects (n = 40) and was rated as unsatisfactory. This information may be more difficult to teach than other information about activity since it must be individualized according to the patients desired level of activity.

The information reported as given by most subjects referred to the follow-up appointment. Since this was the only information given to all subjects in writing, it supports the value of the use of written information for patients on discharge.

Information which was considered important, but reported as not given by at least 40% of subjects, referred to recommendations for rest and physical exercise, complications including knowing what complications to observe for, recognition of and reporting complications, and guidelines for problems with elimination. Approximately 30% of subjects reported that information about prevention of complications, pain management, and guidelines for bathing was not given. Of particular importance to nurses is the finding that many subjects perceive information about complications as not given. Patients may be at risk for potential problems if they are not informed about prevention and management of complications.

Further concerns of patients regarding management of pain and symptoms, problems with elimination, and recommendations for rest and exercise need to be addressed. Patients may need information about optimal times for taking analgesics in relation to activity and possibly other comfort measures such as supporting the incision. Patients who experience symptoms, such as fatigue may need to know how to pace activities and how to balance rest and activity while returning to their normal routines.

Information perceived by patients as not given has implications for nurses and gives direction for specific areas which should be targeted when teaching patients. While the information may have been given, patients may not have been receptive to learning at that time or the information may not have met their needs. Teaching should reflect the priority content needed by patients in order to manage their own care and nurses should incorporate teaching strategies to address their learning needs, with consideration of the limited time available to teach patients.

Qualitative Data

An open ended question was added to the PLNS for subjects to add information which they perceived as important to learn and that was not included in the questionnaire. A summary is presented in this section.

Informational Needs

One area which was not included in the tool was knowing when to return to work. This comment was made by two subjects, with one of these subjects needing to know time periods for various degrees of work and activities such as lifting, walking, and sitting. This comment reflects the need for patients to be given specific guidelines for building endurance and pacing activities, as recommended by Baker (1989).

Information Given

Two subjects stated that they would like to have talked with the surgeon following the surgery in order to receive an explanation about the procedure which was done.

One subject commented on the discharge process, stating a number of staff members were involved in the process and that it was rushed. This subject recommended that a check list be used to cover applicable questions, similar to the procedure carried out on admission.

Several comments referred to the teaching-learning process. One subject commented that patients should not have to ask for information, and that it was important for the health professional to tell the patient everything that's important to know. A second subject commented on the difficulty for patients to communicate and absorb facts and the importance of ensuring that information is given clearly.

Several comments were made about the provider of information. One subject stated she had an early discharge and that the surgeon gave all of the information that was needed. A second subject had family and friends who gave information and helped relieve anxiety. A family member, who is a nurse, helped care for her incision following discharge.

CHAPTER V

Summary and Implications of Findings

The summary of the findings of the study and the implications of the findings for nursing practice, education, and research are presented in this chapter.

Summary of Findings

The findings of this study suggest that information related to activities of living is of most importance for short term surgical patients, with guidelines for physical activity, especially activity restrictions, being a priority. Other areas of importance to this group included information about wound care, complications, pain management, elimination, and guidelines for bathing.

In relation to satisfaction with information given, items considered to be of most importance to surgical patients were rated as satisfactory. Information considered to be important, but perceived as not given by at least 40% of subjects, included information about possible difficulty with bowels and urination, recommendations for physical activity and rest, and information about complications, including possible complications, recognition of and reporting complications. Approximately 30% of the subjects perceived that information was not given about prevention of complications, pain management, and guidelines for bathing.

The personal factors of age, gender and years of education were not significantly related to total informational needs. However, subjects with fewer years of schooling needed more information about community resources. Length of hospital stay was not related to informational needs. There was no difference in the informational needs of subjects who experienced different surgical procedures. Patients who were discharged on medications needed more information about medications and about community resources than patients who were discharged without a prescription for medications.

Implications for Nursing Practice

The findings of this study are relevant for nurses practising on surgical units. The priorities identified by the patients in this study give guidelines for content which could be included when preparing short term surgical patients for discharge to home. This information could also be included when developing teaching programs to meet the needs of surgical patients.

In relation to personal and illness-related factors, the results of this study, due to the small sample size, should be interpreted with caution. In this study, there was no difference in the information needed by men and women, and no relationship was found between age and informational needs and years of schooling and informational needs. However, patients with a lower level of education needed more information about community resources. Length of stay was not related to the total informational needs. Since patients experience an early discharge from hospital, teaching strategies need to be developed to reflect the limited time available for teaching.

Information considered important to the subjects in this study was often perceived as not given and indicates areas for nurses to focus on when preparing patients for discharge home. This information relates to complications, guidelines for rest and activity, elimination and pain management. Due to an early discharge, patients may not remember the information which was given, or it may have been given at a time when patients were not receptive to learning. One subject commented on the difficulty in "communicating and absorbing facts" and felt that hospitalization was "confusing and intimidating". This feedback is valuable to nurses who need to ensure that discharge teaching is clear. One area of particular importance concerns information about complications. Patients who do not have this information may be at risk for developing potential problems. This information would also be important for nurses working in the community who visit surgical patients for follow-up. Patients may need information related to complications at that time.

Guidelines for physical activity and rest would likely be helpful to facilitate recovery. Concerns of patients in relation to elimination should be addressed. Patients may need information about pain management, including optimal times for taking pain medication. Again, these areas could be identified for follow-up by the community nurse. Guidelines for personal care such as bathing also need to be emphasized.

Considering the findings in this study related to information perceived as not given, the following recommendations are presented:

1. Teaching content perceived as important to the subjects in this study should be included in a discharge teaching program for surgical patients.

2. Teaching methods should reflect the limited time available for teaching. These teaching methods should include the use of written instructions which could be reviewed with patients and given to them to read at home. These instructions would reinforce teaching content and provide guidelines to follow at home at a time when they are possibly more motivated and ready to learn.

3. A follow-up contact could be made with patients by a professional who is familiar with the patient's plan of

care. Alternately, patients could be given a phone number of a professional whom they could contact if a problem should arise. This would give patients the opportunity to address or clarify any area of concern.

As previously reported, the nurses on the surgical unit of the agency are presently preparing a booklet outlining discharge instructions for surgical patients. The findings of this report can contribute to the development of such teaching programs.

Implications for Nursing Education

The findings of this study are relevant for nurse educators in undergraduate programs and for graduates in continuing education. Traditional reading materials are readily available as resource materials for students and graduates, outlining what professionals should teach patients. Since professionals do not always perceive the same priorities for teaching content, this study describes content desired by a sample of short term surgical patients. The findings are relevant for educators who are teaching the principles of teaching learning and emphasize the importance of the assessment phase. Students should be encouraged to be creative in planning teaching strategies to meet the needs of patients with a short hospital stay.

Implications for Nursing Research

Recommendations for nursing research resulting from this study are as follows:

(1) The informational needs of patients prior to discharge, and at specific intervals following discharge should be explored in order to determine how these needs of patients change over time. This study should have a larger sample and include subjects with a greater range of surgical procedures.

(2) The relationship between social support and informational needs should be examined. Patients may have resources for information, such as friends or family members, at home or in the community, and thes may influence the amount of information needed during hospitalization.

(3) This study should be replicated in various agencies in order to increase the generalizability of the findings.

(4) The factors educational level and discharge medications and their relationship to the need for information about community resources should be further explored, since these relationships have not been evident in previous research. The relationship between personal and illness-related factors and informational needs should be explored further, using a larger sample.

(5) A research instrument should be developed to

measure patient satisfaction with information since valid and reliable measures of this variable are not available.

(6) The impact of written information or follow-up contact on patient satisfaction with information should be examined.

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Appendix A

Code # ______

Patient Information Needs Following Hospitalization for Surgery

Questionnaire

This questionnaire is designed to learn about the needs patients have for information when they return home from hospital following surgery, if patients receive that information prior to discharge from hospital, and how satisfied patients are with the information received.

Please complete this questionnaire during your first week home following discharge.

The information you provide will be treated confidentially.

The questionnaire has 3 parts:

Part I: Patient Learning Need Scale

Part II: Information Provided in Hospital

Part III: Information about Participants

PART I: PATIENT LEARNING NEED SCALE

Introduction for Home Administration

Many people who are leaving the hospital have some questions about how to manage their care once they are at home. Different people have questions about different things. The following is a list of things which some people have said they would like to know to be able to take care of themselves at home.

Now that you are at home and managing your care, would you please rate how important you think the information in each statement is to learn before discharge from hospital. For each of the following statements please circle the appropriate choice based on how important you think it is to learn about the area before you go home. If the item does not apply to your situation or illness please circle "does not apply" and go on to the next statement. If the item relates to your situation or illness, please circle the appropriate number 1 through 5 with 1 having the least importance and 5 being extremely important for you to know. At the end, please indicate anything which you feel is important to know but is not included in the statements listed.

In order to manage my own care at home I need to know:

	Does Not Apply 0	Of No Importance 1	2	3	Extremely Important 4	5
1. Which complication I should seek immediate help for.	0	1	2	3	4	5
2. How to change my activities to save energy.	0	1	2	3	4	5
3. How each medication works.	0	1	2	3	4	5
4. How to recognize a complication.	0	1	2	3	4	5
5. What to do if I have trouble with my bowels.	0	1	2	3	4	5
6. What a Home Care program provides.	0	1	2	3	4	5
7. How to talk to family/friends about my illness.	0	1	2	3	4	5
8. What to do if I have a reaction to a medication.	0	1	2	3	4	5
9. Where I can get help for family to deal with illness.	0	1	2	3	4	5
10. What complications might occur from my illness.	0	1	2	3	4	5
11. How this illness will affect my future.	0	1	2	3	4	5
12. When I can take a bath or shower.	0	1	2	3	4	5
13. What symptoms I may have related to my illness.	0	1	2	3	4	5

In order to manage my own care at home I need to know:

	Does Not Apply	Of No Importance			Extremely Important	
	0	1	2	3	4	5
14. When I can start to do household activities safely.	0	1	2	3	4	5
15. How to manage my pain.	0	1	2	3	4	5
16. When to stop taking each medication.	0	1	2	3	4	5
17. How much rest I should be getting.	0	1	2	3	4	5
18. How to take each medication.	0	1	2	3	4	5
19. Who I will see at my follow-up appointment.	0	1	2	3	4	5
20. What the possible side effects of my treatment are.	0	1	2	3	4	5
21. How to manage the symptoms that I might experience.	0	1	2	3	4	5
22. How to get through "red tape" in the health care system.	0	1	2	3	4	5
23. Who my family members can call about questions of my illness.	0	1	2	3	4	5
24. What caused my illness.	0	1	2	3	4	5
25. How to care for my wound or incision.	0	1	2	3	4	5
26. What to do if I have trouble urinating.	0	1	2	3	4	5
27. How to prepare the food I am allowed to eat.	0	1	2	3	4	5

In order to manage my own care at home I need to know:

	Does Not Apply	Of No Importance			Extremely Important	
	0	1	2	3	4	5
28. Which foods I can and cannot eat.	0	1	2	3	4	5
29. What to do if I cannot sleep properly.	0	1	2	3	4	5
30. What physical activities I cannot do such as lifting.	0	1	2	3	4	5
31. How to get through "red tape" to get services at home.	0	1	2	3	4	5
32. Who to talk to about my concerns about death.	0	1	2	3	4	5
33. How to care for my feet properly.	0	1	2	3	4	5
34. Which vitamins and supplements I should take.	0	1	2	3	4	5
35. Where I can get help in handling my feelings about my illness.	0	1	2	3	4	5
36. How to contact community groups for my health condition.	0	1	2	3	4	5
37. Why I need to take each medication.	0	1	2	3	4	5
38. How to prevent a complication from occurring.	0	1	2	3	4	5
39. The possible reactions to each medication.	0	1	2	3	4	5
40. How to manage stress.	0	1	2	3	4	5
41. How to arrange transportation to follow-up appointments.	0	1	2	3	4	5

In order to manage my own care at home I need to know:

	Does Not Apply	Of No Importance			Extremely Important	
	0	1	2	3	4	5
42. How to recognize my feelings towards my illness.	0	1	2	3	4	5
43. How to prevent my skin from getting sore.	0	1	2	3	4	5
44. When to take each medication.	0	1	2	3	4	5
45. Where I can get my medications.	0	1	2	3	4	5
46. How to avoid stress.	0	1	2	3	4	5
47. What the purposes of my treatments are.	0	1	2	3	4	5
48. What physical exercise I should be getting.	0	1	2	3	4	5
49. How to prevent my skin from getting red.	0	1	2	3	4	5
50. How this illness will affect my life.	0	1	2	3	4	5

Is there anything which you feel is important to learn that has not been included in the above statements? If so, please describe:

Part II: INFORMATION PROVIDED IN HOSPITAL

In completing this section, please consider the information which was given to you in hospital before you were discharged. For each statement, if the information was not given to you, please circle "was not given" and go on to the next statement. If the information in the statement was given to you, please indicate how satisfied you were with the information which was given by circling the appropriate number 1 through 5, with 1 indicating you were very dissatisfied and 5 indicating you were very satisfied with the information given.

How satisfied were you with the information which was given?

	Was Not Given	Very Dissatisfied			Very Satisfied	
	0	1	2	3	4	5
1. Which complication I should seek immediate help for.	0	1	2	3	4	5
2. How to change my activities to save energy.	0	1	2	3	4	5
3. How each medication works.	0	1	2	3	4	5
4. How to recognize a complication.	0	1	2	3	4	5
5. What to do if I have trouble with my bowels.	0	1	2	3	4	5
6. What a Home Care program provides.	0	1	2	3	4	5
7. How to talk to family/friends about my illness.	0	1	2	3	4	5
8. What to do if I have a reaction to a medication.	0	1	2	3	4	5
9. Where I can get help for family to deal with illness.	0	1	2	3	4	5
10. What complications might occur from my illness.	0	1	2	3	4	5
11. How this illness will affect my future.	0	1	2	3	4	5
12. When I can take a bath or shower.	0	1	2	3	4	5
13. What symptoms I may have related to my illness.	0	1	2	3	4	5

How satisfied were you with the information which was given?

	Was Not Given	Very Dissatisfied			Very Satisfied	
	0	1	2	3	4	5
14. When I can start to do household activities safely.	0	1	2	3	4	5
15. How to manage my pain.	0	1	2	3	4	5
16. When to stop taking each medication.	0	1	2	3	4	5
17. How much rest I should be getting.	0	1	2	3	4	5
18. How to take each medication.	0	1	2	3	4	5
19. Who I will see at my follow-up appointment.	0	1	2	3	4	5
20. What the possible side effects of my treatment are.	0	1	2	3	4	5
21. How to manage the symptoms that I might experience.	0	1	2	3	4	5
22. How to get through "red tape" in the health care system.	0	1	2	3	4	5
23. Who my family members can call about questions of my illness.	0	1	2	3	4	5
24. What caused my illness.	0	1	2	3	4	5
25. How to care for my wound or incision.	0	1	2	3	4	5
26. What to do if I have trouble urinating.	0	1	2	3	4	5
27. How to prepare the food I am allowed to eat.	0	1	2	3	4	5

How satisfied were you with the information which was given?

	Was Not Given	Very Dissatisfied				Very Satisfied
	0	1	2	3	4	5
28. Which foods I can and cannot eat.	0	1	2	3	4	5
29. What to do if I cannot sleep properly.	0	1	2	3	4	5
30. What physical activities I cannot do such as lifting.	0	1	2	3	4	5
31. How to get through "red tape" to get services at home.	0	1	2	3	4	5
32. Who to talk to about my concerns about death.	0	1	2	3	4	5
33. How to care for my feet properly.	0	1	2	3	4	5
34. Which vitamins and supplements I should take.	0	1	2	3	4	5
35. Where I can get help in handling my feelings about my illness.	0	1	2	3	4	5
36. How to contact community groups for my health condition.	0	1	2	3	4	5
37. Why I need to take each medication.	0	1	2	3	4	5
38. How to prevent a complication from occurring.	0	1	2	3	4	5
39. The possible reactions to each medication.	0	1	2	3	4	5
40. How to manage stress.	0	1	2	3	4	5
41. How to arrange transportation to follow-up appointments.	0	1	2	3	4	5

How satisfied were you with the information which was given?

	Was Not Given 0	Very Dissatisfied 1	2	3	4	Very Satisfied 5
42. How to recognize my feelings towards my illness.	0	1	2	3	4	5
43. How to prevent my skin from getting sore.	0	1	2	3	4	5
44. When to take each medication.	0	1	2	3	4	5
45. Where I can get my medications.	0	1	2	3	4	5
46. How to avoid stress.	0	1	2	3	4	5
47. What the purposes of my treatments are.	0	1	2	3	4	5
48. What physical exercise I should be getting.	0	1	2	3	4	5
49. How to prevent my skin from getting red.	0	1	2	3	4	5
50. How this illness will affect my life.	0	1	2	3	4	5

Part III: INFORMATION ABOUT PARTICIPANTS

Please complete information in the space provided.

(1) Number of years of schooling: ______________

(2) Number of members living in household: _________

(3) Number of days spent in hospital: ____________

Thank you for your assistance. Please return the completed questionnaire in the enclosed self-addressed and stamped envelope to:

Velma Jacobs R.N.
Memorial University of Newfoundland
School of Nursing
St. John's, NF, A1B 3V6

Appendix B

REQUEST FORM

I request permission to copy the Patient Learning Need Scale for use in my research entitled Information Needs as perceived by surgical patients on discharge from hospital

In exchange for this permission, I agree to submit to Natalie Bubela or Susan Galloway, upon completion of the study a printout of the learning need data or a disk containing the data with a data dictionary. The data must contain information on each subject's age, sex, education and diagnosis, along with the raw data on the patient learning need scale. This data will be used to establish a normative data base for clinical populations. No other use will be made of the data submitted. Credit will be given to me in reports of normative statistics that make use of the data I submitted for pooled analyses. I also agree to send Natalie Bubela or Susan Galloway an abstract of my findings. I understand that my report will be used to compile information on the structure of patient learning needs. Credit will be given to me in any reports referring to my findings.

Signature

October 4, 1993
Date

Position Nurse Educator & MN candidate

Position and Full Address of Investigator

St. John's NF
A1E 4A9

Permission is hereby granted to copy the Patient Learning Need Scale for use in the research described above.

N. Bubela of S. Galloway

Please send two signed copies of this form to:

Susan Galloway. RN, MScN.,
Clinical Nurse Specialist, Nursing,
C418b Sunnybrook Health Science Centre,
2075 Bayview Avenue, North York,
Canada, M4N 3M5.

Appendix C

Code #_________

Information from Records

1. Surgical procedure ________________ __________________
2. Age in years _________________
3. Gender _____________

Appendix D

Explanation of Study to Nurses

TO: Nurses, 4 North B, 4 South B

FROM: Velma Jacobs

SUBJECT: Nursing Research Study

DATE: February 18, 1994

I am a Registered Nurse and a student in the Master of Nursing program at Memorial University of Newfoundland.

As part of my program, I am conducting a research study to explore information as perceived by surgical patients to be necessary in order to manage their care at home following discharge from hospital. Patients will also be asked to indicate what information was given to them prior to discharge from hospital and how satisfied they were with the information which was provided. The results of this study may give direction to nurses when planning discharge teaching for surgical patients.

Criteria for selection to the sample will be that subjects are (1) discharged home following selected procedures--open cholecystectomy, laparoscopic cholecystectomy, appendectomy, or inguinal herniorrhaphy (2) oriented to person, place and time and (3) able to read, write and understand English. I will be meeting these patients in order to explain the study, answer any questions relating to the study, and obtain their written consent to participate. A questionnaire will be mailed to the patient when discharged, and returned directly to me by return mail in the stamped self-addressed envelope provided.

Procedures will be employed to maintain the confidentiality of information provided by all patients who participate in the study.

This study will be greatly facilitated if you would contact patients who are admitted for surgical procedures specified, and meet criteria #2 and #3, and request permission for me to meet with them and further explain the study. Please refer to the attached form for information which should be given to patients.

I will be available to answer any questions you may have concerning the study. Please contact me at 737 6491 (w) or 368 6742 (h).

Thank you for your cooperation and assistance.

Sincerely,

Velma Jacobs

Appendix E

Information Given to Patient by Nurse

Velma Jacobs is a Registered Nurse and a student in the Master of Nursing program at Memorial University of Newfoundland. She is conducting a research study as part of her studies.

She is interested in finding out what patients feel they need to know when they go home from hospital following surgery in order to manage their care at home.

Would you agree for her to meet with you and further explain the study so that you can decide whether or not you would be willing to participate?

Appendix F

MEMORIAL UNIVERSITY OF NEWFOUNDLAND
SCHOOL OF NURSING

CONSENT TO PARTICIPATE IN NURSING RESEARCH

TITLE: Informational Needs of Post-surgical Patients Following Discharge

INVESTIGATOR: Velma Jacobs

You are asked to participate in a research study. Participation in this study is entirely voluntary. You may decide not to participate or may withdraw from the study at any time.

Confidentiality of information concerning participants will be maintained by the investigator. You may contact the investigator by phoning 368-6742 during the study at all times should you have any problems or questions about the study.

Purpose of Study

The purpose of this study is to find out what people feel they need to know when they go home from hospital in order to manage their care at home. The results of this study will help nurses and physicians better understand peoples' needs and give information which will be most helpful.

Description of procedure and tests

Participation in this study will involve completing a questionnaire which will be mailed to you when you go home from hospital. This questionnaire will ask how important it is for you to have specific information about your surgery. The second part of the form will include the same areas, and you will be asked which information was given to you before you were discharged from hospital and to indicate how satisfied you were with the information provided.

Permission is requested to mail this questionnaire to you. Your name will not appear on the questionnaire form. The forms will be stored in a locked file and only the investigator will have access to them. When the study is over, they will be destroyed.

Duration of subject's participation

You are being asked to complete one questionnaire, which will be mailed to you. It is anticipated that it will take approximately 40 minutes to complete this questionnaire. If for some reason, the questionnaire is not received within 2 weeks, a second one will be sent to you in case you did not receive the first one. If you do not return it, we will assume you have withdrawn from the study and we will not contact you again.

Foreseeable risks, discomforts, or inconveniences

There are no expected risks involved in completing this questionnaire. However, you may refuse to respond to any questions on the form that make you feel uncomfortable. The only inconvenience to the subjects is the personal loss of time.

Benefits which the subject may receive

You may not benefit directly from this study. However, if you agree to participate, the information that you give may help nurses and physicians address the needs of people when they return home following surgery.

Alternative procedures or treatment for those not entering the study

Participation in this study is voluntary and you may decide to withdraw at any time.

Any other relevant information

If there are any areas of the study that are not clear, please feel free to ask any questions before you sign the consent form. If you have any questions or concerns when you receive the questionnaire, please contact the investigator at the phone number provided. Findings will be available to you and health care professionals upon request. Findings of this study may be published but you will not be identified.

I,__________________________, the undersigned, agree to my participation in the research study described.

Any questions have been answered and I understand what is involved in the study. I realise that participation is voluntary and that there is no guarantee that I will benefit from my involvement. I acknowledge that a copy of this form has been offered to me.

__________________________ ____________
(Signature of Participant) (Date)

<u>To be signed by investigator:</u>

To the best of my ability I have fully explained to the subject the nature of this research study. I have invited questions and provided answers. I believe that the subject fully understands the implications and voluntary nature of the study.

__________________________ ____________
(Signature of Investigator) (Date)

Phone Number 368-6742