Perceptions of discharge instructions by the emergency department patient

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PERCEPTIONS OF DISCHARGE INSTRUCTIONS
BY THE EMERGENCY DEPARTMENT PATIENT

by

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ABSTRACT

Perceptions of Discharge Instructions by the Emergency Department Patient

by

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Patient education is an essential part of the nursing process and is part of every nurse-patient interaction. A better patient outcome is the combination of teaching completeness and patient comprehension. When the nurse-patient interaction takes place in the emergency department (ED), the instruction is taking place in a less than conducive environment.

The ED's have become a health care safety net for people with a variety of available resources and literacy levels. An indicator of how well patient education is accomplished by looking at this teaching through the patient's eyes. A sample of 30 adult patients was surveyed one week after being treated and released from the ED. They were asked 6 Likert-type survey questions dealing with their discharge education process, 5 yes/no questions dealing with clarification of their instructions and 4 demographic questions. An analysis of variance was conducted on their responses.
There were no statistical differences found in this study and patients were relatively satisfied with their instructions. The greatest variation was found in the 56 and older age groups, which correlates with previous studies. This suggests that nursing needs to assess their patients' educational needs to effectively educate them at a time in their lives when chronic illnesses are becoming more prevalent. Replication of this study using a larger, more diverse sample population should be completed to further validate these findings.
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CHAPTER 1

INTRODUCTION

Patients are seeking treatment in our nation's emergency departments (ED) in record numbers. For many people, it is the portal into the health care system. For others, the ED is a back-up when they are not able to see their primary physician. But for many, it is their only source for healthcare (Glick & Thompson, 1997; Washington, Stevens, Shekelle, Henneman & Brook, 2002). With this increased use of ED's, nurses are pressed to manage the many patients in their care. This leads to increased levels of stress placed upon the nurses as well as jeopardized safety for the patients (Frank, 2001).

Emergency department nurses need to disseminate detailed and often lengthy discharge information (DCI) during patient teaching encounters in a short amount of time. They need to teach patients who may be less receptive to learning due to their illness (Marcum, Ridenour, Shaff, Hammons & Taylor, 2002). It is important for nurses to be able to teach in ways that assure the best possible outcome for the patient. Discharge information needs to be in a format that the patient is able to comprehend and understand.
Background

During times when the community experiences periods of increased illness, the influxes of patients into ED’s can often push existing resources to the limit. As ED’s become busier, and nurses are stretched to the limit, caution needs to be taken that patient care is not compromised.

Patient education is an essential part of nursing care along with collaboration within the medical community. Patient education is an essential component of improving patient outcomes (Swavely & Peter, 1999). An important aspect of patient education is the continued-care instruction provided by the nurse prior to discharge (Freda, 2004).

Part of the treatment plan for patients includes discharge education and instructions which are given to patients to help them continue their treatment plan at home (ACEP, 1994). Patient education is within the scope of nurses. In fact, it is a responsibility that cannot be delegated. A requirement of this education is providing patients with written instructions for continued care when they are discharged. When patients return to the ED for the same complaint, the quality of that discharge instruction requires examination. The manner in which the discharge instructions or education was delivered by the nurse needs to be part of this examination. Of significance is whether the patient was able to understand what they were being told and if they could read the written instructions given to them. These written instructions need to be in a language and at a level the patient can understand (Logan & Schwab, 1996; Freda, 2004). If these instructions are hand-written, they must be legible.
Significance of the Study

Discharge instruction of patients remains an important aspect of total nursing care. Patients who are discharged from a hospital, clinic or ED require discharge instruction. How well they are able to care for themselves at home depends, at least in part, on how well they understand their instructions.

As the health care community continues to change and become stretched at the seams, it remains important that patient care is not compromised. People are being discharged home from the ED sicker than in years past. These factors put a greater importance on the quality of their discharge instruction (Maynard, 1999; Swavely & Peter, 1999).

People are also living longer with one or more chronic illnesses and they are required to have an increased knowledge in order to care for themselves at home. Older adults account for the majority of ED visits (CDC, 2004; Martens, 1998; Hayes, 1999). Many of these people are on drug regimens that can be difficult and confusing to the patient and their family (Martens, 1998).

The increase in the number of people without any or very limited healthcare coverage is compounded by the problems that the homeless, indigent and migrant populations face in obtaining any type of continual healthcare (Freda, 2004). The people in this population increasingly use the ED's as the source of their primary care. These people are also a diverse population in terms of culture, cognitive ability and educational levels which adds to the constraints placed upon the staff for completing total patient care including discharge instruction.
Purpose of the Study

The purpose of this study was to examine the perceptions of patients regarding the instructions provided upon discharge from the ED. The goals were to determine if the patients felt the discharge education materials given to them upon leaving the ED were sufficient enough for them to continue their plan of care at home; ascertain whether the patient sought further information by telephone or by returning to the ED; determine how a patient’s age, gender, educational level and ethnicity may affect their ability to understand the information they are presented with upon their discharge from the ED.

The method of discharge instruction delivery was addressed. Whether the patient received instructions that were written, verbal or both are of importance. Also if the patient felt all of their questions about their continued care were answered completely in a manner they could understand and if they were asked for confirmation that they understood their instructions.

Finally, this study looked at the patient returning to the ED in less than one week for the same problem. Determining whether the return was due to a lack of comprehension of the discharge instruction provided or due to a worsening of their illness requiring physician intervention versus an unrelated reason for their return was of interest.

Nursing as a profession, can improve the level of care given to their patients by increasing their awareness of the patient’s perception of the information they receive upon discharge. Nurses can also increase the patient’s level of functioning and decrease the burden of unnecessary returns to healthcare system by insuring the patient, family or caregiver has a complete understanding of how to continue the care at home.
Theoretical Framework

This study was conducted using the guidelines of Orem’s Self-Care Deficit Theory of Nursing integrated with the Theory of Adult Learning Styles. Orem describes her general theory as composed of three related theories: the theory of self-care, the theory of self-care deficit and the theory of nursing systems (Tomey & Alligood, 2002, Chap. 13). The framework of this theory lends itself readily to this study in that people seek assistance when they are no longer able to care for themselves at previous level of functioning. At this point, they seek the assistance of those who are educated in the various fields of health attainment.

The Adult Learning Style Theory (ALST) is based on the knowledge that adults process, retain and respond to information as they experience it. The ALST also carries the assumption that individuals show a preference for particular learning behaviors (University of Toledo). Each of these theories is expounded on in length in subsequent sections.

Research Questions

Questions answered by this survey include:

1. What are the perceptions of the discharge instructions held by the ED patient who is seeking treatment for an illness or injury?

2. Does the ED patient that is treated for an illness or injury have a need for more information or require follow up after being discharged from the emergency department?

3. What is the relationship between select demographic variables and the ED patients’ perceptions of the discharge instructions they received?
Definition of Terms

The following definitions are defined as being central to the study or the theories used in the study. These include:

- **Patient**: one who seeks the help or assistance of health care personnel in an effort to recover to a former level of functioning after an injury or illness or to maintain a level of health.

- **Discharge instructions**: consists of information given by the nurse or health care provider to the patient when they are being discharged from care. Included is information regarding the illness or diagnosis of the patient and what the patient can expect during the recovery process along with what symptoms to watch for that indicate a worsening of their illness and how to care for themselves in order to recover or improve their condition. Finally, the instructions include when and with whom the patient should follow up for further treatment.

- **Patient education**: “the process of assisting people to learn health-related behaviors”; includes knowledge, skills and attitude in an attempt to help patients assimilate new behaviors into their day to day lives to attain an optimal level of health and a return to independence (Bastable, 2003)

- **Learning style**: “an individual’s characteristic method of responding to and processing learning events as he or she experiences them” (University of Toledo) or “our natural learning strengths” (Mills, 2002). It is the method in which a person best learns. The methods can include visual, auditory or tactile. Visual includes reading a set of instructions or seeing a demonstration of the topic to be learned. Auditory
includes having someone explain the steps involved in the process where tactile includes a hands-on approach with doing and demonstrating the skill.

- **Adult learners:** are those individuals age 18 and over.
- **Self-care:** defined by Orem as the practices that people perform on their own behalf in order to maintain a level of health, function, personal development and well being (Tomey & Alligood, 2002).
- **Self-care deficit:** according to Orem occurs when the person is no longer able to meet the needs required to promote or maintain their level of health, function, personal development and well being (Tomey & Alligood, 2002).
- **Nursing agency:** described by Orem in her theory, are those who have the education and development in which they are able to represent themselves as nurses to help other persons meet or attain their level of self-care (Tomey & Alligood, 2002).

**Theoretical Assumptions**

People care for themselves and their families until they reach a point where they are no longer able to do so. At that time they seek help from others who are better equipped to deliver that care. At the same time, they seek to return to their former level of functioning.

It is the responsibility of nurses to help these people achieve and/or maintain this level of functioning. One of the methods used is in delivering the information required for these people to return to an optimal level of functioning. As part of this responsibility, nurses need to make every effort to help their patients understand the information they are being given.
A factor included in looking at learning potential is the knowledge level of the patient. It is important to gain an understanding of what the patient and family already knows about their condition. Understanding what the patient and/or family knows provides the basis for determining what information patients still need to learn.

Other factors are the skill level, attitude and ability of the family and patient (Falvo, 2004). Many patients are being discharged home with medical conditions and equipment that used to be only used in hospitals. To be able to effectively carry on the care of the patient, patients and their care takers need to be taught how to carry out the tasks that are a part of outpatient care such as IV therapy, oxygen therapy and respiratory treatments.

Attitude is determined by past experiences and the present situation as well as culture. An example of this includes the patient who is being given information on the health benefits of smoking cessation but knows someone who was a heavy smoker that lived to an old age (Falvo, 2004). The patient who relies on folk remedies such as coining, which is marking the skin with a coin to release the bad spirits and is practiced by some Asian countries, is another example.

Hindrances to learning can include the above but also the responsibilities of the patient and their physical surroundings at home (Falvo, 2004). A young, single mother who is diagnosed with back strain and given instructions to rest and not lift anything over 15 pounds will not be able to be compliant with an active toddler at home. Likewise, the homeless patient who is advised to keep a dressing clean and dry and do daily dressing changes will probably not have access to the facilities or supplies to allow this to happen.
Teaching and learning interactions can be carried out at any time during the care of a patient. When dealing with a life threatening emergency, the teaching that is required deals with the immediate, ongoing care and state of the patient. Whereas the focus will shift when working with a patient and family that requires continued care at home for an injury or illness. In this case, the focus will be more on what needs to be done to continue the care once they return home, what signs to look for if a condition is worsening and when to follow-up with the primary provider.

The goal for patient education should be developed with the patient and includes what the patient needs to learn and the priority for learning. These goals can be developed by observing the patient in an interaction in which the nurse can observe how they carry out a function such as doing a dressing change or giving a child medication. It can also be assessed by asking questions of the patient to determine what they know or what they need to know. A third way is by the patient’s remarks or questions they ask which will give the nurse an open window into what the patient or family wants to know or needs to learn (Falvo, 2004).

Priority for learning can be dictated by the circumstances surrounding the interaction such as being a medical emergency that requires immediate life saving interactions or continued care at home (Falvo, 2004). As a part of the plan, the patient’s and family’s ability to learn also needs to be assessed. Included in this plan is their learning potential, helping or hindrance factors and their priorities (Falvo, 2004).

Part of patient education is to determine how people learn best. Individuals vary on how they acquire and process information. People are unique individuals who face illness based upon their culture, their upbringing, past experiences and their coping
capabilities. Nurses need to assess their patients for learning style in order to teach them effectively (Falvo, 2004).
CHAPTER 2

LITERATURE REVIEW

Use of Emergency Departments for Health Care Services

During 2002, there were an estimated 110.2 million visits to our nation’s ED’s which average out to 38.9 visits per 100 people. This is up 23% from 1992. An estimated 3.5 million of the visits were by patients who had been in the ED in the previous 72 hours. Of these visits, 5.5% were for a follow up for the same problem. General symptoms such as fever, pain and fatigue accounted for 15.9% of patients seeking care in the ED. On an average day, there were more than 300,000 visits to the ED while the number of operating ED’s decreased by 15% (CDC, 2004).

Increased number of visits leads to long waits and overcrowding in the ED. Overcrowding of the ED is a major health care problem. Three indicators of over-crowding, as reported by the General Accounting Office, include: the number of hours an ED is on ambulance diversion; the length of time and the number of patients being held in ED’s waiting for an in-patient bed and the number of patients that leave prior to being medically screened (CDC, 2004).

Treatment of the seriously ill or injured is the primary function of the ED. Increased use of the ED for unscheduled urgent care visits have been noted due to the inability to gain access to, or requiring a service not offered by a walk-in clinic or
physician office. Many primary providers also direct their patients to the ED’s for evaluation and stabilization with possible admittance to in-patient status (CDC, 2004).

Today, many of the ED’s have become the principle health care sites for persons with inadequate or no insurance, which conflicts with the primary function of the ED (Washington et al., 2002). For many patients, the emergency department is their safety net for health care. In a Colorado study, 34% of the patients who used the ED had no other access to health care (Koziol-McLain et al., 2000).

Out of the average of 300,000 visits per day to ED’s, only 22% were for an emergent reason. A larger percentage (29%) of the patients had semi- or non-urgent complaints (CDC, 2004). Semi-urgent or non-urgent complaints equates to 87,000 patient visits to our country’s ED’s who would be better treated at a walk-in clinic or primary physician’s office. Over-use of the ED leads to extended waits for the emergent patient.

A 2000 study in Denver, CO looked at ED use through the eyes of the patient. All 30 patients in this study were seen for non-urgent problems with the visit being considered as an inappropriate use of the ED. Inappropriate use of the ED is regarded as visits for non-serious medical conditions based on anatomy and physiology without regard to mind, spirit, family or community (Koziol-McLain, Price, Weiss, Quinn & Honigman, 2000).

The reasons given for seeking care in the ED included: no longer being able to tough it out, symptoms which over-whelmed self-care abilities, calling a friend, no where else to go and convenience. Each person revealed a level of distress that prompted their ED visit (Koziol-McLain et al., 2000). The high number of patient visits increases the
demands of the nurses to complete patient education in a manner the patient is able to comprehend while the waiting room is being jammed with other patients waiting to be seen.

The most common patient complaint for visiting the ED was pain which accounted for 20% of the visits in 2002. Of this, 6.5% were for complaints of abdominal pain, chest pain accounted for 5.1%, back pain 3.8%, and headache was at 2.6% with generalized pain following at 2%. The next most common complaint was for fever accounting for another 4.8% of patients. Contusions were the most common discharge diagnosis followed by acute upper respiratory infections, open wounds and abdominal pain. Of all the visits to the ED in 2002, 16.1% were either admitted to the hospital or expired in the ED. The majority of the other patients (61.6%) were referred to clinics or to their primary providers (CDC, 2004). These statistics speak to the fact that most ED visits are able to be treated and handled more affectively at a walk-in clinic.

People over the age of 75 accounted for the highest ED visit rate (61.1 per 100 persons) among the age groups. Females sought treatment more often than males (54.1 to 45.9 per 100 persons). Persons of Asian descent had a lower visit rate than white persons while African American persons used emergency departments at a rate that almost doubled the use by Caucasian persons (CDC, 2004).

A group of people who utilizes the ED on a regular basis are classified as frequent users. It is a perception that these people are abusing the system and adding to the overcrowding issues. Frequent users are more apt to have mental health, alcohol and drug abuse issues (Hackenschmidt & Malone, 2003).
In 1995, Malone identified frequent or heavy users as not only being comprised of the mentally ill, alcohol and drug dependant persons, but the poor and minorities as well. This study further goes on to describe this population as having a low family income, adults having less than a high school education, having no insurance or on Medicaid and children in single parent households (MacDonald Thompson & Glick, 1999).

A 1998 study conducted in San Francisco found frequent users as often being sicker requiring three times more frequent hospitalizations. This study also found that 30% of frequent users had attempted to find care elsewhere prior to turning to the ED and were less likely to obtain outpatient follow-up after discharge (Hackenschmidt & Malone, 2003). These various characteristics can be found any day in the ED. It is up to the nurse caring for them to give them instructions in a manner they can understand. Patient education can be a daunting task when the patient may be under the influence of alcohol and drugs have less than a high school education, come from another culture that may have other views of health care or are too sick to care or learn.

Literacy Levels in the United States

As stated previously, one of the characteristics of the frequent user of the emergency department is someone who has less than a high school education. It has been stated that 48% of English speaking patients are considered to be functionally health illiterate which can lead to decreased comprehension of medical information. Health literacy is the ability to read, understand and act on health information. In 1993, the National Adult Literacy Survey found that approximately 40 - 44 million people in the United States were functionally illiterate with another 50 million people having marginal skills. Literacy is the basic ability to read and speak English. Characteristics that have
been linked to higher levels of functional health illiteracy included being African-American, older aged, having lower levels of education completed and working in blue collar occupations (Andrus & Roth, 2002).

The lack of health literacy skills raises concerns about the ability of the patient to comprehend and follow instructions related to the diagnosis, medication administration and other issues related to care for themselves once they return home. This makes it even more important for health care workers to assess for reading skills. The inability to read or comprehend is often embarrassing to patients. Health care workers need to be aware of coping strategies used such as; making statements that they do not have their glasses with them, wanting to discuss the situation with family members or wanting to wait until they get home to read the instructions (Andrus & Roth, 2002).

Studies have shown that 20% of Americans read at or below the 5th grade level with the average reading level being at the 8th to 9th grade levels. Almost 40% of inner-city minorities and the elderly are reading at or below the 5th grade level. Meanwhile, 55% of the pamphlets developed by the American Cancer Society were written at a 12th grade level or higher (Maynard, 1999).

A study conducted on 528 members of an indigent population found that the mean level of comprehension was at the 5th grade though the reported mean of education completed was at the 10th grade level. This study also found that even though 40% of this population reported finishing the 12th grade more than 58% could only read at or below the 5th grade level (Andrus & Roth, 2002). A second study tested 63 cancer patients finding the mean reading level was at the 6th or 7th grade. A study looking at 40 patients taking coumadin reported that 83% had completed high school yet 30% had
scores below the 6th grade level. Similar results were found in other populations also (Andrus & Roth).

In the elderly population, which is often burdened with chronic diseases, this trend is even more alarming. In a study of 177 elders, 32.2% had reading levels at less than the 4th grade level with 25.6% of them stating they could not read the material (Andrus & Roth, 2002). In a study of 272 patients over the age of 30, those patients who were over 60 years of age had a mean reading comprehension level at the 2nd to 3rd grade level which was significantly lower than the comprehension rate of 5th to 6th grade level for the younger people in the study (Andrus & Roth).

Added to this is the fact that the elderly account for 20% of the ED visits and of these at least 40% receive a new medication during their visit to add to their already complex medication regime. Hayes (1999) completed a study that looked at how adding medications in the ED impacted the elderly patient at home. The study found that as the complexity of medications administration rises, the knowledge of medications decreases. The study also found that the patient had multiple questions related to their care but were reluctant to call back to the ED for clarification. In some cases, patients stopped their regular medications while taking the new medication or did not take the new medication.

In a study of an inner city ED, 400 patients were evaluated on information that was taken from discharge instructions they had received. The results revealed that 76% of the people between the ages of 18-39 answered 4 out of 5 questions correctly compared to 72% of those between the ages of 40-59 and 64% for those over the age of 59 (Andrus & Roth, 2002). A second study of ED patients evaluated how well the patients understood their own instructions looking at 3 components; diagnosis,
medication use and follow-up. Of these, 23% had no understanding of at least 1 component while 4% had no understanding of at least 2 components (Andrus & Roth).

A combined study conducted in Atlanta and Los Angeles looked at the comprehension levels of 2,659 indigent and minority patients. These people were uninsured, poor people that had not finished high school. In this particular study, 35% of the English speaking people in Atlanta and 13% of the English speaking people in Los Angeles were functionally health illiterate. Additionally, 42% of the Spanish speaking people in Los Angeles were also functionally health illiterate. The study found that 33% of the people could not follow radiographic prep instructions at the 4\textsuperscript{th} grade level, 24-58\% could not understand medication administration instructions, 20% could not follow an appointment card and 75\% could not comprehend an informed consent form (Andrus & Roth, 2002).

Patient Education

Consequences of reduced health literacy include poorer health status, decreased comprehension and lack of knowledge, lower use of preventative health services; poorer self reported health and lower compliance rates. This leads to increased hospitalizations and health care costs (Andrus & Roth, 2002).

More than 23 million Americans are functionally illiterate and as such may be unable to understand information given to them by health care providers. It has been determined that a person will understand 90-100\% of printed information that is written at one grade level lower than what they read at. The general aim of health care is to provide patient education at a sixth grade level or less. This would mean that printed materials that contain more than 30 sentences would include no more than 12 words that
contain 3 or more syllables in a selected group of 30 sentences for a sixth grade level. This number would drop to no more than 6 words containing 3 or more syllables for a fifth grade level (Monsivais & Reynolds, 2003; Duffy & Snyder, 1999).

A study was completed in 1996 on ten commonly used ED preprinted discharge instruction sheets for reading levels. These instruction sheets were found to have been written at the 8th to 14th grade levels. With the mean reading level being at the 9.8 grade level, approximately 45% of the patients in this study would be unable to comprehend their instructions (Williams, Counselman & Caggiano, 1996; Duffy & Snyder, 1999).

A study by Wayne State University looked at the comprehension level of 238 adults from age 20 to 87. The adults in this group had an average education level at grade 13. They were given instruction cards that had a readability level at grade 11. When the comprehension of the material read was evaluated, the results showed that 54% of the participants required additional information over the written material (Wilson, Mood, Risk & Kershaw, 2003).

When teaching patients with low literacy skills, handing out printed material is not enough. With the average reading level in the United States at the 8th or 9th grade level, 20% of Americans are unable to understand pamphlets at a grade school level. This statistic increases to 40% with Americans over the age of 65. It is estimated that 30% of the Americans using the ED’s are unable to read their instructions or understand simple terms. To help these people have a better understanding of their discharge instructions, literature suggests using words that elicit concrete images, words that the patient regularly uses and giving specific time frames will help. Patients in this
population are also unable to formulate questions and as a result do not know what to ask (Brooks, 1998).

A study in Israel completed in 1999 found that the biggest obstacle to patients understanding discharge instruction education was the use of medical terminology by the staff. Suggestions given for improvement were to have a special discharge nurse give the information followed by giving information in written form, the latter which is required in medical settings in the United States (Waisman et al., 2003).

A study conducted in 2001 by Henderson and Zernike looked at the impact of discharge information for surgical patients. They looked specifically at wound care and pain control in patients who had been hospitalized for a week for abdominal surgery. One week after the patient was discharged; they contacted the patient at home for a follow up telephone survey. The survey focused on whether or not there was a change in the perception of the adequacy of the discharge instructions from the time of discharge to 1-2 weeks post-discharge. The study found that people who had sufficient information were less likely to access a health facility following discharge. It also found that patients who felt well informed at discharge were less likely to continue to feel well informed 1 week later when they were contacted by telephone (Henderson & Zernike, 2001).

A study in 2000 compared the discharge instructions given by medical students. Medical students gave instructions in either a verbal format or a verbal plus written format. In each format, the medical students either discussed the instructions with an attending physician or followed standardized instructions. One of the main suggestions for improvement was the decreased use of medical jargon. This study found that the use of standardized education improved patient-care giver communication. The difference
found between the verbal and the verbal-written group was negligible and was explained by either a lower literacy rate or lack of use of written material (Isaacman, Purvis, Gyuro, Anderson & Smith, 2001).

Nurses not only place a high priority on patient education, but also feel it is their responsibility and is an important aspect of their practice. Patient education is part of the standard of care and within the scope of practice for nurses (Falvo, 2004). Patient education occurs whenever patients and nurses are in the same vicinity. Nurses educate not only in words but also by example. Patient education is an intrinsic part of nursing (London, 1999). Nurses have accepted the fact the educating patients and family are an integral part of nursing though many have not received formal preparation to deal with the variety of situations that arise (Bastable, 2003). Factors that have been found to hinder patient education are shortened patient stays, inadequate staffing, influx of patients from other cultures, and lack of reimbursement for patient education (Freda, 2004). Other factors recognized were the perceptions of the nurses related to the patient’s lack of interest in learning about their disease process along with prevention methods and self-care skills (Marcum, Ridenour, Shaff, Hammons & Taylor, 2002).

As with all aspects of patient care, patient education requires a plan of action. Included in this plan is setting the goal for patient education, assessing the patient, implementing the plan and assessing the outcomes (Falvo, 2004, Chap. 4). With the limited amount of time that emergency nurses have to interact with their patients, teaching needs to be done at every opportunity throughout the length of stay. In assessing their patients and their family members, nurses should look for the ability to make informed decisions regarding their health care, ability to perform basic self-care...
skills, the ability to recognize problems and respond accordingly, and the ability to get their questions answered (London, 2004).

Theoretical Framework

Orem Theory of Self-Care Deficit

During the past 40 years, nursing has begun to be recognized as a profession through the work of various nursing scholars and theorists. While there have been various reasons for the lack of professional standing of nursing, one has been the absence of professional knowledge. The knowledge base for nursing arose from the grounded disciplines that included physiology, sociology, psychology and medicine (McEwen & Wills, 2002, chap. 1). The foundation for nursing to be accepted as a profession and distinct discipline was laid down through the work of the earlier nursing theorists. Through the use of nursing theories, structure and organization was developed that enabled data collection through which nursing practice could be explained and predicted (McEwen & Wills, Chap. 2).

The earlier nursing theories were considered to be grand theories. These theories carried a wide scope and were very complex as they attempted to explain large areas within the discipline. Grand theories are comprised of abstract concepts and often do not have operational definitions (McEwen & Wills, 2002, Chap. 6).

One of the earlier nursing grand theorists was Dorothea E. Orem. She is considered to be a pioneer in nursing knowledge development (Fawcett, 2001). In the late 1950’s, while working with the Indiana State Board of Health, she developed her definition of nursing practice which came to be known as the Self-Care Deficit Theory of Nursing. Orem described her theory as a “general theory composed of 3 related theories”
These related theories include the theory of self-care, the theory of self-care deficit and the theory of nursing systems (Tomey & Alligood, 2002, Chap. 13).

In the theory of self-care, persons perform activities to maintain or promote a level of health and well being. Self-care is an acquired ability that is affected by both internal (knowledge and cognitive ability) and external (education) influences (Lauder, 2001). Self-care is considered on-going and required to enhance life and health. With the state of health being dynamic, the need for self-care also changes (Franklin, 2001). The self care agency consists of three types of abilities which are foundational capabilities and dispositions, power components that enable self care and capabilities for self care (Callaghan, 2003).

The goal of self-care is person and family empowerment (Mayo, 1997) with the abilities placed in a hierarchal manner. The first level or base is made up of the foundational capabilities and dispositions with the center level being the power components. The final level is the self-care capability which includes a manner which allows for investigation into conditions and factors that permit self-care, transitional operations that allow for making judgments about what one can do to meet the needs of self-care and a production level that allows for the performance of self-care (Callaghan, 2003). Self-care is considered a learned function that requires deliberate performance by the person for their benefit (Tomey & Alligood, 2002).

In the theory of self-care deficit, the person is limited in some manner, generally thought to be out of the control of the patient such as a disease process (Callaghan, 2003; Lauder, 2001). This prevents them from carrying out the deliberate functions required.
This limitation creates a mismatch between the person’s capabilities and needs, which can be evidenced at various levels of required assistance (Tomey & Alligood, 2002).

It has been stated that nursing is done primarily to enhance the health attaining potential of patients and their families (Franklin, 2001). The theory of nursing systems sees nursing as a human action that is performed by nurses to help those persons with self-care deficits at whatever level is required. This action can be supportive, in which the nurse may act as a consultant; partial, with the nurse performing some care and the person performing some self-care; or wholly or total in which the nurse performs total care for the person who is unable to perform any self-care actions (Tomey & Alligood, 2002). The goal of nursing care is to assist the patient and return the patient to a level of self-care (Ugarriza, 2002). The instruction given to patients and their family members at the time of their discharge from the ED is a component of nursing care.

Orem’s Self-care Deficit Theory was used in a study evaluating patient education materials and was found to be comprehensive in looking at the educational levels of patients, culture and the nurse’s role and responsibility for patient education. Among the underlying capabilities for a person to accomplish self-care are “reading, writing, verbal skills, reasoning, perceptual skills and counting” (Wilson et al., 2003, p. 70). Other factors that have a bearing on the patient’s ability to learn include age, gender, family dynamics, socio-cultural orientation, economic status and state of health (Wilson et al.).

Adult Learning Styles Theory

One of the primary issues in patient education is assessing the ability of the patient to learn. Principles of adult learning by Malcolm Knowles include the fact that adults learn best when there is a perceived need and through using active participation.
With adults, teaching should start with the known and simpler concepts progressing to the unknown and more complex concepts. Adults require opportunities to practice the new skill and require immediate feedback and correction to help increase their level of learning (Freda, 2004).

These factors also affect the learning style of the adult patient. Adults generally learn based upon a “process model” (University of Toledo). In this style of learning, there is collaboration where the learner (patient) obtain the necessary information they require to meet a particular need (University of Toledo).

While there are many theories of adult learning, none have been able to address the diversity of adult learners adequately. However, in looking at various theories, we can gain an understanding of adult learning. Based on works by Malcolm Knowles in 1984, it is assumed the adult learners are independent, self-directed whose learning needs are problem centered and based on need. They tend to be engaged in a learning method that is interactive. New information they come into contact with takes on meaning and is more readily remembered when they are able to assimilate it into their lives. Plans for what they need to learn, how to learn and an evaluation of what they have learned are obtained mutually between the adult learner and the “teacher” (University of Toledo).

One model of adult learning style defines learning as being “multidimensional and encompassing a range of variables” and has been utilized by Dunn and Dunn (University of Toledo). In this model of learning styles, learning is affected by 5 different elements. These elements include emotional, environmental, sociological, physiological aspects and psychological (Bovell & Ansalone, 2001). It is believed that
each element has a bearing on how a person learns. The effect can have either a positive or negative reflection on what they learn.

The emotional element looks at motivation, persistence, responsibility and structure. Environmental elements that can affect learners include sound, light, temperature and the design of the study area. The sociological element refers to the preference of the learner to learn alone or with others while the psychological elements include which hemisphere the learner operates from along with how they make decisions.

The physiological elements include preference for learning. Included in the preference for learning are those whose learning styles include visual (reading, seeing), auditory (hearing a lecture or tapes) and kinesthetic (hands on doing, return demonstrations or note taking) styles. The ability to concentrate varies with the ability of the learner to sit or stand for the duration of the learning experience (Learning Styles Network, 2003).

In working with adult learners, consideration also needs to be taken to address the barriers that may be encountered. Some of the barriers to adult learning include having various other responsibilities to family, careers and commitments. For others it can include a lack of time, money, child care options or self-confidence. Other problems include lack of reliable transportation or inflexible schedules. Finally, being uninterested in what is being taught or not being ready to learn what they need to is also a problem (Blackmore, 1996).

For many adult patients coming into the ED, there are many distractions to learning new information. Not only is the patient not feeling well, but have other
stressors at hand such as being able to return to work, child care and being in a noisy environment that, at its best, is not a conducive learning environment.
CHAPTER 3

METHODOLOGY

Study Design

The current study is based on a descriptive survey conducted by Henderson and Zernike on 158 patients undergoing abdominal surgery in Australia (Henderson & Zernike, 2001). The investigators examined the discharge information given to patients on pain control and wound care. These patients were hospitalized for in-patient care for up to 7 days. Subjects received a written survey of perceptions of discharge information within 24 hours of being discharged and were followed up with a telephone survey 1-2 weeks after they were home. A comparison was made of the subjects' perceptions of the discharge information at the time of discharge to the time of the telephone survey. Permission to adapt and use the original survey tool was obtained from the researcher (Appendices A, B).

The purpose of this study was to examine the perceptions of ambulatory adult patients seeking treatment in an ED regarding their discharge information. This descriptive survey was tailored to the adult ED patient who is discharged after diagnosis and treatment without being admitted to the hospital. In 2002, close to 89,000 of the 110,000 visits were discharged after treatment in the ED (CDC, 2004). Viral illnesses
were among the most common problems diagnosed along with pain, orthopedic problems, wounds and injuries.

The data for this study was collected by using a telephone survey questionnaire to obtain the information being sought. This study compared differences in the perception of the quality of the discharge education process among several variables including gender, age, educational level and ethnicity.

Sample/Sampling Procedure

The research was conducted in a primarily out-patient setting. The participants involved in this study were a convenience sampling of 30 adult patients seeking treatment in a for-profit, southwestern, metropolitan hospital ED. This convenience sample was chosen from patients that were treated and discharged from the ED on Sunday, Monday, Tuesday and Wednesday mornings, afternoons and early evenings during August and September of 2005. Data collection continued until the sample size of 30 participants had been attained.

The researcher contacted the on-duty physicians and charge nurses to access patients being treated for and discharged without requiring in-patient hospitalization. The researcher made the initial contact with the potential participants after they had gone through the discharge process with the discharge clerks. This contact was made prior to the patient leaving the ED but after receiving discharge instructions from the nurse. This procedure was performed to prevent contamination of the patient’s perception of the discharge instruction process.

The researcher approached eligible patients, explained the study and invited them to participate in the study. If the patient agreed to participate, the researcher described
the study to the patients and provided them with an information sheet (Appendix C) about the study.

The researcher then went over the consent form (Appendix D) with them. Patients who decided to participate in the study then signed the consent form. Patients were asked to provide the researcher with a telephone number. A time to call the patient was arranged one week from the date they were treated in the ED. The date and time was added to the consent form as a reminder to the participant and a copy of the signed consent was given to the participant. The process of distributing information to and signing up participants took no more than 15 – 20 minutes per patient/participant.

Participants met the following inclusion criteria: had been treated and discharged from the ED, is age 18 years or older, are able to speak and write in English and have a telephone number where they could be contacted one week after they were discharged. Only those patients who were treated and waiting for discharge while the researcher was on the premises were included in the study.

Potential participants were informed that the study was confidential. They were assured that their participation was completely voluntary and would not be associated in any way with the care they would receive now or in the future. They were informed that they were able to drop out of the study at any time without reason.

Patients who consented to being a part of the study had their first name, gender, telephone number, date and time of availability added to a contact list (Appendix E). This information is known only to the researcher for the purposes of making telephone contact the following week. This contact list contained a code number for each
participant. Only the participant code number was used on their survey and demographic forms.

Patients who left the ED without receiving written discharge instructions were not eligible to be included in the study. Also excluded was the patient who required admission to an observation or in-patient status.

Prior to the beginning of the study, the approval of the Institutional Review Board (IRB) of the hospital and the IRB committee of the University of Nevada, Las Vegas was obtained.

Data Collection Instrument

The data collection instrument, Patient Survey of After-Care Instructions (PSCI), was developed to focus on the adult ED patient and their perceptions of the discharge instruction process. The PSCI was adapted from the instrument used in the original study by Henderson and Zemike (Henderson & Zemike, 2001) to focus on the ambulatory ED patient for this study. The PSCI includes 7 statements with Likert-type responses ranging from (1) strongly disagree to (4) strongly agree; five yes/no questions; 4 demographic questions and a section for additional comments. The questions from the original survey by Henderson and Zemike (Henderson & Zemike, 2001) were changed from yes/no responses on pain and wound care to Likert-type responses on understanding of the discharge instruction to gain more complete information from the patient. The demographic questionnaire was also included to determine gender, age, race and educational level of the participants. The PSCI was pilot tested on 10 non-nursing staff members chosen at random, in a hospital setting, to examine the clarity and the understandability of the questions in relationship to the information being sought.
Modifications to the survey were made according to the recommendations of the pilot group.

Information regarding the comprehension and completeness of the discharge instruction process were obtained using the 7 Likert scale items (Appendix F). The Likert-type items focused on the patient’s perception of how well they could comprehend the discharge instructions they received. After the data collection was completed, a Cronbach-alpha reliability assessment was conducted on the survey items.

Information obtained through the dichotomous questions focused on whether or not the patient had the need to contact the ED by telephone or by returning in regards to their discharge instructions or if they required another visit to the ED for worsening symptoms. The yes/no questions examined any difficulties the patient may have had with their instruction comprehension as well as deterioration in their health status. They also addressed whether the patient returned to the ED for a reason not associated with the level of their comprehension of their discharge education. The last comment section of the PSCI was used to gain more information on how participants felt the discharge education process could be improved.

Data from the demographic questionnaire was used to examine the possible relationships between comprehension of information and patient demographic variables (Appendix G).

Data Collection Procedure

One week after the patient was discharged from the ED, they were contacted at the telephone number provided to the investigator on the day they signed their consent to join the study. This brief telephone survey took approximately 5 minutes. This one week
time frame was chosen similar to the 1-2 week time frame used in the original study by Henderson and Zemike (Henderson & Zemike, 2001). This time frame allowed the patient time to seek additional information if required.

At the time of the telephone contact, the patient was again asked if they wished to continue participating in the study. If the patient agreed to continue, they were read each of the 7 Likert-type statements. The choices, strongly agree to strongly disagree, were read following each statement as it is read to the participant. The researcher wrote down the responses on the coded sheet (Appendices E, F). The participants were then read the yes/no questions regarding the need for further clarification of discharge instructions or return to the emergency department. Lastly, they were asked the demographic questions.

Limitations

A requirement of the study was a follow-up telephone call. Patients not having a telephone number where they can be reached were excluded. Also excluded were those who were non-English speaking as the investigator only spoke English. The population for the study is patients in an adult emergency department which excluded minor patients and their care givers.

These requirements excluded a large number of people that use the emergency department for their health care. These exclusions included large segments of the population in this south-western metropolitan area which included the homeless, indigent, non-English speaking people and children.

Conducting the study at one hospital in a single emergency department was also a limitation. This limited the participants to those who were living in the general area of that hospital and the instructions given by the nurses in this one facility. While patients
may travel to receive treatment, a wider picture would have been obtained by using various hospitals in the area to reflect the perceptions of the patients' views of instructions of other nurses at other facilities. By using various hospitals, a more complete picture would be obtained.

Another limitation was the use of a solo researcher. The blocks of time that the researcher was not able to spend at the hospital also excluded potential participants who may have met inclusion criteria. Biases may have occurred by the use of the information sheet explaining the study at the time participants were discharged as they may have sought further medical information in anticipation of being called by the researcher.

Analysis

This survey was evaluated for reading level using the Fog formula (Burns & Grove, 2005). According to this formula, this survey is constructed at the 4th grade reading level. Based upon the literature, the average reading and comprehension level of 8th to 9th grade will allow for the greatest number of participants to understand these questions. This was further pilot tested in the pre-study evaluation of the questionnaire in which 10 people were given the questionnaire to read for understandability of the questions. Likewise, the information sheet was evaluated to be at the 5th grade reading level and the informed consent was evaluated at the 6th grade reading level using the Fog Formula (Burns & Grove, 2005).

The Likert Scale data is interval in nature, reflecting perceptions on the part of the patient. Scores on this portion of the survey range from 7 to 28, with 7 representing a low perception of the quality of their discharge instructions and 28 reflecting a high
perception of the quality of their discharge instructions. The dichotomous items and Likert-type items were subjected to the Cronbach-Alpha reliability testing.

A descriptive analysis of participant responses to the Likert-type and dichotomous items of the PSCI was conducted. This descriptive analysis was used to answer research questions 1 and 2.

Descriptive statistics was used to examine frequency analysis of the survey items and demographic variables. To answer research question 3, an analysis of variance (ANOVA) was used to examine the relationship between the demographic variables and Likert-type items on the PSCI measuring patient perceptions of after-care instructions. Data was analyzed using SPSS for Windows, Version 13 (SPSS, 2004). The data did not permit for the responses of the dichotomous questions to be compared with the Likert-type items as there were not enough positive responses.
CHAPTER 4

FINDINGS OF THE STUDY

Introduction

The purpose of this study was to examine the perceptions of the adult emergency department patient regarding the discharge instructions they receive upon discharge from the emergency department. Of interest is whether these patients feel the discharge instructions they received are sufficient to continue to care for themselves at home, if they had all of their questions answered and if they received instructions in a way they could understand.

The questions being answered by this study are:

1. What are the perceptions of the discharge instructions held by the ED patient who is seeking treatment for an illness or injury?

2. Does the ED patient who is treated for an illness or injury have a need for more information or require follow up after being discharged from the ED?

3. What is the relationship between select demographic variable and the ED patients’ perceptions of the discharge instructions they received?
Sample Characteristics

The participants for this study were obtained from a convenience sampling of adults who were treated and released from the emergency department. These patients were seen during the time frames that the researcher was on the premises. Of the 42 participants that initially agreed to the study, 30 completed the survey. The remaining 12 either opted out of the study or could not be reached at the telephone numbers provided. There were equal numbers of males and females who did not complete the study.

Of the 30 participants that completed the study (see Table 1), 11 were male and 19 were female. There were 19 Caucasians, 8 Hispanics, 2 African Americans and 1 Asian/Pacific Islander. Every age category was represented in the study. The 56-65 year old category had 2 participants; all remaining categories had 5-6 participants (see Table 1). Most of the participants either had some college education or had graduated from college with 11 participants in each category. Of the remaining participants, 1 had less than a high school education with the remainder graduating from high school.

Results from Analysis of Research Questions

The reliability of the survey was tested using the Cronbach's Alpha (CA) reliability test. The CA for the 7 for Likert Scale questions was 0.969. The CA for the 5 dichotomous questions was 0.824. Both of these reliability values are very acceptable assessments (Burns & Grove, 2005; Polit & Beck, 2004). The perceptions of each group were examined parametrically for differences between and within the groups using ANOVA. The data was analyzed using SPSS for Windows, Version 13 (SPSS, 2004).
Research Question One.

The first research question related to how the participants perceived their discharge instructions. This was answered through 7 Likert-type statements that utilized a 1-4 point scale. The most positive perception score for this area was 4.0; the most negative was 1.0. When looking at the scores, 1 participant scored the lowest at 1 point and 4 participants scored the highest with 4 points. Looking at the responses to the statements, the perceptions of the participants were relatively positive. Of those who responded, 63% gave scores of 3.0 to 4.0, 23% gave scores that ranged from 2.6 to 2.9. The remaining 10% giving scores less than 1.6. These scores speak positively towards the quality of the discharge instruction that they received.

The first statement (see Table 2) indicated how well the participants felt the instructions were explained to them. There was little variance between genders. Women were slightly more satisfied than men with a mean satisfaction score of 3.1 to 2.9 respectively. There was no significant difference between the groups (F = .075, p = .79).

With regards to the education level (see Table 2), those who had completed high school had a mean satisfaction score of 3.6. Those who had graduated from college had a mean satisfaction score of 2.6 and those who had some college, 3.1. Here, also, there was no statistical significance found (F = .94, p = .45) however the numbers may suggest that there is a decrease in satisfaction with the discharge instruction process as the education level rises.

Ethnicity was examined to determine if this played a role in how well the participants rated their nurse’s explanation of discharge instructions (see Table 2), there is a mean satisfaction score of 3.4 for the Hispanic participants as compared to the
Caucasian mean satisfaction score of 2.9. African American participants had a mean satisfaction score of 3.0. The variability between these groups was much less and no significant statistical differences were found ($F = .18, p = .84$).

A greater variance was noted between age categories. The 18-25 year group had a mean satisfaction score of 3.5. Those in the 26-35 year age grouping had a mean satisfaction score of 3.3. The 36-45 year age group and the 46-55 year age group each had a mean satisfaction score of 3.0. Older participants were least satisfied. The 56-65 year age group had a mean satisfaction score of 2.0, while those over 65 had a mean satisfaction score of 2.8. There was more variability between the groups in regards to age than seen with gender, education level or ethnicity (see Table 2), however, no statistical significance was found ($F = .73, p = .61$).

In looking at the responses for statement 2 (see Table 3), explaining the discharge instructions in a way the patient could understand, there again was no statistically significant difference for the variables examined; gender ($F = .51, p = .49$); education ($F = .54, p = .67$) and ethnicity ($F = .93, p = .42$). The mean satisfaction score for males was 3.2 and the mean satisfaction score for the females was 3.1.

The age of patients had the largest variability for understanding explanations (see Table 3). Each of the groups had a mean satisfaction score of 3.3 with exception for the older participants. A mean satisfaction score of 2.0 was found for the 56-65 year age group and 3.0 mean satisfaction score was found for those over 65. No significant statistical differences were found between the groups ($F = 1.28, p = .33$).

Statement 3 dealt with how understandable the written discharge instructions were (see Table 4). When examining the age groups, the outcome, while not statistically
significant ($F=.65, p=.66$), showed some variability. The mean satisfaction scores for the 18–25 year old age group were 3.5 and 3.2 for the 26-35 year old age group. Each of the 2 groups from 36-55 had a mean satisfaction score of 3.3. The two older age groups from age 56 and over scored lowest with a mean satisfaction score of 2.5.

For statement 3, education showed a greater variation with the college graduate group having a mean satisfaction score of 2.8 and the high school graduates having a mean satisfaction score of 3.4 (see Table 4). The group with some college had a mean satisfaction score of 3.2. Again, there were no significant differences shown ($F = .17, p = .91$) though the numbers may suggest that those in the higher education levels may be less satisfied with the simpler termed instructions.

Ethnicity, for statement 3, had mean satisfaction scores ranging from 2.9 for Caucasians to 3.6 for Hispanics with African Americans having a satisfaction score of 3.5 (see Table 4). There were no significant differences found for ethnicity ($F = 1.29, p = .31$) or for gender ($F = .06, p = .82$).

Having time to understand their DCI was the focus of statement 4 (see Table 5). The mean satisfaction scores ranged from 2.0 for the 56–65 year old age group, to 2.9 for the college graduate group and Caucasian group to 3.6 for high school graduate group. There was no statistical significance noted (see Table 5).

Statement 5 looked at how well patients had their questions related to their discharge instructions answered by the nurse. While not statistically significant (see Table 6), the greatest variation in mean satisfaction scores was shown for age with the 56–65 year old group at 2.5 and the 18–25 year old group at 3.5.
Having the nurse verifying with the patient for understanding of their discharge instructions was the focus of statement 6. There were no statistically significant differences found among the variables examined (see Table 7). Here again, those in the 56-65 and > 65 year old categories had the lowest mean satisfaction score; 2.0 and 3.0 respectively. The high school graduate group had the highest mean satisfaction score at 3.4.

The last statement pertained to the nurse giving the participant enough information for them to be able to continue their care at home. Once again there was no statistically significant difference for the variables examined (see Table 8). The mean satisfaction scores ranged from a low of 2.0 for the 56–65 year old age group to a high mean satisfaction score of 3.5 for the age groups of 18 -25 year olds and the 26-35 year olds.

Research Question Two.

The second research question examined whether or not participants had the need to either seek further clarification of their instructions or further treatment for their illness. The five dichotomous questions examined this aspect (see Tables 9 – 13). One participant contacted the ED regarding discharge instructions. An additional 5 participants returned to the ED for the same problem. Those who returned to the ED sought further treatment because they experienced a worsening in their condition. No one returned to the ED because of a lack of understanding regarding their discharge instructions.
Research Question Three.

This research question looked at whether or not there were differences in the perception of discharge instructions related to gender, age, educational level or ethnicity. While there were some variances that were previously discussed, especially in the 56-65 year old age group, there were no statistically significant findings observed (see Tables 2-8).

When asked if they had any other comments on their discharge instruction process, seven participants responded with comments that ranged from being very positive to being very negative. Positive comments included “very well done”, “very professional, and “wonderful”. Negative comments included “I didn’t get any instructions”, “they rushed me out and didn’t give me any time, they said I was finished and they needed the bed”,”I’m from out of state, and no one took the time to explain the Nevada law on narcotics to me on the 1st visit” and finally, “They told me to go AMA (against medical advice) if I wasn’t happy, I was really sick and they didn’t seem to want to take the time. I ended back there 2 days later because I was so sick”.

Summary

The PSCI indicated acceptable reliability for the Likert-type statements and the dichotomous questions. There can be no comparison between the PSCI used in this study and the original tool used by Dr. Henderson in her study as there was no data published on her tool. Although some variances were noted, the survey did not yield any statistical significance within or between groups.
CHAPTER 5

DISCUSSION, RECOMMENDATIONS AND CONCLUSIONS

This study was developed and undertaken to investigate the educational needs of the emergency department patients. Due to the wide diversity of educational needs of the patients who use the emergency department, one style of patient education does not fit each patient or even the same patient at different visits. Consideration must be taken with regard to age, life experiences, and level of education as well as culture. Nurses must consider the patient's physical condition, emotional stressors and level of support (Bastable, 2003).

Discussion of Results

The results obtained in this study were from a small group of participants. The use of a solo researcher and single facility also weigh into the results obtained. While this study found little statistical significance, the results would carry a greater weight if carried out at multiple facilities with a variety of researchers and a larger number of participants, ideally more than 100.

The written instructions that were used for patient education were evaluated to be at the 8th grade level using the Fog formula (Burns & Grove, 2005). This falls within the average comprehension level found in the literature (Duffy & Snyder, 1999; Monsivais & Reynolds, 2003). This also is within the stated education level of most of the
participants in this study. It is unknown if the one participant had attained at least an 8th grade level of education and reading comprehension. The instructions being written at this level would explain why the majority of the participants rated the understanding of the written instructions at or around 3 out of a possible 4 points.

On each variable or question, there was little difference in how patients responded with regards to their gender, race or, in most instances, their education level. This speaks highly of how the patient’s view their nurse’s ability to give them the information they need to care for themselves once they return home. Since most patients seek care and information at a point when they are no longer able to manage on their own, it is imperative that nurses give them the tools they need and teach them how to use them as a means to maintain their level of independence (Callaghan, 2003; Falvo, 2004).

Seeking assistance and treatment in the ED fits well with Orem’s Self-Care Deficit Theory. As previously discussed, Orem’s Theory of Self-Care Deficit occurs when there is a gap in patient’s ability to meet their needs. It is at this time when they seek assistance. This assistance can be offered as physical care (total or partial), support, guidance or teaching as a means to return to a normal level of functioning (Tomey & Alligood, 2002).

While 10% (3 participants) were very unhappy with the quality of their education, the majority, 67% of the participants (20) scored 21 or more points. The remainder (23 %) scored between 18 to 20 points. This indicated that the participants in this study were generally satisfied with the quality of the education that they received in the ED.

While the study found no statistical differences in the perceptions of patient’s with regards to their discharge instructions, the more negative perceptions of older
participants are concerning. With each dimension (explanation of instructions, written instructions and comprehension of instructions) of the discharge education process examined, the “56-65” age group gave consistently low scores. This finding needs to be weighed with the reminder of only having 2 participants in this age grouping. This group was followed by those “over 65”.

These findings are consistent with findings in the literature suggesting that older people are more likely to have a diminished capacity for literacy and understanding (Andrus & Roth, 2002; Brooks, 1998). They may also less able to consistently learn or remember what they had previously learned (Kerka, 2003). Additionally, neurological senses (including vision, hearing and motor responses) begin to diminish in the age group making educational interactions more challenging (Bastable, 2003).

Of all age groups, it is the older adult group who is the most likely to be living with multiple chronic illnesses. Usually, management of these conditions requires the use of multiple medications (Hayes, 1999). Multiple, coexisting diseases and complex treatment regimens, along with the decrease in cognitive and neurological ability may increase the risk of poor health outcomes in this population. This can be especially important if they have been dealing with 1 or more chronic diseases for a relatively short time period versus having dealt with the disease for a longer period of time. Understandably, these patients may require not only more teaching but also more time in which to understand what they are being taught.

Patients over the age of 65 are one of the highest users of the emergency department (CDC, 2004) and also the fastest growing segment of the population (Bastable, 2003). Almost 20% of the visits made to the ED were for those over the age of
65 (Hayes, 1999). With 36% of medical expenditures being spent on this age group (Bastable), emergency nurses will be seeing more of these patients. Nurses need to not only spend more time, but be more focused on the unique needs of these patients.

Interactions that would help the patient in this age group retain what is being taught need to focus on teaching to their specific need or situation. They also need to be given positive reinforcement. Allowing adequate time for them to process the information they have been given and enough time to respond is also essential (Bastable, 2003). Treatment modalities may also need to be adjusted. It may be safer to place an elderly person with a fractured fibula in a walking boot with a walker than in a splint with crutches with them being non-weight bearing.

Also of special interest was the education level variable. The group that was the least satisfied was the “college graduate” group. This may suggest that this group of patients is looking for more information than what they are getting. It may also mean, that being more educated and having some understanding already, these patients may want information that is pertinent and more in depth (Freda, 2004; University of Toledo).

Education level is one of the areas that nurses need to assess their patients for so they can tailor the educational process to the patient’s level of understanding. While it is important that patients understand what they are being taught, it is more important that the learning takes place at the educational level they are at (Kerka, 2003). Some basic foundations of adult education must be considered: whatever is being taught should be relevant to what is happening in their life; they choose to learn when they are ready; they need time to process what they have learned and can process the new information if they
are able to relate it to their particular experience; and above all, they need to feel respected as an individual (Bastable, 2003).

In the emergency department, it is often not standard procedure to ask patients what their educational background is. Emergency nurses care for patients with all levels of cognitive skills and must be able to effectively teach them how to continue their care once they return home. One method of accomplishing this is asking them what they know about their condition. Since patient education occurs with every patient/nurse interaction; nursing needs to make the most of each interaction. Patient teaching need not be a formal interaction to be successful; many teaching moments can take place in the form of a conversation during treatment (London, 1999; Lassman, 2001).

With regards to ethnicity, there were no significant differences among groups. However, on all but 2 of the dimensions, the “Caucasian” participants indicated a lower perception than the other ethnic groups while the “Hispanic” participants consistently had the highest perception. This suggests that culture does play a significant role in how nurses need to assess their patients. The Hispanic culture is one that shows high levels of respect for authority (Bastable, 2003). Because of this, they may be more apt to agree with than disagree with the researcher which could account for their high levels of satisfaction.

Another factor that could enter into these relatively high satisfaction findings is the educational level of the Hispanic participants in this study. While national studies indicate that approximately only 10% of Hispanics finish high school (Bastable, 2003), all of the Hispanic participants in this study had completed high school with most of them having some college.
It should also be noted that the Hispanic participants who participated in this study were able to speak English and as such, these findings may not be reflective of the Hispanic population as a whole. It should be further noted, that due to the language barriers that often exist with non-English speaking patients, lack of the use of interpreters can have a dramatic impact on the inability to understand or comprehend the discharge instructions these patients are given.

A group of patients not included in this study, but one seen frequently in emergency rooms are the homeless and indigent population. The members that make up this group of patients often have problems with mental illness, alcohol and drug abuse and less than a high school education (MacDonald Thompson & Glick, 1999). The inability to follow up with this population may explain the lack of participants with less than a high school education in this study.

Homeless people also present a challenge for teaching since they may have the dependency and mental health issues that interfere with cognitive functioning. Suggestions to help with the comprehension with this group of patients include using words familiar to the patient, using measurable terms with frequent examples, using short sentences or pictures and asking them to explain to you what they know are all effective ways of teaching with this group of people (Brooks, 1998).

Recommendations for Further Study

Sample Size.

The sample size was discussed previously as being a limitation of the study along with the use of a single facility and solo researcher. To further support the findings of
this study, it should be replicated using more facilities and a larger number of participants.

This study was completed using a minimum number of participants from one Southwestern emergency department. Due to the limited number of hours the researcher was available, there also were a limited number of nurses involved in treating the participants in this study. To strengthen the results, it is important to repeat the study not only using a larger number of participants but to also vary the days and times those participants are contacted and increase the number of facilities surveyed.

*Non-English speaking patients.*

A study that captures the non-English speaking population would also be in order. This could be accomplished by having either a bilingual researcher or translating the tool to other languages. Obtaining the perspectives of the non-English speaking patients carries a variety of implications not the least of which is how they received their discharge instructions, such as written and/or verbal in English or in their native language.

*Homeless patients.*

The perceptions of the homeless were not obtained in this study related to the inability to contact them one week later for follow up. The homeless is a population that utilizes the ED frequently (MacDonald Thompson & Glick, 1999). The method of surveying this patient population could also be altered to obtain their perceptions at the time of discharge. To ascertain whether or not they returned to the ED in the week following, a medical chart review could be accomplished looking at the return factor and if further treatment was for the same problem.
Caregivers of children.

Another connected area would be to include parents of children who have been treated to ascertain the extent of the instructions they received for the continued care of their children. Since this study was completed in an adult ED, children, and thus their families, were not included. While every visit to an ED is a stress producing event, when the ill patient is a child, the anxiety level of the caregiver can be extremely elevated. This elevated anxiety level can lead to barriers in education, especially if it requires the parents to learn a new skill in order to care for their child at home (Bastable, 2003).

Change in perspective over time.

This study dealt with the patient’s perceptions at 1 week post-discharge. An area of interest would be how the patient’s perspectives change over a period of time. A better understanding could be obtained of how well patients perceive they are being instructed upon discharge from, for what many, is a stress inducing experience. This could be obtained by asking the survey questions at discharge. The follow up survey could then be completed 1 week later to determine how well they remember what they were taught. This result could then be compared with the results that have been obtained from similar studies on the in-patient population.

In the initial study completed by Dr. Henderson, this aspect was included. In her study the participants were in-patients hospitalized for 1-7 days. Their perceptions of the teaching were obtained at discharge and compared to their perceptions 1-2 weeks later.

Wait times.

A few participants had negative experiences as evidenced by their comments during the telephone survey. An area of interest would be to note whether or not the
length of time a patient spent in the emergency department had a bearing on their level of satisfaction with their discharge instructions. This time would need to be separated out into time spent waiting to be seen in the waiting department, time waiting in treatment rooms for treatment or results and length of time from completion of treatment to time of discharge. This knowledge may be helpful to emergency department personnel concerned with increasing the overall quality of the patient experience.

Overcrowding issues have become common place. It is not unusual for ambulances in Las Vegas to hold patients in hallways for several hours while waiting for ED staff to take over care of the patient (Clark & Normile, 2002). One of the factors that impact on this wait time is the lack of in-patient beds. Admitted patients can be held in the ED for up to 34 hours (CDC, 2004; Clark & Normile; Frank, 2001; Washington et al., 2002).

The use of the ED by admitted patients pushes the patients who are seeking treatment into waiting areas. Waiting times in our nation’s ED’s have increased dramatically with some facilities reporting wait times greater than 3 hours from what had been less than 1 hour. In some facilities, as many as 50% of the patients waiting left without being seen due to the long wait times (Washington et al., 2002).

Long wait times have been associated with less than optimal outcomes be it a decline in the health of the patient or an increase in the resources needed to return the patient to a previous level of function (Clark & Normile, 2002; Glick & Thompson, 1997; MacDonald Thompson & Glick, 1999). These wait time could be due to long waits in the ED’s (Washington et al., 2002) or patients putting off seeking help until they are seriously ill and require hospitalization (Hackenschmidt & Malone, 2003).
Perspectives of nurses.

On the other end of the spectrum are the perceptions of nurses. Patient education is a nursing function and a requirement to help patients improve their health status. One of the questions that could be asked would be how much time nurses spend in educating their patients. This area would need to look at formal patient education and informal education as well. Informal education can occur each time a nurse performs an intervention with a patient or whenever a patient asks the nurse a question. Informal education is no less important than formal education (London, 1999).

When nurses view patient education as an independent job function, it tends to be placed behind other nursing tasks (London, 1999). Patient education is a requirement that needs to be documented for each patient. In light of the time constraints that are placed on nurses in crowded ED’s, this formal education can become rushed with a less than desired outcome. When the educational component is integrated at each intervention, there is not only more consistency, but the patients have time to think about what they have learned and have the opportunity to ask questions (London).

Another question would be how much is assumed by nursing about their patient’s need for education. Included would be how do nurses assess how much their patient feels they need to know in order to return to their normal level of functioning. This assessment can be done through questioning which would not only help the nurse obtain a level a cognitive ability but also an idea of the patient’s belief system as it deals with health care issues (Bastable, 2003).

The findings in this study raise questions that deal with how well nurses evaluate their patients for educational needs along with the amount of time spent educating
patients. The participants scored relatively high when it came to their instructions. As previously stated, patient education occurs with every interaction. Education can occur through conversation, talking to patients about the procedure or treatment that they are going through or by example through a dressing change.

Conclusions

The discharge educational process at this facility involved various aspects of teaching and learning. Patients were given verbal instructions as evidenced by statements 1 and 2 on the Likert-type survey (Appendix E). Written instructions were also given to the patients as evidenced by statement 3 on the survey. Patients also were given time to assimilate the information and had their questions answered as demonstrated by statements 4 and 5. Comprehension was assessed based on statement 6 while the success of the discharge education was evaluated in statement 7.

While the results from this study found no statistical differences in the perceptions of patient’s with regards to their discharge instructions, some of the findings indicate areas of concern, specifically the age of the patient. Over the age of 55 is the age where our patients are starting to show up with chronic problems and their ability to understand and learn may be beginning to fail.

It is during this time when they need to know more, not less, about what is happening with them. They need to become more involved with health care staff to help them maintain as much independence as possible. It is a time when they should be encouraged to ask as many questions as possible to learn as much as they can to remain healthy and productive within their families and communities.
These patients deserve to be allowed the time they need to process the information they are receiving by health care personnel and to have the information repeated if they so need it. All patients, regardless of age, need to have any health care information and education given to them at the level they can understand and in a language they can understand.

Nurses know what the end result of their educational process with the patient should be. If the patient does not know what questions to ask, the nurse may ask the following simple set of questions and explanations:

1. Tell me what brought you in today? Investigate. The real reason may not be the stated reason.

2. What do you know about your illness/injury? Let them know what to expect, not only during their ED visit, but also in the days, weeks and maybe their lifetime ahead. This also allows for the combining of cultural beliefs with the medical necessities.

3. Is there anyone at home to help you or do you live alone? Support systems are important. Patients may not be emotionally able to handle what is happening with them and may need outside intervention from family or friends.

4. What do you know about how to take care of the problem that brought you here today? Do not assume that the patient has not already gotten instructions from another health care worker. Also, the patient may have some knowledge related to prior experience or the experiences of others. Some of that information may no longer be pertinent with the advances in
medical knowledge and treatments. At one time someone with a head injury was not allowed to go to sleep because it was believed that if they had a concussion, they would not wake up.

It is only when nurses take the time to talk with their patients can they learn the needs of their patients. As nurses involve the patients in becoming active partners in their health care, nurses need to give them the support while they develop the skills and knowledge required. In the case of emergency department patients, optimal self care is inextricably intertwined with the quality of the instructions provided by nurses.
# TABLES

Table 1

Valid Frequency of Participants by Group & Category (for question 1-7)

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Table 2

Question 1: My nurse explained to me how to care for myself before I went home.

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Question 2: My nurse explained my DCI in a way I could understand.

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Question 3: My DCI were written in a way I could understand.

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Question 4: My nurse gave me time to understand my DCI.

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Question 5: My nurse answered my questions about my DCI.

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Question 6: My nurse asked me if I understood my DCI.

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Question 7: My nurse’s instruction helped me to care for myself at home.

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Question 8: Did you need to contact the ER after you returned home about your DCI?

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Question 9: Did you need to return to the ER after your first visit for the same problem?

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Question 10: If you returned to the ER was it because you did not understand your DCI?

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Question 11: If you returned to the ER was it because your condition got worse?

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Question 12: If you returned to the ER was it because of another reason?

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<tr>
<td></td>
<td>Hisp.</td>
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APPENDIX A

LETTER OF PERMISSION TO REPLICATE STUDY

Dear Ms. Henderson:

I am a graduate student at the University of Nevada, Las Vegas enrolled in the Nurse Educator track.


I was very interested in your study as I feel patient discharge education is a very important aspect of complete patient care. I have gone back to your study various times during my graduate studies and continue to refer to your work.

The study I am doing will be looking at the emergency department patient population instead of surgical patients. In doing this research, I would like to use similar data collection tools that you used in your study. Any help you can give me in finding these tools would be greatly appreciated. I am planning on doing my data collection in January or February of 2005, with completing the study in late March.

Thank you for any help you can give me.

Sincerely;

Darlene Brown
APPENDIX B
RESPONSE TO LETTER OF PERMISSION TO REPLICATE STUDY

Dear Darlene,

The tools were very simple

The first survey was on one sheet.

It asked demographic information age, sex, operation etc.

It then asked the questions along the following lines -

Did you receive information prior to discharge about wound care YES/NO

If yes, did you feel this information was sufficient to care for yourself at home

YES/NO

Did you receive information prior to discharge about pain relief YES/NO

If yes, did you feel this information was sufficient to care for yourself at home

YES/NO

The most important aspect of the study was the follow-up telephone calls
that asked the whether the believed if the information was still appropriate. The telephone calls also asked whether they had sought further information from another health source.

If you are undertaking this type of study in an emergency department it would seem that the pain question would be appropriate however the you may need to identify the main reasons why patients access the emergency in your study to identify other relevant questions.

Of particular interest would be if other health related information was sought and how this was done and also what was the final outcome - eg medications from the pharmacy, emergency hospital admission etc.

Good luck - your work sounds interesting

kind regards

amanda

Dr Amanda Henderson
Nursing Director - Education
Education & Research Unit
Princess Alexandra Hospital & District Health Service
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Woolloongabba Qld 4102
Phone: +61 7 3240 2092
Fax: +61 7 3240 7356
email: amanda_henderson@health.qld.gov.au
APPENDIX C

INFORMATION SHEET

Perceptions of discharge education by the emergency department patient

This is a study looking at how patients view the quality of their discharge teaching. This study is being done to help improve the discharge teaching process for the patient. The results of this study may be published in nursing journals.

This study is being done by Darlene Brown, a graduate nursing student at UNLV. This study is being done under the direction and guidance of Dr. Lori Candela of the UNLV – School of Nursing.

You have been selected for this study based upon your being treated in this emergency room. You are an adult over the age of 18. You speak English. You have a phone number where you can be reached for interviewer contact.

The study consists of ranking 6 different areas of your discharge teaching process on a scale of 1 (strongly disagree) to 4 (strongly agree). You will also be asked 3 yes or no type questions related to your discharge teaching process. You can add any comments. Finally, you will be asked 4 background questions on race, gender, age and educational level.

The personal information obtained in this study will remain private and is being obtained to ensure the integrity of this study. The results of this study will be reported without you being identified. The data collected will be stored in a locked cabinet in the School of Nursing at UNLV for 3 years at which time it will be destroyed.
APPENDIX D
INFORMED CONSENT

University of Nevada, Las Vegas
School of Nursing

TITLE OF STUDY:
Perceptions of discharge instruction by the emergency department patient

You are invited to help in a research study. The purpose of this study is to look at the discharge teaching process as seen by the emergency room patient. Discharge teaching is important in helping patients learn how to care for themselves and their families once they return home.

You are being asked to help in the study based upon being treated and discharged from the emergency room.

If you agree to help in this study, you will be asked to give a phone number where you can be reached 1 week after your discharge from the emergency room. During this phone call, you will be asked about your discharge teaching process along with basic background information. You will not be given any medical advice by the researcher at any time during the study.

The expected benefits of this study will be a better idea of what patients may need in the way of discharge teaching. There are minimal risks for helping in this study. There will be no financial cost or benefit to you to help in this study. The study will take no longer than 10 minutes of your time.

Your helping in this study is voluntary. You may refuse to help in this study or in any part of this study. You may quit at any time without reason. You are encouraged to ask questions about this study any time during the research period. Any questions you may have about your medical care you need to ask your doctor or the nurse who took care of you.

If you have any questions or concerns about the study, you may contact either Darlene Brown or Dr. Lori Candela at 895-2443. For questions regarding the rights of research subjects, any complaints or comments regarding the manner in which the study

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Perceptions of discharge instruction by the emergency department patient

is being done you may contact the UNLV Office for the Protection of Research Subjects at 895-2794.

All personal information gathered in this study will be kept completely private. You will not be identified in any written or oral materials. All records will be stored in a locked room at UNLV for at least 3 years after the study is done. After that time, the information will be destroyed. The information gathered from this study may be used in nursing journals or presentations.

By signing this consent form, you allow the collection of your name, phone number and diagnosis for the purpose of conducting this research study. You also allow this information to be released to the UNLV Institutional Review Board, the Food and Drug Administration, The Sunrise Hospital Institutional Review Board, and the doctors, nurses, and research personnel caring for you during the course of this research study, if asked. Once your information has been disclosed to anyone outside of this study, the information may no longer be protected under this authorization. No identifiable information about you will be published. This authorization expires upon completion of the research study.

I have read the above information and agree to help in this study. I am at least 18 years of age. I have received a signed copy of this form.

<table>
<thead>
<tr>
<th>Printed Name of Participant</th>
<th>Participant Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Darlene Brown</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Researcher Name</td>
<td>Researcher Signature</td>
<td>Date</td>
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APPENDIX E

CONTACT LIST

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APPENDIX F

EMERGENCY DEPARTMENT PATIENT SURVEY FOR
AFTER-CARE INSTRUCTIONS

Circle the number that most closely describes your experience with your discharge instructions from the emergency department.

<table>
<thead>
<tr>
<th>Strongly Agree (4)</th>
<th>Agree (3)</th>
<th>Disagree (2)</th>
<th>Strongly disagree (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>My nurse explained to me how to care for myself before I went home</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>My nurse explained my discharge instructions in a way I could understand</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>My discharge instructions were written in a way I could understand</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>My nurse gave me time to understand my discharge instructions</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>My nurse answered my questions about my discharge instructions</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>My nurse asked me if I understood my discharge instructions</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>My nurse’s instruction helped me to care for myself at home</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

Did you have need to contact the emergency room after you returned home about your discharge instructions?  
Did you need to return to the emergency room after your first visit for the same problem?  
If you returned to the emergency room, was it because:  
- You did not understand your instructions  
- Your condition got worse  
- Other reason  
Other comments on your discharge instruction process.
APPENDIX G

EMERGENCY DEPARTMENT PATIENT SURVEY

FOR AFTER-CARE INSTRUCTIONS

DEMOGRAPHICS

Male ______  Female ______

Age:  18-25 ______  46-55 ______

26-35 ______  56-65 ______

36-45 ______  Over 65 ______

Highest education level:

- Less than high school education
- High school graduate
- Some college
- College graduate

Race:  African American

Asian/Pacific Islander

Caucasian

Hispanic

Middle-Eastern

Native American
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Appleton, Wisconsin 54913-2277

Associate of Science Degree, 1990
UW-Center, Fox Valley
Menasha, Wisconsin 54952

Bachelor of Science, Nursing, 1994
Bellin College of Nursing
Green Bay, Wisconsin 54305

Honors and Awards:
1993 -- St. Elizabeth Hospital Auxiliary Scholarship
    American Legion Scholarship
    Elenore and Emory Ansorage Scholarship
    Margaret and Robert Nelson Scholarship
    Security Bank Scholarship

1994 -- Wisconsin League of Nursing Scholarship
    Patricia and Fred Baer Scholarship
    Bellin Auxiliary Scholarship

2003, 2004 -  Advanced Nursing Traineeship Grant
Thesis Title: Perceptions of Discharge Instructions by the Emergency Department Patient

Thesis Examination Committee:
Chairperson, Dr. Lori Candela, Ed.D., RN, CCRN
Committee Member, Dr. Cheryl Bowles, Ed.D., RN
Committee Member, Dr. Carolyn McCarroll, Ed.D., RN
Graduate Faculty Representative, Dr. Chuck Regin, Ph.D.