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Patient Education in the Emergency Department

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by

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Abstract

Patient education is a core component to the practice of nursing in many countries, including the United States. Emergency department nurses are often overwhelmed with the number of patients they must care for in short amounts of time. The patients are often in varying stages of evaluation and treatment, and the nurse may be involved in one-on-one interventions with these patients. This can leave little time for patient education, especially if the nurse does not feel like the patient education is meaningful or useful. Various factors can influence the ability and desire of the emergency department nurse to provide proper patient education. This research study examined these factors in relation to the emergency department nurses' experience and educational levels. Surveys were sent out to 99 emergency department nurses in the Carolinas and Georgia, with 31 surveys being returned. While there was not sufficient response to approach a significance level of 95%, the trends did indicate that nurses felt that time was a limiting factor to patient education. Other limiting factors included lack of patient interest and lack of follow-up systems. Nurses also felt that patients do not try to change their habits or lifestyles based on the nurses' educational interventions.

Acknowledgments

I would like to express my thanks and love to my wife for putting up with my path to my Master's Degree and helping to encourage me to complete this journey. I would like to thank Dr. Susan Lane for her encouragement and support during my hunt for a topic and the first part of my thesis work. I would further offer thanks to Dr. Janie Carlton for picking up the end of my thesis work and helping me finally complete the part of the Master's program I dreaded the most.

TABLE OF CONTENTS

List of Figures

List of Tables

CHAPTER I

Introduction

Emergency department nurses are typically responsible for providing the education and explanations required during the emergency department visit and the discharge process. Emergency department nurses must, therefore, have a positive attitude about patient education and health promotion and be able to communicate needed details to the patients and their families or caregivers at a level they can comprehend.

Health promotion and patient education has become increasingly important over the past several decades. The increasing disease spectra, prevalence of chronic disease, complexity of health problems and comorbidities, and shorter duration of inpatient treatment all increase the burden on health care practice (World Health Organization, 2009).

Problem Statement

Effective two-way communication during emergency department visits is a key factor in the continuity of care and promotion of health for the patient but is often overlooked or poorly done. Patient education and discharge instructions include three basic tasks (Samuels-Kalen, Stack & Porter, 2012). These basic tasks are to communicate crucial information, verify comprehension of the information, and help clear any confusion or misunderstanding about ongoing patient care and wellbeing.

All too often, discharge instructions and patient education are limited to basic forms, basic information and prescriptions, and any other health promotion is incomplete at best. While studies have focused on specific illnesses or complaints, education by physicians and inpatient health promotion and discharge education, few studies have

actually evaluated the health promotion activities, general discharge instructions, and education performed by emergency department nurses.

Significance

Over ninety million Americans are unable to fully comprehend how to properly care for their own medical needs. Health related materials are often written at a level above the patient's reading ability. The Emergency Department is especially prone to this due to the limited literacy of many emergency department patients. While emergency department discharge instructions are an integral part of the care for those patients discharged from the emergency department, some studies have shown that 78% of discharged patients do not have a complete understanding of their discharge instructions (McCarthy et al., 2012).

Purpose

The purpose of this study was to examine the perceptions of emergency department nurses regarding patient education and health promotion in the emergency department.

Theoretical/Conceptual Framework

Orem's Self-care Deficit Theory, and more specifically the component theory of Self-care, was used as the framework for this study. While Orem did not specifically define health promotion in theoretical terms within the Self-care Deficit Theory, review of early literature suggested that health promotion was important in the development of the concepts used in the theory (Hartweg, 1990).

Orem's theory is complex and contains many presuppositions and propositions. The overall theory is formed by three nested theories, the outermost and encompassing

being a theory of nursing systems. Within this encompassing theory falls the theory of self-care deficit which in turn encompasses the theory of self-care (McEwen & Wills, 2011).

Orem formulated three categories of nursing systems under which all patients could be categorized. These were wholly compensatory, partly compensatory, and supportive-educative. Under the supportive-educative system, the patient is fully capable, mentally and physically, of providing self-care and the nurse is responsible for supporting, guiding, and teaching the patient in order to facilitate their self-care. This teaching and support may be in the form of explaining the pathophysiology of the disease process to the patient, educating the patient and caregivers about the medications the patient is taking or providing counseling and support in life-style changes to improve the patient's medical conditions (Clark, 1986). The majority of emergency department patients will fall into this final nursing system (See Figure 1).

Orem also broadly described three sets of limitations to self-care. These were described as limitations to knowing, limitations of judgment and decision making, and limitations of restriction on result-achieving courses of action. These limitations can restrict achievement of self-care and therefore promotion of a patient's health and well-being (Jaarsma, Abu-Saad, Dracup & Halfens, 2000).

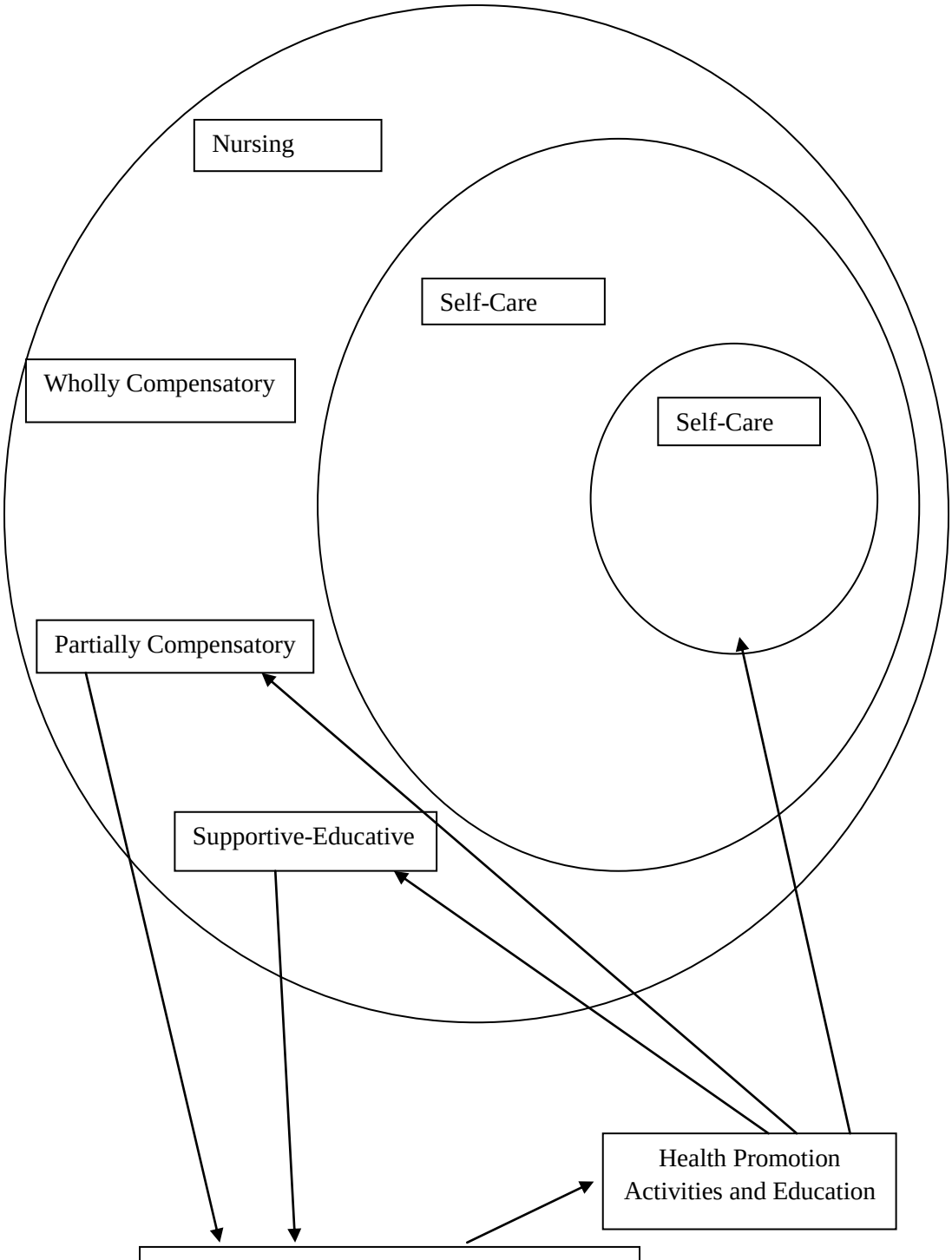

Figure 1. Orem's Self-Care Theory System with Health Care Promotion

Research Questions

The questions examined in this study were:

1) Do nurses with a higher level of emergency department experience have a higher positive attitude toward health promotion and patient education during the emergency department visit and at the time of discharge?
2) Do nurses with a professional certification have a higher positive attitude toward health promotion and patient education during the emergency department visit and at the time of discharge?
3) Do nurses perceive that time limitation is a barrier to proper patient education and health promotion in the emergency department?

Definition of Terms

Patient education has been defined as the educational activities a nurse directs toward their patient (Friberg, Granum, & Bergh 2012). The terms patient education, patient education work, patient education duties, and patient education practices may be used interchangeably in this study.

Health literacy is defined as the cognitive and functional skills needed by a person to make health-related decisions. Health literacy is limited in approximately 25% of the population, which in turn leads to increased expense and is associated with adverse health outcomes and poor health (Samuels-Kalen et al., 2012).

High level of emergency department experience is defined in this study as a nurse having at least eight years of active emergency department experience. This number was chosen as it is the average number of years of experience of the respondents to this study.

Positive attitude was determined by the nurses' perception of effectiveness as evidenced by survey question number 13 and perception of importance as evidenced by question number 14 and the last two statements in question number 15 (see Appendix A).

Summary

In the emergency department setting, the nurse encounters many patients who could be helped to promote their own healthcare through improved counseling and education, both during the emergency department visit and at the time of discharge from the department. Many of these patients do not routinely seek medical attention from primary care practitioners and many also have limited health literacy. Studies have reviewed health care promotion education and activities by physicians and by nurses during the patient's inpatient admission, but little research have been done on health education and promotion during emergency department visits. Emergency department nurses are under time constraints to move patients in and out of the department and may also be reluctant to approach patients concerning improving their self-care. This study evaluated the frequency with which emergency department nurses performed health promotion activities and the importance they attached to these activities.

CHAPTER II

Literature Review

All too often, discharge instructions and patient education are limited to basic forms, basic information and prescriptions, and any other health promotion is incomplete at best. While studies have focused on specific illnesses or complaints, education by physicians and inpatient health promotion and discharge education, few studies have actually evaluated the health promotion activities, general discharge instructions, and education performed by emergency department nurses.

Literature Related to Statement of Purpose

In the review of literature, the Cumulative Index for Nursing and Allied Health (CINAHL) and the Academic Search Complete were queried using the key terms Emergency Department and patient education. The searches were also limited to full text, peer reviewed articles with publication dates after January 2005. These queries resulted in approximately 34 and 60 articles respectively. Many of these articles dealt with telephone follow-ups, outpatient settings other than the Emergency Department, Case Management/Discharge Planning in the Emergency Departmen,t and Inpatient Patient Education. Only two articles were found dealing with the actual practices and attitudes of registered nurses regarding patient education in the emergency department (Taggert, 2009; Han, Barnard, & Chapman, 2009).

Emergency Department Patient Education

Asthma education was addressed in several studies. Patient education is an important part in asthma management, and emergency department educational interventions had a significant impact on the confidence levels and abilities of parents

and guardians to properly manage their children's asthma in the first 14 days following a visit to the emergency department. These interventions were used in a feasibility study of the effectiveness of computer assisted education in the emergency department setting. The study included 69 children aged 3 - 18 years. The children were exposed to a computer assisted educational program on the disease and its management. Fifty-six of the children found the program easy to use and there was a 13% improvement in the knowledge levels of the patients. The children's well-patient visits also improved over the subsequent nine months when compared to the control group (Joshi, Lichenstein, Rafei, Bakar, & Arora, 2007).

Patients are often receptive to education while in the emergency department and this education can be retained for several weeks as demonstrated by telephone follow-up interviews. In a study of 296 emergency department asthma patients, all patients were given information on asthma, instructions on the use of peak flow meters, and asthma brochures. The intervention patients were then also given a self-management workbook, a behavioral contract, inhaler training, and telephone reinforcement. The very act of being involved in a study seemed to improve the return rate of patients for asthma exacerbation as compared to visit rate before being involved in the study, as both the study group and control group showed improvement in this area. Participants who had improvement in return visit rates also were likely to have at least a high school education, a smoking history (previous or current) at the time of study enrollment, and a history of previous hospital admissions which originated in the emergency department (Mancuso et al., 2011).

Emergency departments are also an area that often presents a problem for hospitals' satisfaction scores. The Joint Commission and the Department of Health and Human Services have been increasing the requirements for improved patient satisfaction throughout the hospital environment and this is now linked to payment, as well as reaccreditation. In a random sample of emergency department patients, a two page survey was used to explore patients' perceptions of an educational brochure. The brochures explained the emergency department processes and reasons for extended waits. While there were several limitations identified in the study regarding the nature of the patients included in the study, it was found that the brochure helped the patients better understand the nature of emergency department visits. The study did not, however, provide indications that the brochure helped improve the satisfaction scores (Messner, Reck, & Curci, 2005).

Printed patient discharge instructions should include basic "need to know" information and be constructed to the appropriate cognitive level for readability and understanding. While developing new patient discharge education materials, the concepts of clarity, simplicity, use of pictures, and limited but essential information were evaluated by focus groups and then emergency department patients (McCarthy et al., 2012). This was a preliminary evaluation for the creation of the materials and a broader study was planned for the future. Through the use of the focus groups and limited group of patients, the evaluation showed that the use of visuals in the instructions helped the patients be more receptive and attentive to the written portions of the instructions. Short focused messages, limited to the two or three most important concepts helped with retention and use of "plain language" improved understanding. Interestingly, while the

newly developed instruction documents were preferred for understandability and clarity, when presented with commercially prepared documents, the study participants found the commercially prepared documents were more visually appealing as the new documents had been simply printed as documents without any additional formatting (McCarthy et al., 2012).

Patient Education in Other Settings

The uses of different educational methodologies were also supported by studies of in-patient and out-patient settings. The use of individual in-person education is sometimes necessary, especially if the patient has limited health literacy. In a study of patients seen in the office and outpatient settings, children and their families were provided in-person education utilizing written and verbal instructions as well as demonstrations. Written education materials were designed for the reading levels of the recipient groups. The patients and families also received written "Asthma Action Plans" which were clearly stated and contained details on symptoms as well as triggers for treatment actions. Findings included that the education based on the health literacy of the patient population can impact the overall cost of healthcare in a positive manner. There was also evidence of the positive effects on the health of the child when frequent education, positive reinforcement, and family interactions are included (Wood & Bolyard, 2011)

When compared to a control group who received telephone counseling, patients who received written education materials prior to admission for hip arthroplasty demonstrated higher knowledge levels at discharge. In both groups, the knowledge levels improved from preadmission to discharge. The telephone counseling group, however,

expressed a higher feeling of empowerment. The telephone counseling group felt that they were able to make more choices and had their fears alleviated better than the written education group. This indicates that, while written education is more cost-effective, those patients who may need more empowerment in their healthcare decisions and beliefs are better served by telephone counseling (Johansson, Katajitso, & Salantera, 2010).

Nurses' Attitudes toward Patient Education

The most significant barrier to patient education in the emergency department is lack of time. This impacts the nurses' willingness and comfort in providing patient education. Other barriers include lack of proper resources and support.

The perception of importance in specific education was seen as the most important factor in the nurses' attitude toward emergency department education. In a study of Canadian emergency department nurses (n = 223), participants were asked several questions examining their attitudes and activities in providing education to patients (Taggert, 2009). The nurses felt they were most effective in changing patient's behavior in regard to blood pressure management. They also felt that they were only minimally, or somewhat effective in changing behaviors when dealing with illicit drug use and alcohol use. Other education topics examined included safe sex, exercise, diet, tobacco use, hypertension management, etc. The questionnaire also included a section on perceived barriers to patient education. The primary barrier (moderately or very influential) was perceived as *lack of time* (92.8%). The next two barriers were *lack of systems for follow-up* (78.5%) and *lack of health educators* (74%). The barrier dealing directly with the attitude of nurses, personal lack of interest had the lowest rating of moderately or very influential at 40.4%. The demographic characteristics of the group,

work status, type and size of facility, gender, educational level, and professional certifications, were shown to have no correlation with the nurse's frequency of provision of patient education. Age, total experience, and emergency department experience had weak, but significant, correlations with the provision of health education. None of the demographic criteria were shown to have a relationship with attitudes of perceived barriers. It was also felt that policies and procedures need to be put into place to help support and encourage the concept and practice of proper patient education (Taggert, 2009). The instrument used in this study was developed by, and obtained from, the author of the Canadian study.

Workload and lack of time were also identified as barriers to proper education and discharge planning in emergency departments in Taiwan (Han et al., 2009). Thirty-two nurses from two emergency departments in Taiwan were interviewed in a phenomenographic approach. Participants viewed patient education as essential to their implementation of discharge planning. Some participants also expressed uncertainty about discharge planning and its significance. It was also felt that due to occasional periods of physical and emotional exhaustion, as can be experienced in the emergency department setting, contributions to discharge planning can be insufficient. The comfort levels of the nurses can also be improved by providing additional education on patient education during orientation and annually. Unlike nurses in the United States, nurses in Taiwan are legally obligated to assess the patient's future needs and ensure proper preparation for providing continuation of care (Han et al., 2009).

Patients' Understanding of Discharge Instructions

In a study of discharged emergency department patients, the understanding of discharge instructions by the patient and family were explored (Engel et al., 2009). The study conducted in two Michigan hospitals, involved a sample of 140 discharged English-speaking patients. The assessment in the study included the patients' and/or family members/caregivers understanding of the discharge instructions and satisfaction with their care. The major finding was that patients had most issues with understanding and comprehension of their discharge instruction. Patients are often frightened, overwhelmed, and unprepared during emergency department visits. These factors, as well as their health literacy, adversely affect the learning and comprehension ability of the patients or their families/caregivers (Engel et al., 2009).

Literature Related to Theoretical Framework

The concept of health promotion is included as a type of self-care. Pender described behaviors that supported health promotion as being integral to an individual's lifestyle. These activities included exercise, good nutrition, and appropriate stress management. These activities are consistent with Orem's ideas of self-care activities. One of the nested theories inside Orem's Self-care Deficit Theory is that of Self-care, which is described as a series of active, deliberate actions (Hartweg, 1990).

Orem's Self-care Theory has been used previously in health care studies. Self-care in heart failure and heart disease patients has been examined in several studies. Adolescent children have been found to have the capacity for self-care. In a purposive sampling of 82 school aged children, who had been admitted to a hospital within the past year for heart failure were evaluated for their self-care capacity (Fan, 2008). The patients

were selected from three hospitals in mainland China. Patients with Class I failure had the highest level of self-care behaviors while patients with Class II or III failure had moderate levels of self-care behavior. The author recommended that the nurses caring for these patients should more thoroughly assess the self-care abilities of their patients in order to help them improve their health (Fan, 2008).

Self-care behavior has also been found to be very important in optimizing the positive outcome of patients with heart failure. A supportive-educative nursing intervention program was developed at the University Hospital of Maastricht in The Netherlands to improve the self-care behavior of heart failure patients (Jaarsma et al., 2000). Following admission for various levels of heart failure, 129 patients were followed for nine months with data collected during the initial hospitalization and at the 1, 3, and 9 month marks. The control group consisted of 73 patients and the intervention group had 55 patients. The effects of the program were most apparent at the one month follow-up visit. Both groups reported higher levels of self-care behavior were present at the initial assessment; however the intervention group complied with 14 of the 19 self-care behaviors as opposed to the control group who complied with 12 behaviors. Although the level of self-care behaviors decreased with both groups over the study period, the intervention group maintained a higher level of self-care behaviors throughout. It is important to form the education to the specific needs and knowledge of the patients as much as possible. It is therefore, also important for nurses to be aware of the knowledge, learning needs, and existing self-care behaviors of their patients (Jaarsma et al., 2000).

Heart failure patients have a high rate of hospital readmission during the course of their disease. Improvement in self-care behaviors can lead to a reduction in the number of readmissions. Proper assessment of patient knowledge by the nurse is of key importance. In a convenience sampling of 125 patients in South Africa, the majority of the patients had good self-care behaviors and about 85% already had at least a moderate level knowledge (Aliha, Azarbad, Shahpourain & Rafiee, 2007). Over 80% of the study participants, however, reported their learning needs as high and very high. Understanding by nurses of the patient's actual, and perceived limitations in knowledge as well as their learning needs will enable the nurse to provide better supportive-educative interventions (Aliha et al., 2007).

Strengths and Limitations of Literature

While there have been several studies regarding education in the emergency department, they have focused mainly on asthma. As other studies have indicated, education has been helpful in the improvement of patients with heart failure and heart disease. Other significant areas of potential education in the emergency department include hypertension, smoking, and diabetes management.

As the available studies demonstrated, a broad spectrum of educational methods is indicated. Studies evaluating methods for determining the appropriate educational methods for each patient and disease process, as well as implementation of those methods, would be helpful.

An integral part of implementing health education in the emergency department is the ability and willingness of the nurses and other healthcare professionals in assessing the patients' needs and providing the educational materials and information. Additional

studies aimed at the barriers faced by healthcare staff and ways to improve the ability of healthcare staff in delivering this information would be helpful.

Summary

While patient education is important and expected through all levels and areas of patient care in the hospital setting, the Emergency Department presents special barriers and difficulties to provide this service. Education should be directed based on the patient's needs and knowledge levels and deficits. Orem's Self-care Deficit Theory supports these activities by showing that improved patient education improves the patient's self-care abilities. There is also a distinct lack of study materials relating to educational methods and overcoming barriers in the emergency department setting.

CHAPTER III

Methodology

Nurses are often tasked with educating patients during their hospitalizations and at the time of discharge. For emergency department nurses, this can be difficult. Emergency department nurses must treat patients rapidly and complete their dispositions in often as little as one to two hours. In addition to this time constraint, the nurse may be caring for four or more patients, in varying stages of evaluation and treatment, and may be involved in one-on-one interventions with these patients. This can leave little time for patient education, especially if the nurse does not feel like the patient education is meaningful or useful. Various factors can influence the ability and desire of the emergency department nurse to provide proper patient education. This research study examined these factors in relation to the emergency department nurses' experience and educational levels.

Design

A quantitative design was used to explore the health promotion activities of active emergency department nurses as well as their attitudes toward working with patients in health promotion and any perceived barriers to these activities.

Data collected in the demographic section of the survey allowed correlation of age, years of service, possession of a nursing certification credential, and highest level of nursing education obtained to the respondent's perception of the importance of promotion activities. The survey tool used was entered into SurveyMonkey, a commercially available data collection website. The survey tool link was distributed to current emergency department nurses via email using email addresses the author had obtained

through various avenues. SurveyMonkey software includes SPSS integration. Data was downloaded to the Statistical Package for the Social Sciences (SPSS) program for quantitative analysis.

Institutional Review Board approval was obtained in early February 2014. The study instrument, along with the description and consent form were entered into the SurveyMonkey website and appropriate internet links were generated. Since email addresses from the Emergency Nurses' Association are not available for release, the decision was made to use a personal networking and "snowballing" methodology of participant recruitment.

The author used personal email contacts from four hospitals and supplemented this with Facebook contacts from two additional hospitals (see Table 1). This resulted in invitations being sent to 99 potential participants.

Table 1.

Survey Participant Invitation Distribution

Hospital	Emergency Department Beds	Licensed Beds	Invitations
Hospital A	25	201	3
Hospital B	11	62	1
Hospital C	33	84	47
Hospital D	20	160	36
Hospital E	10	24	8
Hospital F	9	55	2
Hospital G	6	24	1
Hospital H	48	701	1

Instrument

The instrument used in this study was obtained from a study of Canadian emergency department nurses regarding their activities and attitudes toward health promotion and education (Taggert, 2009). The author of that study modified the Preventive Medicine Attitudes and Activities Questionnaire (PMAAQ) originally developed by Yeazel, Lindstrom and Center (2006).

The PMAAQ was developed to assess the attitudes and activities of family physicians. This 17 question survey, which was based in social cognitive theory, included seven demographic questions and 10 attitude and activity questions. The questions in the second section included 84 items which were measured on 4, 5, or 7 point Likert scales. Validity of the original tool was established by an expert panel of preventative medicine physicians. Cronbach's α for internal consistency was calculated at 0.74 - 0.98. Pearson's *r* was used for divergent validity and confirmed that each scale was a measuring a different attribute. A chart review was conducted to assess external validity. In the chart review, respondents' charts were assessed for the presence of physician risk assessments and counseling services (Yeazel et al., 2006).

For use in the Canadian nurse study, the PMAAQ was modified slightly. The Modified PMAAQ (MPMAAQ) also consisted of 17 questions but these were arranged into three categories. The first category, containing eight demographic questions, was altered to reflect the nature of registered nurses' age, experience, work characteristics, educational levels, and professional certifications. The second section was altered to eight questions, again dealing with activities and attitudes related to health promotion and risk prevention as well as the nurses' perception of their effectiveness and perceived

barriers to health promotion. The third section was the addition of an open-ended comments question (Taggert, 2009).

The modified tool was assessed for validity by a panel of five registered and advanced practice nurses from the Foothills Medical Center in Calgary, Alberta, Canada. This was also the facility where that study's author was employed as an emergency department nurse. Suggestions from this panel were incorporated into the study instrument and included wording changes for specific questions and improved survey completion instructions. The panel also recommended the addition of instructions in the questions to define the adult patient as being greater than 18 years of age to avoid ambiguity. Following the changes, four of the five panel participants (80%) felt that the instrument was satisfactory, with the fifth member indicating that the questions were too judgmental.

Permission to use the MPMAAQ was obtained from a member of the development team of the original tool (PMAAQ) and the modified tool.

Setting

The research for this study was conducted using an online methodology. No physical setting was employed. All participants were contacted by email and offered the opportunity to participate in the study.

Protection of Human Subjects

Application was made to the university's Institutional Review Board for approval of the study. The review board determined that the risk to the participants was no greater than for any time that a person would reveal personal information about themselves.

Participation in the study was voluntary and no enticements were used to encourage participation. The entry page to the survey explained the options to skip any of the questions and end the survey at any time after entering the survey tool. Choosing the "I Agree" button on the entry page confirmed consent to participate in the survey. Participants were also given the email contact information for the author and faculty advisor. The participants were asked basic demographic information but no individual identification was requested (see Appendix A). Surveys were not linked to individual email addresses of the participants. The SurveyMonkey website required use of a password.

Summary

During an emergency department visit, part of the registered nurses duties included assessing the knowledge and educational needs of the patient as they relate to the patient's visit. The nurse is also responsible for assessing the educational needs of the patient relating to such topics as smoking and safety. The nurses' ability and willingness to accomplish this is affected by the amount of time the nurse has available and the perceptions of the nurse relating to the effectiveness of this education. This perception can be affected by a number of things, including experience levels and educational levels.

CHAPTER IV

Results

Nurses often must attempt to educate their patients while in the emergency department and at the time of discharge. Emergency department nurses must treat patients rapidly and complete their dispositions in a timely fashion. Patients are often expected to be discharged within one to two hours of their arrival in the treatment room. In addition to this time constraint, the nurse may be caring for multiple patients who may range in severity, for a single nurse, from minor complaints to critically ill or injured. The nursing staff may quickly become overwhelmed and patient education may suffer, especially if the nurse does not feel like the patient education is meaningful or useful. Various factors can influence the ability and desire of the emergency department nurse to provide proper patient education. This research study examined these factors in relation to the emergency department nurses' experience and educational levels.

Sample Characteristics

The final sample for this study consisted of 31 emergency department nurses. This leaves a non-response rate of at least 69% although, due to the "snowballing" methodology utilized, the actual number of initial participants who did not respond may have been higher. The responding nurses ranged in age from 27 years to 63 years ($M = 44.58$, $SD = 8.94$). The respondents were predominately female ($F = 26$, $M = 5$).

The majority of the nurses (71%) did not have an Emergency Nurses Association certification. Approximately 90% ($n = 28$) of the nurses had undergraduate nursing degrees while 10% ($n = 3$) had Masters Degrees in nursing. There were no respondents who had other specialist degrees or doctoral degrees.

Approximately 54% of the nurses worked in a general hospital with less than 100 beds. General hospitals with more than 100 beds employed about 39% while the remaining 7% were employed at teaching hospitals. Sixty-one percent of the responding nurses were employed in a full-time status while 16% were part-time and 22% were casual (PRN) workers. See Table 2 and Table 3 for complete listings of the sample characteristics.

Table 2.

Sample Demographics

Demographic	Frequency (n)	Percent (%)
Gender		
Male	5	16.1
Female	26	83.9
ENA Certification (CEN, CPEN, CTRN, CFRN)		
Yes	9	29
No	22	71
Education Level		
Diploma	0	0
Undergraduate	28	90.3
Masters	3	9.7
ED Nurse Specialist	0	0
Non-ED Nurse Specialist	0	0
Doctoral (PhD, DNSc, etc)	0	0
Hospital Setting		
Teaching Hospital	2	6.5
General Hospital (<100 beds)	17	54.8
General Hospital (>100 beds)	12	38.7
Schedule		
Full Time	19	61.3
Part Time	5	16.1
PRN	7	22.6

Table 3.

Age and Years of Experience

	N	Range	Minimum	Maximum	Mean	Std. Deviation
Age Years	31	36.00	27.00	63.00	44.5806	8.94343
RN Years:	31	38.00	1.00	39.00	13.3548	10.80601
ED Years:	31	26.00	1.00	27.00	8.2903	7.91283

Major Findings

Educational Activities

The participants were presented with three questions regarding their educational and health promotion efforts with their emergency department patients. These questions were answered using a 7-point scale from never to always.

In the first question, they were asked about their frequency counseling obese patients (see Table 4). Advice on weight control measures was provided less than half of the time (N = 31, M = 2.7, SD = 1.14). The most common advice provided was to increase the consumption of fruits and vegetables (M = 3.03, SD = 1.58). The second most common advice was to exercise regularly (M = 2.96, SD = 1.49). Setting a weight loss goal was the least recommended intervention (M = 2.23, SD = 1.14). (see Table 4)

Table 4.

Advice to Obese Patients

During the past 60 days, in caring for adult patients (>18 years of age) who were, in your opinion, overweight or obese, how often did you advise them to do the following?					
	Mean	SD		Mean	SD
Exercise regularly	2.96	1.49	Decrease Dietary Fat Consumption	2.66	1.49
Decrease Caloric Intake	2.6	1.56	Increase Consumption of Fruits and Vegetables	3.03	1.58
Set a Goal For Weight Loss	2.23	1.14	Question Total	2.7	1.49

The second question in this group asked participants about their counseling of patients who use tobacco products. The most common advice was to stop smoking (M = 5.13, SD = 1.8). This relatively high rating may be due to the common act of physicians automatically including these smoking cessation instructions in their routine discharge instructions when dealing with patients who admit to tobacco use. The next most common intervention was to provide self-help materials (M = 3.00, SD = 1.87). The least most common advice was to set a "quit date" (M = 2.41, SD = 1.60). (see Table 5)

Table 5.

Advice on Tobacco Use

During the past 60 days, in caring for adult patients (>18 years of age) who use tobacco products, how often did you do the following?					
	Mean	SD		Mean	SD
Advise them to stop using	5.13	1.8	Prepare them for withdrawal symptoms	2.55	1.62
Advise setting a 'quit date''	2.41	1.60	Have the physician prescribe a nicotine patch or gum	2.45	1.41
Refer them to a group clinic or smoking cessation program	2.93	1.77	Provide self-help materials	3.00	1.87
			Question Total	3.09	1.95

Participants were also asked about their evaluation and counseling of patients with hypertension, even though hypertension was not the primary reason for their emergency department visit. An elevated blood pressure may be an exacerbation of a chronic condition or a new condition unrelated to the current complaint. These interventions were the most common of the three sets of advice and interventions reviewed by these questions (M = 6.03, SD = 1.33). A contributing factor to this might be the need to intervene in some method when the patient is being discharged when the vital sign is outside what would normally be considered acceptable limits. The most common intervention in this situation was for the patient to follow up with their primary care provider. The least most common intervention was to advise the patient to lose weight (M = 3.74, SD = 1.54). (see Table 6)

Table 6.

Advice on Hypertension

During the past 60 days, in caring for adult patients (>18 years of age) with a history of high blood pressure and arriving with an elevated blood pressure not immediately related to presenting complaint, how often did you do the following?					
	Mean	SD		Mean	SD
Review the health risks of HTN	4.58	1.58	Talk about taking antihypertensive medications regularly	5.12	1.56
Advise weight loss	3.74	1.54	Discuss how to decrease stress	3.87	1.82
Advise salt reduction	3.87	1.88	Suggest follow-up with primary MD	6.03	1.33
			Total	4.53	1.83

Attitude toward Health Promotion and Patient Education

Participants were given two questions which related to their attitude regarding health promotion and patient education. Both questions ask the nurse to assess how they perceive the patients' response to health education and promotion. It was felt that if the nurse does not believe that the promotion and education were effective, they would be less interested and motivated to provide those services. None of the correlations reached the 0.005 level of confidence.

In the first research question the participants were asked to rate the statement *For most patients, health education does little to promote adherence to a healthy lifestyle*. This question was answered using a 5-point Likert scale where 1 was strongly disagree and 5 was strongly agree. In general, the respondents felt that this was an accurate statement (M = 3.48, SD = 1.23) (see Figure 2). The responses were correlated to factors of emergency department experience and the nurse having obtained a professional

certification. The nurse's years of emergency department experience had no significant correlation to the feeling that health education promotes a healthy lifestyle, $r = -0.029$, $p = 0.879$. The correlation with having an Emergency Nurses Association certification were similar, again revealing no significant correlation, $r = 0.057$, $p = 0.760$.

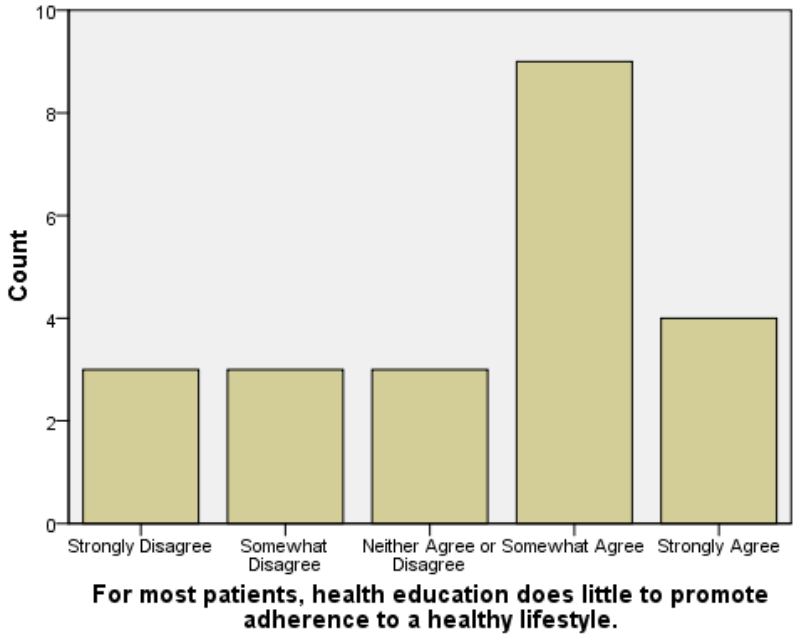

Figure 2. Health Education Does Not Promote Healthy Lifestyle

In the second research question participants were asked to rate the statement *Most patients try to change their lifestyle if I advise them to do so*. The question was worded in such a way as to reverse the intent from the previous question. Again, the question responses were ranked on a 5-point Likert scale with 1 indicating strongly disagree and 5 indicating strongly agree. The participants did not feel that this was an accurate statement (M = 1.74, SD = 0.85) (see Figure 3). This question was also assessed in regards to length of emergency department experience and the participant having obtained an Emergency Nurses Association certification. There was a small correlation between experience levels and feeling that the patients will change their lifestyles, r = 0.194, p = 0.296. As with the previous question, having obtained a professional certification had no significant correlation, r = 0.057, p = 0.760.

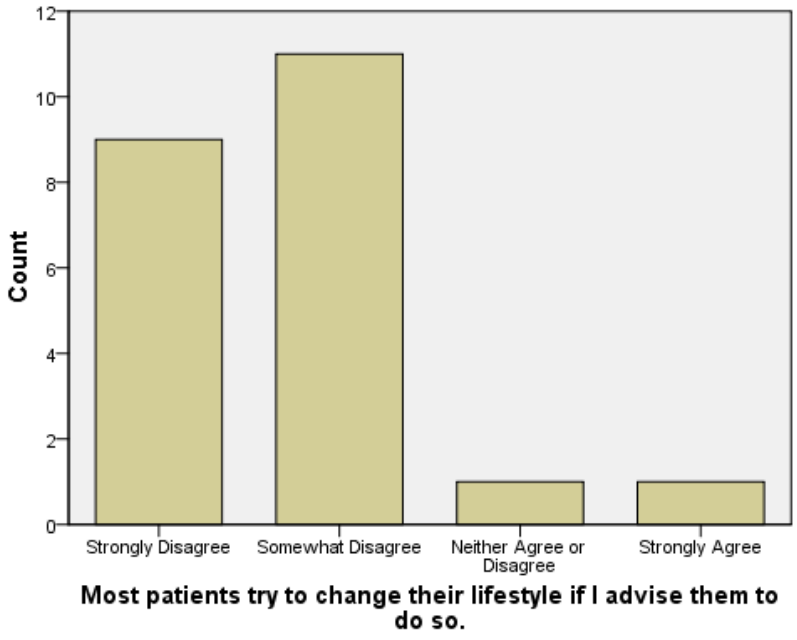

Figure 3. Patients Try to Change If I Advise Them

Time as a Barrier to Patient Education

Participants were presented with several potential barriers to providing patient education and were asked to rate how influential each of these barriers was individually. The responses were ranked on a 5 point Likert scale with the 1 indicating very influential barriers and 5 indicating that the potential barrier was not considered influential. Lack of time was considered the most influential barrier (M = 1.71, SD = 1.00) followed closely by Lack of Patient Interest (M = 1.74, SD = 1.09) and Lack of Systems for Patient Follow-up (M = 1.83, SD = 1.01) (see Table 7).

Table 7.

Potential Barriers to Patient Education

Potential Barrier	Mean	Std. Dev
Lack of Time	1.71	1.01
Lack of Availability of Health Educators	2.45	1.28
Believe It to Be the Physicians Role	3.74	1.26
Lack of Systems for Patient Follow-up	1.83	1.01
Personal Lack of Interest in Providing Preventative Services	3.38	1.38
Lack of Patient Interest in Prevention	1.74	1.09
Uncertainty About What Services to Provide	3.06	0.92
Lack of Proper Educational Materials	2.64	1.33
Communications Difficulty With Patients	3.03	1.19
Cultural Differences Between Nurses and Patients	3.25	1.34
Patient Visited the ED for a Different Reason	2.38	1.33

The last question in the survey tool was an open comment section where the participants were encouraged to enter any desired free-text comments. Of the 31 participants, 11 chose to include comments and five included comments regarding lack of time (see Table 8).

Table 8.

Time Statements

Years as RN/Years in ED	Statement
24/20	It is also very time consuming to do health education/promotion/disease prevention in ED due to pt. load and fast pace of ED. It is hard enough just teaching them discharge instructions about specific reason they were seen
3/3	Understandably, in an ED our focus in these profit driven times is less on preventative education as it is on pt flow/moving pt in and out as quickly as possible.
16/11	I don't believe that the majority of pts we see either care or want education. If I attempt to teach, I usually walk away feeling like I have wasted my precious, little time.
8/8	The main barrier in the ED as far as discharge/pt education is lack of time, especially if it is busy, you do all you can just to get the patient discharged and don't have time to spend the extra minutes talking about something that does not pertain to the ED visit.
3/3	Time constraint is a problem in the emergency room. Health promotion and education are essential but the time of stay and acuity of patients are factors, such that health education is minimally mentioned as we give our discharge instructions.

Summary

The participants in this study indicated that they felt that they had little impact on patients changing their lifestyle based on the nurse in the emergency department advising them to do so. This was not impacted by the participants' level of emergency department experience nor having obtained a professional emergency nursing certification. The participants also felt that education performed in the emergency department has little impact on patients adhering to healthy lifestyle choices. Furthermore, the participants felt that lack of time was an adverse influence on their ability to provide proper patient education in the emergency department.

CHAPTER V

Discussion

Patient education is a core component to the practice of nursing in many countries, including the United States. Emergency department nurses are often overwhelmed with the number of patients they must care for in short amounts of time. The patients are often in varying stages of evaluation and treatment, and the nurse may be involved in one-on-one interventions with these patients. This can leave little time for patient education, especially if the nurse does not feel like the patient education is meaningful or useful. Various factors can influence the ability and desire of the emergency department nurse to provide proper patient education. This research study examined these factors in relation to the emergency department nurses' experience and educational levels.

Implication of Findings

While the results of this study were limited, they did reveal some interesting, but not unexpected trends. The majority of participants in this study felt their educational activities in the emergency department had no long term effect on the activities or lifestyle choices of their patients. They also felt that lack of time was a barrier to providing any but the most basic discharge instructions and education. If nurses do not believe that they are having any affect in their non-direct patient care actions, they are not likely to put a great emphasis on those actions and to this extent, they are not going to try to actively promote lifestyle changes and healthier living choices. The participants also felt that there was a lack of follow-up with patients to assess their lifestyle and healthy-living changes. Again, this helps fuel the nurses' beliefs that education and health

promotion are not effective and are not an appropriate use of their limited time. This was further reinforced by their beliefs that patients are not interested in improving their lifestyle and health choices. Again, systems for following-up on the patient's emergency department visit could help lessen this belief although alternatively it could reinforce this belief based on the follow-up results.

Application to Theoretical/Conceptual Framework

Orem's Theory of Self-care was used as the conceptual framework as it does address the use of education in improving the patient's self-care agency. This remains an appropriate framework for the research as nurses are attempting to improve the lifestyle and health choices of the patients by improving the patient's knowledge base. With improvement of the knowledge base, and the health choices made by the patients, it may be possible to reduce the rate of emergency department visits and the recidivism of existing emergency department patients.

Limitations

This study was only able to gain a very limited number of participants. The Emergency Nurses Association lists approximately 40,000 members. With only 31 participants in this study, we cannot make generalizations regarding the emergency nurse population based on this small study population. The study population was also located in a small geographic area as all participants worked in emergency departments within an approximate radius of 75 miles.

Implications for Nursing

The results indicated a need to reinforce with the nurses the need for proper patient education and health promotion. Even with limited time in the emergency department, nurses should be talking to the patient about proper health choices with every possible interaction, from triage, through treatment, to discharge. This may require additional nursing education in order to train nurses on how to educate in small increments, similar to the techniques used in the "60-second" book series. The inclusion of patient educators in the emergency department setting should also be considered. While this may be cost prohibitive in smaller departments, the duties could be included into the duties of a department educator position, thereby helping even smaller departments to justify dedicated educators.

Recommendations

The results of the Canadian study and this limited study warranted further investigation into the attitudes of emergency nurses regarding their involvement into patient education and health promotion. The questionnaire should be reevaluated with the potential for changes in some of the questions to better reflect the information being collected and evaluated. Furthermore, studies utilizing dedicated patient educators in the emergency department setting and follow-ups with the patients or caregivers should be considered in evaluating the actual effectiveness of emergency department education.

Conclusion

While the participant population for this study was very limited, especially compared to the overall profession population in the United States, several issues were evident that suggested further research and areas for change and improvement. In

general, the participants in this study felt that patients were not receptive to health care education and promotion in the emergency department and would not change their lifestyles based on this education. They also felt that the lack of time and lack of follow-up systems were very influential into not providing education and health promotion to the patients in their care.

Further, wider-spread research should be performed in order to assess these feelings on a more profession-generalized basis. The use of patient education specialists should be evaluated. Another area for consideration is the training of emergency nurses to perform education in small one to two minute increments to overcome the time constraint in the emergency department setting. Many procedures performed on patients require the nurse to work with the patient for 5 - 10 minutes and as the nurse becomes more experienced education can be performed.

References

Aliha, J.M., Azarbad, M., Shahpourian, F., & Rafiee, F. (2007). Relation between self-care behavior and self-care needs in patients with heart failure. *South African Journal of Critical Care, 23* (1). 40

Clark, M. D. (1986). Application of Orem's theory of self-care: A case study. *Journal of Community Health Nursing, 3* (3), 127 - 135.

Engel, K., Heisler, M., Smith, D., Robinson, C., Forman, J., & Ubel, P. (2009). Patient comprehension of emergency department care and instructions: are they aware of when they don't understand? *Annals of Emergency Medicine, 53*, 454-461

Fan, L. (2008). Self-care behavior of school age children with heart disease. *Pediatric Nursing, 34* (2), 131 - 138.

Frieberg, F., Granum V., & Bergh, A. (2012). Nurses' patient education work: conditional factors - an integrative review. *Journal of Nursing Management 20*, 170 - 186.

Han, C.Y., Barnard, A., & Chapman, H., (2009). Emergency department nurses' understanding and experiences of implementing discharge planning. *Journal of Advanced Nursing* 65 (6), 1283 - 1292

Hartweg, D. L. (1990). Health promotion self-care within Orem's general theory of nursing. *Journal of Advanced Nursing, 15*, 35 - 41.

Jaarsma, T., Abu-Saad, H. H., Dracup, K., & Halfens, R. (2000). Self-care behavior of patients with heart failure. *Journal of Scandinavian Caring Science, 14*, 112 - 119.

Johansson, K., Katajisto, J., & Salantera, S. (2010). Pre-admission education in surgical rheumatology nursing: towards greater patient empowerment. *Journal of Clinical Nursing, 19*, 2980 - 2988.

Joshi, A., Lichenstein, R., Rafei, K., Bakar, A., & Arora, M. (2007). A pilot study to evaluate self-initiated computer patient education in children with acute asthma in pediatric emergency department. *Technology and Health Care, 15*, 433 - 444.

Mancuso, C.A., Peterson, M.G.E., Gaeta, T.J., Fernandez, J.L., Birkhan, R.H., Melniker, L.A., & Allegrante, J. P. (2011). A randomized controlled trial of self-management education for asthma patients in the emergency department. *Annuals of Emergency Medicine, 57* (6), 603 - 612.

McCarthy, D.M., Engel, K.G., Buckley, B.A., Forth, V.E., Schmidt, M.J., Adams, J.G., & Baker, D. W. (2012). Emergency department discharge instructions: Lessons learned through developing new patient education materials. *Emergency Medicine International 2012*, 1 - 7.

McEwen, M., & Wills, E. M. (2011). *Theoretical basis for nursing*. Philadelphia: Wolters Kluwer/Lippincott Williams & Wilkins.

Messner, E.R., Reck D.L., & Curci, K.M. (2005). Effectiveness of a patient education brochure in the emergency department. *Topics in Emergency Medicine, 27* (4), 251 - 255.

Samuels-Kalen, M.E., Stack, A.M., & Porter, S.C., (2012). Effective discharge communication in the emergency department. *Annuals of Emergency Medicine*, 60 (2), 152 - 159

Taggart, M. (2009). The attitudes and activities of registered nurses towards health promotion and patient education in the emergency department. *NENA Outlook, 32* (1), 15 - 19.

Wood, M. R., & Bolyard, D., (2011). Making education count: The nurse's role in asthma education using a medical home model of care. *Journal of Pediatric Nursing, 26,* 552 - 558

World Health Organization. (2009). Report of the review committee on the functioning of the international health regulations in relation to Pandemic (H1N1).

Yeazel, M. W., Lindstrom, K.M., & Center, B.A. (2006). A validated tool for gaining insight into the clinicians' preventative medicine behaviors and beliefs: The preventative medicine attitudes and activities questionnaire (PMAAQ). *Preventive Medicine*, 43, 86 - 91

Appendix A

Questionnaire: The Attitudes and Activities of Registered Nurses towards Health Promotion and Patient Education in the Emergency Department

1. What is your highest level of nursing education?

( ) Diploma

( ) Undergraduate Degree (Associate or Bachelor)

( ) Masters

( ) ED Nurse Specialist

( ) Non-ED Nurse Specialist

( ) Doctoral (PhD, DNSc, DNP, etc)

2. Do you have an Emergency Nurses Association certification (i.e. CEN, CPEN, CTRN, CFRN)

( ) Yes

( ) No

3. How many years' experience do you have as an RN?

_____Years

4. How many years do you have as an ED RN?

_____ Years

5. In what type of ED setting do you currently practice?

( ) Teaching Hospital

( ) General Hospital with >100 beds

( ) General Hospital with <100 beds

6. In the ED, do you work:

( ) Full Time

( ) Part Time

( ) PRN/Casual

7. What is your gender?

( ) Male

( ) Female

8. What is your age?

_____Years

9. During the past 60 days, in caring for adult patients (>18 years of age) in the ED, how often did you ask about the following? (Check the most appropriate box per row.)

	Never 0%	Rarely 1 - 20%	Sometimes 21 - 40%	Half the Time 41 - 60%	Often 61 - 80%	Usually 81 - 99%	Always 100%
Alcohol Use							
Diet							
Immunization History							
Oral/Dental Health Care							
Helmet Use							
Seatbelt Use							
Sexual Activity							
Contraceptive Use							
Home Smoke Detectors							
Symptoms of Depression							
Tobacco Use (Smokeless, Cigarettes, Cigars, etc)							
Illicit Drug Use							
Domestic Violence							
Contraceptive Use							
Home Smoke Detectors							

10. During the past 60 days, in caring for adult patients (>18 years of age) who were, in your opinion, overweight or obese, how often did you advise them to do the following? (Check the most appropriate box per row.)

	Never 0%	Rarely 1 - 20%	Sometimes 21 - 40%	Half the Time 41 - 60%	Often 61 - 80%	Usually 81 - 99%	Always 100%
Exercise Regularly							
Decrease Caloric Intake							
Set a Goal for Weight Loss							
Decrease Dietary Fat Consumption							
Increase Consumption of Fruit and Vegetables							

11. During the past 60 days, in caring for adult patients (>18 years of age) who use tobacco products, how often did you do the following? (Check the most appropriate box per row.)

	Never 0%	Rarely 1 - 20%	Sometimes 21 - 40%	Half the Time 41 - 60%	Often 61 - 80%	Usually 81 - 99%	Always 100%
Advise them to stop using							
Advise setting a “quit date"							
Refer them to a group clinic or smoking cessation							

program							
Prepare them for withdrawal symptoms							
Have the physician prescribe a nicotine patch or gum							
Provide self-help materials							

12. During the past 60 days, in caring for adult patients (>18 years of age) with a history of high blood pressure and arriving with an elevated blood pressure not immediately related to presenting complaint, how often did you do the following? (Check the most appropriate box.)

	Never 0%	Rarely 1 - 20%	Sometimes 21 - 40%	Half the Time 41 - 60%	Often 61 - 80%	Usually 81 - 99%	Always 100%
Review the health risks of HTN							
Advise weight loss							
Advise salt reduction							
Talk about taking antihypertensive medications regularly							
Discuss how to decrease stress							
Suggest follow-up with primary MD							

13. Regardless of whether you see patients again or not, as an ED RN, how effective do you feel you are changing your patients' behavior with respect to the following? (Check the most appropriate box per row.)

	Minimally Effective	Somewhat Effective	Moderately Effective	Very Effective	Do Not Counsel
Alcohol Consumption					
Safe Sex Practices					
Illicit Drug Use					
Exercise					
Healthy Diet					
Tobacco Use Cessation					
Weight Reduction					
Seatbelt Use					
Stress Management					
Injury Prevention					
Violence Prevention					
Sun/UV Ray Exposure					
Blood Pressure Management					
Depression Management					
Helmet Use					

14. In general, how important is it for ED registered nurses to provide health education to their patients about the following? (Check the most appropriate box per row.)

	Not Very Important	Somewhat Important	Moderately Important	Very Important
Alcohol Consumption				
Safe Sex Practices				
Illicit Drug Use				
Exercise				
Healthy Diet				
Tobacco Use Cessation				
Weight Reduction				
Seatbelt Use				
Stress Management				
Injury Prevention				
Violence Prevention				
Sun/UV Ray Exposure				
Blood Pressure Management				
Depression Management				
Helmet Use				

15. To what extent do you agree with the following statements? (Check the most appropriate box per row.)

	Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Strongly Agree
I feel comfortable discussing illicit drug use with patients.					
I feel comfortable discussing sexual behavior with patient.					
Tobacco cessation counseling is and effective use of my time as an ED RN.					
For most patients, health education does little to promote adherence to a healthy lifestyle.					
Most patients try to change their lifestyle if I advise them to do so.					

16. In your ED nursing practice, how influential are the following potential barriers to effective health promotion and disease prevention? (Check the most appropriate box in each row.)

	Very Influential	Moderately Influential	Somewhat Influential	Minimally Influential	Not Influential
Lack of time					
Lack of availability of health educators					
Believe it to be the physician's role					
Lack of systems for patient follow-up					
Personal lack of interest in providing preventative services					
Lack of patient interest in prevention					
Uncertainty about what services to provide					
Lack of proper patient educational materials					
Communication difficulties with patients					
Cultural differences between nurses and patients					
The patient visited the ED for a different reason					

17. Please feel free to express any other comments you may have regarding the provision of health promotion and patient education in the emergency department.