The Attitudes and Activities of Registered Nurses Towards
Health Promotion and Patient Education in the Emergency Department

by

Michelle Rae Taggart RN
BScN, Lakehead University, 2003

A Thesis Submitted in Partial Fulfillment of the
Requirements for the Degree of

MASTER OF NURSING

in the Faculty of Human and Social Development

The Attitudes and Activities of Registered Nurses Towards
Health Promotion and Patient Education in the Emergency Department

by

Michelle Rae Taggart RN
BScN, Lakehead University, 2003

Supervisory Committee

Dr. Anita Molzahn, Co-Supervisor
(School of Nursing)

Dr. Laurene Sheilds, Co-Supervisor
(School of Nursing)

Dr. Michael Prince, Outside Member
(Faculty of Human and Social Development)

Supervisory Committee

Dr. Anita Molzahn, Co-Supervisor
(School of Nursing)

Dr. Laurene Sheilds, Co-Supervisor
(School of Nursing)

Dr. Michael Prince, Outside Member
(Department of Graduate Studies)

ABSTRACT

Emergency department (ED) registered nurses (RNs) can help empower patients toward greater wellbeing through health promotion and patient education (HPPE). The ED is often an individual's first and only access to the health care system, and is seen as an underused setting for HPPE. To investigate RNs' current attitudes and activites about educating patients in the ED, 223 Canadian ED RNs were surveyed using an adapted web-based questionnaire. The attitudes of ED RNs and their current HPPE activities were examined, as was the relationship between level of nursing education and these attitudes. Results showed that perceived importance is the major variable to explain HPPE. A relationship also exists between fewer barriers and feeling more comfortable providing HPPE to patients. More comfortable ED RNS are more likely to see the importance of HPPE. A relationship between perceived effectiveness of HPPE and the frequency of HPPE was found. In general, ED RNs believe that HPPE is important, but need to perceive that what they are providing is effective.

Table of Contents

List of Tables

List of Figures

Acknowledgements

The investigator gratefully acknowledges the contributions of her supervisors and committee members: Anita Molzahn, Laurene Shields, Michael Prince, and Kelli Stajduhar. Without the cooperation of the National Emergency Nurses Affiliation this project would not have been possible. Data analysis assistance from Donald Schopflocher at the University of Alberta was much appreciated. A special thank you to the experienced emergency nurses Alexis Mageau, Kathy Howe, Debbie Harder, Nancy Kissinger, and Renee Vilneff for their valued input, and to the staff at Foothills Medical Centre in Calgary AB for their enormous support. Thank you to all family and friends for their assistance and patience throughout the past couple of years.

The Attitudes and Activities of Registered Nurses Towards Health Promotion and Patient Education in the Emergency Department

Chapter 1: The Problem

In Canada, between four and five million adults are without a family physician, with a significant portion of those individuals seeking medical advice at emergency departments (ED) (Bailey, 2007; Canadian Broadcasting Corporation, 2008). As a result, all types of patients come through the ED doors and an incredibly varied array of health issues are addressed by ED staff. Nurses are at the forefront, helping and caring for those patients. In a health care system that is clearly over extended, where patients often present to the ED with non-urgent concerns, ED nurses can help to empower patients to take control of their own lives through health promotion and patient education.

Background to the Problem

The ED has long been underused as an area for health promoting practices, although it is definitely a suitable setting for these kinds of activities (Bensberg, Kennedy, & Bennets, 2003). For example, similar goals are shared between practices in health promotion and emergency nursing, which is that of the improvement of the health of individuals and communities. As well, the ED has a wealth of reliable and readily available health information, and quite importantly, it is an established entry point to the health care system (Bensberg & Kennedy, 2002, p. 180).

Health promotion is synonymous with nursing (Casey, 2007). According to Allender and Spradley (2001), one role of the nurse is "to encourage the full development of a self-care attitude" (p.363), and nurses can empower patients by educating them about health promotion strategies. Nurses are trusted by patients "as good translators of

sophisticated medical and nursing terminology, [and] are close to the public's needs and have their confidence" (Holmes & Gastaldo, 2002, p. 563). In a study by McBride (1994), "it was felt by 84.3% of hospital nurses that they should be attempting to influence people's lives through health promotion activity." (p.97) According to Wingard (2005), "higher levels of knowledge and a greater degree of self-management [are] associated with significant improvements in functioning and wellbeing." (p. 211) Nurses can help disseminate the information and point their patients in the right direction for them.

Specifically, ED RNs are in an ideal position to promote health through education given their close proximity to patients, and to encourage people to participate and take responsibility for their own health (Allender & Spradley, 2001. ED RNs see a variety of patients, both men and women, ranging in age, ethnicity, and socio-economic background. Many patients are never admitted, a large number of them being discharged home with non acute illnesses. Some of these individuals do not have a family physician or are homeless; often the ED is the only place of contact with the health care system (Wei & Carnago, 2000). It is therefore so much more important that ED RNs play a larger role in health promotion and patient education, reaching some of those patients most in need of support for healthy practices.

Individuals want to and need to take on greater responsibility for their own health rather than prematurely accessing health care services. Cummings, Francescutti, Predy, and Cummings (2006) were able to show how patients are willing to participate in health promotion and education strategies in the ED when the resources are available.

Already overcrowded EDs can be relieved by providing patients with health promotion strategies during their ED visit. "Inadequate patient education before discharge is thought to be the reason for visits to physician offices and emergency departments after discharge, and both constitute higher utilization costs" (Rifas, Morris, & Grady, 1994, p. 216). Health professionals such as the RN in the ED can and should assist these individuals.

However, prior to implementation and expansion of such health promoting practices in the ED, it is important to investigate nurses' impressions about taking the time to educate the patients they see and care for in the ED. This study is important because it will provide baseline information about current attitudes and activities of ED RNs that will be useful in assessing the feasibility of increasing health promotion and patient education within the ED. Further knowledge of barriers to health promotion, such as time, lack of knowledge, or specific attitudes will be important in implementing enhanced education and practice programs (Cummings et al., 2006). Once attention has been drawn to these isssues, then they can be addressed. Specific outcomes regarding health promotion and patient education will be easier to plan and measure.

Purpose and Objectives

The purpose of this study was to gain an understanding of the attitudes that ED RNs have in providing health promoting advice, and to identify the health promotion and patient education activities on which ED RNs currently focus their efforts. The specific research objectives were:

1. to describe the attitudes and activities of Canadian RNs towards health promotion and patient education when caring for adult patients in the ED.

2. to identify relationships between ED RN nursing education and experience, attitudes and activities, and willingness and barriers to provide health promotion and patient education.

Research Questions

The research questions for the study were:

1. What are the attitudes and activities of ED RNs regarding the offering of health promoting advice in the ED?
2. What relationships do age, level of education, years of experience as an RN, years of experience as an ED RN, and perceived importance have with the frequency of providing health promoting advice?
3. What relationships do age, level of education, years of experience as an RN, years of experience as an ED RN, and perceived importance have with the perceived effectiveness of providing of health promoting advice?

Hypotheses

The study's hypotheses were as follows:

1. The higher the level of education of the ED RN, the more positive the attitude towards offering health promotion advice.
2. There is a relationship between years of experience as an ED RN and perceptions of effectiveness in providing health promoting advice.
3. Lack of time is a significant reported barrier for the ED RN to effective provision of health promoting advice.

Definition of Terms

Health promotion refers to supporting individuals to make healthy choices, and *patient education* is providing the information and rationale for one to do so. According to the World Health Organization (WHO), health promotion is "the process of enabling people to increase control over, and to improve, their health" (World Health Organization, 1986, p. 1). As well,

> Health promotion supports personal and social development through providing information, education for health, and enhancing life skills. By doing so, it increases the options available to people, to exercise more control over their own health and over their environments, and to make choices conducive to health." (World Health Organization, 1986, p. 3)

Patient education is defined by Gastaldo (1997) as "practices that concentrate on individuals' responsibility for health and disease prevention" (p. 117), and Dallaire, Hagan, and O'Neill (2000) claim that it occurs by "focusing mainly on the voluntary actions of individual health-related behaviours" (p. 318). Health promotion and patient education are used to empower patients, to have control over their health through knowledge of the determinants of health, and to participate in the health of the greater community.

Chapter 2: Literature Review

Health promotion and patient education of ED patients is an important issue in nursing. To gain background on the subject, health promotion and patient education will be discussed in a historical context. Studies that have been previously conducted in this area will be reviewed. The chapter will then conclude with a review of social cognitive theory and how it is guiding this study.

Historical Context

Health promotion and patient education began with an illness prevention perspective in the mid-1800's with Florence Nightingale. She focused on the importance of proper nutrition, adequate housing, and sanitation issues such as clean air and water as means to a healthy population (McDonald, 2004). Health promotion gained more interest after World War II when politicians began to realize that the curative model of health care was not producing the results they wanted (Irvine, Elliot, Wallace, & Crombie, 2006); by the latter half of the 20th century, health promotion was considered to be an important aspect of health care.

The1974 Lalonde report (Lalonde, 1981) was a major turning point for health promotion in Canada and around the world. The report introduced the 'Health Field Concept', four elements that affect an individual's health, namely human biology, environment, lifestyle, and health care organization. These would later expand to become the twelve determinants of health used today. The report suggested multiple interventions, highlighting health education as one of them, for the promotion of health. The report was criticized, however, for 'blaming the victim' when it came to lifestyle

choices, and for not adequately considering the influence of social, economic, and environmental factors related to health (Glouberman & Millar, 2003).

In 1977, the WHO (1978) adopted *Health for All by the Year 2000*, a plan to decrease inequalities globally and ensure that all individuals have access to health care, in part through health promotion and education. This idea was emphasized at the 1978 International Conference on Primary Health Care in the former USSR. In the declaration of Alma-Ata, primary health care was affirmed as a basic human right. (WHO, 1978)

In 1986, Jake Epp, the Canadian Minister of National Health and Welfare at the time, developed a Framework for Health Promotion driven by the *Health for All* document. His framework was centred around self-care, mutual aid, and healthy environments, making health a personal and social responsibility. Through health promotion, his goal was to be achieved by "reducing inequities, widening the prevention effort and enhancing people's ability to cope" (Epp, 1986, p. 422).

The first international conference on health promotion was held in Ottawa in 1986 and from it was developed the world renowned Ottawa Charter for Health Promotion. The initial focus of the charter was largely on industrialized countries. It highlighted mainly the fundamentals for health such as food, shelter, education, and peace, in an attempt at "ensuring equal opportunities and resources to enable all people to achieve their fullest health potential" (WHO, 1986, p. 1-2) through health promotion.

The year 2000 did not bring forth *Health for All* as was intended by the WHO. Hall and Taylor (2003) explain that this was mainly due to a lack of global political commitment and funding, as well as the large number of unforeseen wars, natural disasters, and the rapid spread of the human immunodeficiency virus.

The year 2005 brought forth the Bangkok *Charter for Health Promotion in a Globalized World* after the 6th International Conference on Health Promotion (WHO, 2005). In this charter, it was emphasized that the social determinants of health guide health promotion world wide. Several changes and updates since the Ottawa Charter were highlighted in the Bangkok Charter, including environmental changes, urbanization, changing family patterns, and inequalities within countries and between genders.

New goals have been formed by the WHO under the *Health for All in the 21st Century* plan with targets set for 2020. The focus is on healthy environments, primary health care reform, population empowerment and support, and healthy development and leadership of women (WHO, 2000). It is hoped that achieving this will occur through health promotion and education under a social, economic, and political view. With attention made to their attitudes and activities surrounding health promotion, ED RNs can contribute in part to these targets being met.

Assessing Previous Studies in the Area

There is considerable research regarding the need for health promotion and patient education in health care. While much of this research has been conducted primarily in community and public health settings, some studies have examined health promotion and patient education in the acute care area.

Casey (2007), an Irish researcher, studied nurses' perceptions, understanding and experiences of health promotion on an acute surgical ward. Even with a small sample of eight nurses, a number of themes emerged in this qualitative study. It was concluded that while health promotion is a broad concept, the majority of nurses continue to focus on individual lifestyle issues. Health education remains a valuable health promotional tool;

however it needs to be combined with significant patient and family encouragement, at the proper educational level for the client, in order to be effective. As a solution to the barrier of lack of time for health promoting activities, Casey suggests the concept of "opportunistic health promotion" (p. 1043), or informal teaching, through discussion during the provision of other care. In order for this type of health promotion to occur, a solid nurse-client relationship is essential. She believes that with nurse empowerment through good managerial role models and support, nurses will feel more comfortable discussing health issues with their patients, passing that empowerment onto them.

In a recent publication, Whitehead, Wang, Wang, Zhang, Sun, and Xie (2008) examined Chinese nurses' perceptions of health promotion and health education practices in a large acute care mainland China hospital. In this study, interviews were held with eight nursing students and eight senior nurses. The participants stated they focused mainly on promoting healthy lifestyle changes. Again, health education as a subset of health promotional strategies was most commonly used. The respondents believed that good communication and family involvement in discussions are essential components in the dissemination of health education. Time was mentioned as a barrier to the provision of health promotion, particularly when other basic nursing care took precedence over health promoting activities. As well, appropriate resources and staff support were viewed as important facilitators to health promotion and patient education.

Wingard (2005) examined the health education of dialysis patients in the United States. She reviewed the literature and used the nursing process (assess, plan, implement, and evaluate) to guide her study. She found it necessary to choose a teaching method appropriate to the situation and to set realistic goals with patients. While her findings

cannot be generalized to all types of patients, she recommended that health education be simple and understandable. She believes that instruction should be provided in a shorter time frame so as not to overload the individual and/or family. She also suggests that individual life circumstances of the patient such as educational level, socioeconomic status, and culture need to be considered when providing patient education.

Rifas et al. (1994) examined a skills training program available at the Kaiser Permanente Medical Center in California. Designed for patients prior to discharge, specially trained nurses are employed to assist in preparing patients for home using a variety of methods: lab set-ups, group instruction, small classes, videotapes and handbooks, among others. The goal is to support patients wherever they can by assessing for readiness and willingness to learn, as well as for physical limitations. Preliminary data showed that with the implementation of this program, surgical patients' length of stay was decreased post operatively, and there was a noticeable cost savings involved. Patient and staff satisfaction was high, even with an initial complaint from nursing staff that there would not be enough time with patients for the program to be carried out effectively. The authors also support the idea of patient education by the bedside nurse, provided that appropriate training and educational resources are available.

Kelley and Abraham (2007) from the United Kingdom looked at nurses' role identity with regards to health promotion with older adults in their research. They surveyed 72 RNs qualitatively through open-ended questions and thematic analysis and quantitatively using a Likert scale. They found that, overall, nurses believe it is part of their role to provide health promoting advice to their patients; however, very few provided health promotion and patient education on a regular basis. The nurses argued

that it is more difficult to do so as an individual ages and therefore health promoting activities get left aside when it conflicts with other work responsibilities. Nevertheless, health promotion and patient education was seen as cost-effective for the system in terms of preventing readmission. Still, more time, need for additional information and resources, and appropriate training for nurses were seen as barriers to its implementation, particularly when not all nurses felt comfortable providing health promoting advice.

In an English study by McBride (1994), the attitudes, beliefs, and practices of hospital nurses towards health promotion were examined, but emergency nurses were excluded from her sample. She justified this by stating that ED RNs do not have regular daily contact with their patients, as do acute care nurses, and therefore these populations must be considered separately. Nevertheless, her findings showed that, in general, nurses believe that by providing health information to their patients, they are helping to empower them, and not attempting to control them. Most nurses who provide health education to their patients rarely chart the information given. She noted, however, that there seemed to be a lack of specific health promotion and education guidelines on the units for the nurses to follow.

Fewer studies have focused specifically on health promotion and patient education in the ED. One such study was performed by Australian researchers, Bensberg et al. (2003). They compared, qualitatively, the negative and positive factors regarding the provision of health promotion and patient education the ED. Barriers overriding it included lack of time, lack of patient and staff interest, and fewer staff numbers, as well as increased acuity of medical conditions seen in the ED. Nevertheless, the ED was seen as an underused environment for the promotion of health education, particularly in the

areas of alcohol abuse, smoking cessation, domestic violence, and injury prevention. These authors recommended that ED RNs "have the opportunity to promote health, including imparting health information by giving discharge advice to patients and empowering them during the process." (Bensberg et al., 2003, p. 176)

Emerson (2003), a British researcher, focused on providing health education to coronary heart disease (CHD) patients. He believes that EDs "have captive audiences for whom health promotion and education on CHD could be offered" (p. 20); however RNs need to examine an individual's readiness to learn. The study found that patients who are particularly suitable for teaching are those who are stable, less anxious, and awaiting an admission or consult. He therefore considers it is reasonable for ED RNs to discuss lifestyle issues related to CHD with their patients.

Finally, Cross (2005), in the United Kingdom, conducted the only study that could be found addressing the attitudes of emergency nurses towards health promotion specifically. The researcher employed a Q methodology, and with a sample size of only 11 RNs, her research produced inconclusive results. Given this limited participant response, she found an overall positive take on health promotion and patient education by ED RNs. Agreement was noted with statements such as: "Health promotion and nursing activities are interlinked" and rejection was found with declarations like: "The [ED] is a stressful environment—it is not a suitable atmosphere for individual meaningful health education." Nevertheless, she concluded that more research is required not only of ED RN attitudes but also regarding health promotional activities in order to highlight barriers to its provision.

Overall, the literature found shows small, non-Canadian studies with a variety of research methods that do not fully address the topic of the attitudes and activities of RNs towards health promotion and patient education in the ED. Issues are that the Canadian health care system is different from the UK or American systems, and ED RNs cannot be likened to acute care nurses. ED RNs see a mix of patient types; it is difficult to compare these patients to a specific group such as surgical or dialysis patients. While there is a clear gap in the literature, two major strengths arising from the review of previous studies are that there is definite support for health promotion and patient education within the hospital setting, and more specifically the ED, and that it is seen cost effective. Therefore, prior to implementing any strategies in the ED that would encourage the provision of health information and expecting nurses to follow these guidelines, it is important initially to assess their attitudes and activities specifically. The ideal way to do this is by a large national quantitative survey to initially gather Canadian data from numerous ED RNs. This is necessary so that strategies can later be created in a way that considers the values of Canadian ED RNs, increasing the likelihood of successful implementation by staff.

Theoretical Framework

Social cognitive theory (SCT) is a framework that encompasses a triad of interconnected variables: behaviour, personal factors, and the environment. Together, these variables influence the understanding, prediction, and change within the realm of human behaviour. SCT posits that every situation is experienced differently, and that behaviour is never the same for every individual under similar circumstances. Personal factors (cognitive, affective, and biological events) that shape one's attitudes ultimately

lead to the behavioural outcomes, or activities, that are carried out, within a specified environment (social or physical) (Davis, 2006; University of Twente, 2004).

Bandura (1998) looks at health promotion through his SCT lens. He focuses on the need for 'self-efficacy', the feeling of effectiveness of one's behaviours. He states:

> Unless people believe they can produce desired effects by their actions, they have little incentive to act or to persevere in the face of difficulties and set backs. (Bandura, 1998, p.3)

This is relevant for both nurses and patients. ED RNs must have their own sense of personal efficacy to carry out health promoting activities, and patients must see the worth of an intervention to continue with it.

Bandura (1998) also explains that personal change occurs "within a network of social influences" (p.12). Therefore, under a SCT framework, interventions should be considered to offer support for change within a social network in order to effectively modify practices. In other words, RNs need the knowledge, resources, and support for health promotion and patient education practices to be socially accepted within the ED, for it to become commonplace.

Much of the research reported earlier does not explicitly draw on SCT. However, it appears that there is an underlying SCT theme within the studies. ED visits and hospital stays are unique to every individual. RNs must be cognisant of that while assisting patients at setting goals and making lifestyle changes. For positive outcomes to occur, resources must be reflective of the individual's current behaviour, personal, and environmental situations.

SCT guides this study in that a variety of activities that occur in the ED are considered. It also addresses attitudes of ED RNs that fall under a SCT realm, specifically perceived effectiveness and importance of health promotion and patient education.

Chapter 3: Methodology

The focus of this research was on relationships among attitudes related to effectiveness, importance, and comfort as well as health promotional activities and barriers with demographic characteristics of ED RNs caring for adult patients. Using a reliable and valid modified instrument, data were collected and analyzed using descriptive statistics, correlation coefficients, and regression analyses.

Design of the Study

A nonexperimental, univariate descriptive exploratory design was used to describe the attitudes and activities of ED RNs regarding health promotion and patient education. This approach was used to identify the frequency of specific RN attitudes and activities, and highlight some facilitators and barriers to health promotion and patient education by RNs in the ED. An adapted questionnaire was used to collect the data.

Sample and setting

The population for this study was RNs currently working with adult patients in EDs across Canada. The sample was obtained mainly through the National Emergency Nurses Association (NENA) membership. NENA was unable to formally release the names of its members; however, they were willing to send out a copy of the questionnaire electronically to the NENA members on the researcher's behalf.

When the surveys were sent out, NENA had 872 members from all regions of Canada and one living internationally. The sample for the study therefore included ED RNs from across Canada (see Table 3.1). The first email with the study's description and a web-based link was sent out to the membership during the first week of May 2008. A follow-up reminder and thank you email was again sent out by NENA three weeks later.

Table 3.1

Breakdown of NENA Membership May 2008

Province/Territory	Member Count
Alberta	178
British Columbia	189
International	1
Manitoba	55
New Brunswick	56
Newfoundland and Labrador	40
Northwest Territories	5
Nova Scotia	46
Ontario	215
Prince Edward Island	1
Quebec	21
Saskatchewan	65
Yukon	0
Total (*N*)	872

The final sample size was 223 completed surveys, resulting in a response rate of 25.6 %. However, included in this sample were not only the NENA members, but also the responses from participants in the pilot test group (*N*=26, see below for description of pilot work), some of whom may not be NENA members. As well, one NENA respondent

emailed the researcher to say that the majority of her staff was not NENA members but that she wanted to forward the survey link to them, which was allowed.

Instrumentation

The instrument that was used in this study was a modified version of the Preventive Medicine Attitudes and Activities Questionnaire (PMAAQ) that was developed by Yeazel, Lindstrom, and Center (2006). While it was not the most ideal for the study because it was developed for family physician use, development of a new instrument was beyond the scope of this study.

The PMAAQ is 17-question survey, grounded in social cognitive theory, and divided into two sections: the seven demographic questions and the ten attitudes and activities questions. The latter half is divided into eight subscales: overall prevention behaviour, smoking cessation, hypertension management, behaviour change effectiveness, lifestyle counselling effectiveness, importance of prevention counselling, comfort of discussing sensitive topics, and barriers to provision of preventive services. These subscales have a range of questions within each one, for a total of 84 items. They are measured on 4, 5, or 7 point Likert scales (Yeazel et al., 2006).

Validity of the PMAAQ was established first by an expert panel of an unknown number of physicians specializing in preventative medicine. They designed the subscales. Then internal consistency reliabilities, using Cronbach's α were calculated. These ranged from .74 to .98 on the eight subscales; test-retest reliability after two months ranged from .56 to .87 on the subscales. Divergent validity, using Pearson's r, showed low to moderate intercorrelations (r = -0.23 to 0.54), evidence that each of the scales is measuring a different attribute. External validity was assessed through the use of a chart

review. Randomly selected charts by PMAAQ respondents were checked for physician risk assessments and counselling services (Yeazel et al., 2006).

For the purposes of this study, minor modifications to the PMAAQ were required in order to ensure that the tool was appropriate for ED RNs. Most of the demographic questions were changed to relate to ED RNs and their education and practice instead of to family physicians. In addition, some questions were omitted as they were irrelevant. For example, the questions regarding asymptomatic patients were deleted from the questionnaire as asymptomatic patients do not typically visit the ED. Permission was obtained from survey developer, Mark Yeazel, to adapt the questionnaire.

The modified PMAAQ consisted of 17 questions, divided into three sections (see Appendix A). The first eight questions related to the demographic characteristics, including the highest level of nursing education, whether ED RN accreditation had been obtained, the number of years of experience as an RN, the number of years of experience as an ED RN, type of hospital setting, and work schedule. Questions regarding gender and age were also included. In the second part of the survey, eight questions were posed. The topics related to overall prevention behaviours, weight management, tobacco cessation, hypertension management, perceived effectiveness of providing health promotion advice, perceived importance of providing health promotion advice, comfort when providing health education, and perceived barriers to health promotion. Each of these questions is further divided into items related to each scale, for a total of 76 items. The third portion of the survey included a comments section, where respondents could choose to add, clarify, or make general comments regarding their view of health promotion and patient education in the ED.

To assess its face and content validity after the changes, a local panel of five experienced and advanced practice emergency nurses at the Foothills Medical Centre in Calgary, Alberta, reviewed the questionnaire in January 2008. These five nurses were chosen not only for ease of access but also because they brought a variety of perspectives, nursing roles, experiences, and levels of education. In the end, a clinical nurse specialist, a research nurse, two nurse educators, and one patient care manager provided excellent feedback. Virtually all of their suggestions were incorporated into the questionnaire. These suggestions included changes to the specific wording of some questions, better direction for survey completion, and the addition of a domestic violence category. For example, the PMAAQ used both *illicit* and *illegal* to describe drugs; the word *illicit* was only used in the adapted survey. Also, the word *smoking* was removed and replaced by *tobacco* to include all forms of tobacco products, not just cigarettes. It was necessary to discern exactly what was meant by *adult patients*, therefore *(>18 years of age)* was included in the questions.

Another suggestion that was used was to include *in your opinion* when asking about overweight or obese patients. It was felt that RNs did not measure BMI or have any real means of distinguishing between someone who was overweight or not, except for by personal opinion. The hypertension question was also of some concern. It was argued by two of the experienced nurses that there were too many discrepancies with the sentence *for a patient with high blood pressure.* The item was then changed to refer to someone *with a history of high blood pressure and arriving with an elevated blood pressure not immediately related to their presenting complaint.*

One of the five experienced nurses did not like the questionnaire, particularly the activities/behaviours questions. She thought that the questions were somewhat judgemental and that a large percentage of ED RNs do not have the correct information to be able to educate patients. Nevertheless, there was 80% agreement among the five experienced RNs overall that the revised items were suitable.

Data Collection Procedure

In March 2008, the survey was administered over a three week period to a pilot test group of RNs, different from the experienced panel of nurses, to examine it further for reliability and utility. This occurred at the Calgary Health Region's Foothills Medical Centre ED. A web link to the questionnaire was distributed via a form outlining the study. This researcher circulated at different intervals in the ED in order to increase the likelihood of reaching all staff members. In the end, the forms were handed out to 110 full and part time RNs (72.8 % of total staff), and one was placed in the staff communication binder in order to reach those nurses the researcher did not encounter in the department. Twenty-six (26) surveys were completed.

After the survey was tested with the results of the pilot group, data for the full study were collected using an online version of the adapted questionnaire. A website was developed using LimeSurvey software. The link was sent out to the prospective participants from the NENA president via email. The email message included an explanation of the study and invited the members to complete the approximately 15 minute survey online. Confidentiality of responses was ensured. To increase the response rate, a reminder was sent out by NENA on behalf of the researcher to the entire membership by email three weeks after the initial mail out, to encourage them to

complete the survey if they had not already done so. Only completed questionnaires were used in the study as most participants who aborted the survey did so early on in the process. There were 67 (23%) incomplete questionnaires omitted from the final analysis.

Data Analysis

The following subscales were scored: overall prevention behaviour, weight management, tobacco cessation, hypertension management, combined prevention behaviour, perceived effectiveness, perceived importance, personal comfort, and reported barriers. Each scale has a different number of questions, ranging from five to fifteen. Responses were on a 4, 5, or 7 point Likert scale.

Data were recoded so that positive responses were rated highest. Responses of "*Did not care for any such patients*" and "*Do not counsel*" were not included in the analysis. Missing values were eliminated by way of listwise deletion. Data analysis was conducted using SPSS version 16 statistical software.

Frequencies were calculated for each of the demographic questions: nursing education, accreditation, years of experience as an RN, years of experience as an ED RN, practice setting, schedule, gender, and age. Descriptive statistics (mean and standard deviation) were calculated for each item. Frequencies, means, and standard deviations were also calculated for individual items in each of the scales: overall prevention behaviour, weight management, tobacco cessation, hypertension management, perceived effectiveness, perceived importance, personal comfort, and reported barriers. The first four scales were summed to create one scale: combined prevention behaviour. Its mean and standard deviation were calculated. This scale was used for further analysis rather than including the four individual scales.

Cronbach's α were calculated in order to determine internal consistency of the questionnaire. Alphas were assessed for all nine scales (eight original ones plus the combined prevention score) as an indication of consistency reliability (see Table 3.2). These were then compared to the alphas estimated with the pilot study (see Table 3.3). In both cases, the internal consistency of the comfort subscale, consisting of five questions, was low. Despite the low results, the subscale was kept in the questionnaire, and the lack of reliability was considered in interpretation of the data analysis.

Table 3.2

Cronbach's Alpha of Adapted Questionnaire (Completed Sample)

Scale	Cronbach's α
Overall Prevention Behaviour	.865
Weight Management	.950
Tobacco Cessation	.907
Hypertension Management	.895
Combined Prevention Behaviour	.940
Perceived Effectiveness	.928
Perceived Importance	.952
Personal Comfort	.278
Barriers	.788

Table 3.3

Cronbach's Alpha of Adapted Questionnaire (Pilot Study)

Scale	Cronbach's α
Overall Prevention Behaviour	.907
Weight Management	.961
Tobacco Cessation	.929
Hypertension Management	.920
Combined Prevention Behaviour	.964
Perceived Effectiveness	.939
Perceived Importance	.949
Personal Comfort	.466
Reported Barriers	.748

Pearson's correlations were calculated among years of experience as a RN, years of experience as an ED RN, and age with the various subscales in the survey. Correlations were also calculated among nursing activities (combined prevention scale) and attitudes (effectiveness, importance, comfort, and barriers) in providing health promoting advice.

Multiple regression analysis was performed with the frequency of giving health advice (combined prevention scale) as the dependent variable and demographic characteristics (age, level of education, experience) and perceived importance as the independent variables. Another analysis was conducted to examine the effect of personal

comfort and reported barriers on the prevention scale. Regression analysis was also conducted with perceived effectiveness as the dependent variable and demographics, importance, barriers and comfort as independent variables. A final regression equation was calculated with personal comfort as the dependent variable and demographics and barriers as independent variables. (See Table 3.4).

Table 3.4

Overview of Study Variables in Regression Analyses

Dependent Variable	Independent Variables
Combined Prevention Behaviour	Demographics*
	Perceived Importance
Combined Prevention Behaviour	Perceived Importance
	Reported Barriers
	Personal Comfort
Perceived Effectiveness	Demographics*
	Perceived Importance
Perceived Effectiveness	Perceived Importance
	Reported Barriers
	Personal Comfort
Personal Comfort	Demographics*
	Reported Barriers

* Demographic variables include age, experience as an RN, experience as an ED RN, and level of education.

Content analysis of the narrative comments was not done for the purposes of this thesis, but the qualitative data were kept for further research. Ethics approval is for seven years of data storage; as the data has already been collected, no new ethics approval is required for a future data review.

Ethical Considerations

The study was approved by the University of Victoria Human Research Ethics Board (UVHREB) in January 2008 (see Appendix B). Discussion with the University of Calgary Ethics Board who oversee all research taking place in the Calgary Health Region occurred concerning the pilot testing of the survey, but in the end it was agreed that the UVHREB approval would cover the entire study.

Participation in this study was voluntary and responding to it implied consent. All participants had access to information regarding the study at the beginning of the questionnaire (see Appendix C). The author's email address was provided if potential participants had questions, and questions were answered promptly. No names were used. There was no way to track the individuals who submitted their surveys. The data are stored in a password protected computer file.

Chapter 4: Presentation of Findings

The results of this study are presented in relation to each research question. A description of the study sample is presented first. Details of the attitudes and activities of RNs regarding health promotion and patient education in the ED are next. This is followed by an examination of the relationship of the frequency of providing health promoting advice and a number of dependent variables. Finally, the relationship between the perceived effectiveness in providing health promoting advice and similar independent variables is described.

Description of the Sample

The sample consisted of 223 ED RNs from across Canada. Participants ranged in ages between 24 and 63 years (M = 42. 2; SD = 9.07). Ninety-one percent (91%) of respondents were female and 9% were male. The participants' years of experience as an RN ranged from 1 to 42 years (M = 18.4; SD = 9.89), and their years of experience as an ED RN ranged from 0 to 40 years (M = 12.8; SD = 8.74).

Almost 65% of the respondents had basic nursing education, either by diploma or by undergraduate degree. The remainder had completed post RN speciality courses, mainly specific to the ED environment (22.9 %), or graduate studies (8.1 %). One respondent had her PhD in Nursing. See Table 4.1 for the complete characteristics of the sample.

Table 4.1

Demographic Characteristics of the Sample

Variable	Frequency (*n*)	Percent (%)
Gender		
Female	203	91.0
Male	20	9.0
CNA Accreditation (ED specialization)		
Yes	115	51.6
No	108	48.4
Level of Education		
Diploma	66	29.6
Undergraduate Degree	78	35.0
ED Speciality Course	51	22.9
Other Speciality Course	9	4.0
Masters	18	8.1
PhD	1	0.4
Hospital Setting		
Teaching Hospital	113	50.7
General Hospital >100 beds	53	23.8
General Hospital <100 beds	57	25.6

Variable	Frequency (*n*)	Percent (%)
Schedule		
Part-time	71	31.8
Full-time	109	48.9
Casual	43	19.3

Attitudes and Activities

The first research question was, "What are the attitudes and activities of ED RNs regarding the offering of health promoting advice in the ED?"

Attitudes were measured through the following scales: perceived effectiveness, perceived importance, personal comfort, and reported barriers to the provision of health promoting advice. Health promotion activities were measured individually through four scales: overall prevention behaviour, weight management, tobacco cessation, and hypertension management. The combined prevention behaviour grouping incorporates all four scales into one. It is this combined variable that was used in the regression equations as a measure of health promotion activities.

Perceived Effectiveness

Fifteen questions were asked regarding perceived effectiveness, on a four-point Likert scale from *minimally effective* (1) to *very effective* (4). The scores were averaged to obtain a total score; the mean was 1.70 ($SD = 0.54$). See Table 4.2.

Table 4.2

Individual Item Scores for Perceived Effectiveness Scale (measured on 4 point scale)

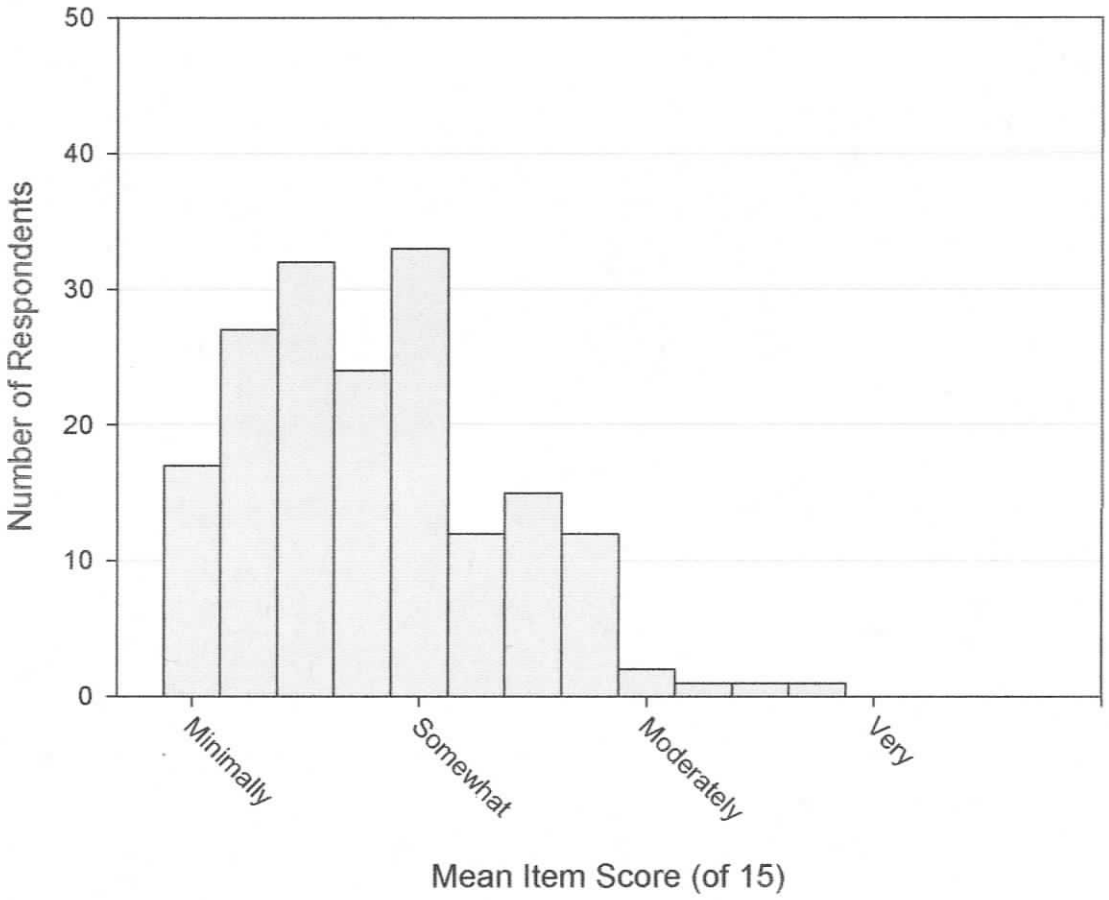
Item	Mean	Std Dev
Alcohol Consumption	1.33	0.60
Safe Sex Practices	1.69	0.75
Illicit Drug Use	1.30	0.52
Exercise	1.52	0.63
Healthy Diet	1.60	0.68
Tobacco Use Cessation	1.55	0.73
Weight Reduction	1.34	0.58
Seatbelt Use	2.22	1.05
Stress Management	1.61	0.70
Injury Prevention	2.15	0.98
Violence Prevention	1.71	0.81
Sun Exposure	1.67	0.86
Hypertension Management	2.31	0.87
Depression Management	1.71	0.76
Helmet Use	2.20	1.04
Total	1.70	0.54

ED RNs found themselves to be most effective at changing their patients' behaviour when it comes to blood pressure management (41.3% *moderately* or *very*

effective), but were found to believe they are only *minimally* or *somewhat effective* at changing their patients' behaviour when it comes to alcohol consumption (92%) and illicit drug use (93.7%). Overall, most respondents reported that they were *minimally effective* to *somewhat effective* at providing health promoting advice to their patients. See Figure 4.1.

Figure 4.1

Frequency of Perceived Effectiveness in the Provision of Health Promoting Advice (N=177)



Perceived Importance

Fifteen questions were also asked regarding perceived importance of health promotion and patient education in the ED. A four-point Likert scale from *not very important* (1) to *very important* (4) was used. The scores were averaged ($M = 3.14$; $SD = 0.69$). See Table 4.3.

Table 4.3

Individual Item Scores for Perceived Importance Scale (measured on 4 point scale)

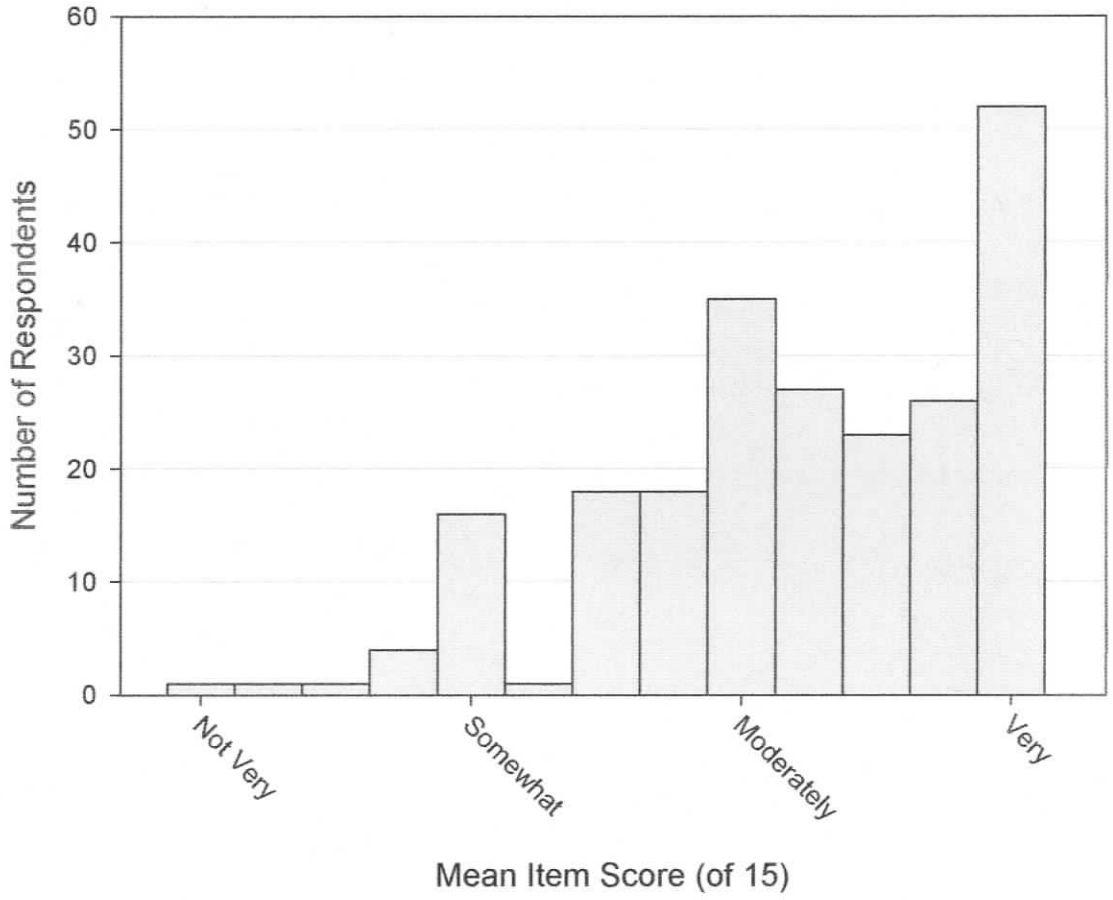
Item	Mean	Std Dev
Alcohol Consumption	3.17	0.87
Safe Sex Practices	3.15	0.92
Illicit Drug Use	3.22	0.86
Exercise	2.88	0.99
Healthy Diet	2.90	0.99
Tobacco Use Cessation	3.12	0.94
Weight Reduction	2.81	0.98
Seatbelt Use	3.51	0.76
Stress Management	2.86	0.91
Injury Prevention	3.43	0.80
Violence Prevention	3.28	0.84
Sun Exposure	2.72	0.97
Hypertension Management	3.43	0.76
Depression Management	2.99	0.87
Helmet Use	3.50	0.78
Total	3.14	0.69

It was found that most respondents believed that the provision of health promoting advice to their patients and families is a *moderately important* to *very important* role of the ED

RN. See Figure 4.2. Specifically, ED RNs found it *moderately* or *very important* to focus on seatbelt use (87.4%), helmet use (87.0%) and injury prevention (86.1%). Of lesser importance were weight reduction (60.9%), stress reduction (60.5%), and sun exposure (57.0%).

Figure 4.2

Frequency of Perceived Importance of Offering Health Promotion Advice (N=223)



Personal Comfort

Five questions were posed regarding comfort with the provision of health promoting advice in the ED. A five-point Likert scale was used, from *strongly disagree* (1) to *strongly agree* (5) with the statement. The fourth statement is a negative one and

therefore the scale was reversed to be consistent with the other statements. The scores were averaged, and the mean was 3.18 (*SD* = 0.73). See Table 4.4. That is, on average, respondents *neither agreed nor disagreed* to *somewhat agreed* with the statements, indicating overall a mild level of comfort when providing health promoting advice.

Table 4.4

Frequency of Personal Comfort when Providing Health Promoting Advice (measured on 5 point scale)

Statement	Mean	Std Dev
I feel comfortable discussing illicit drug use with patients.	3.95	1.14
I feel comfortable discussing sexual health practices with patients.	3.81	1.14
Tobacco use cessation counselling is an effective use of my time as an ED RN.	3.03	1.31
For most patients, health education does little to promote adherence to a healthy lifestyle. (Negative)	2.96	1.17
Most patients try to change their lifestyles if I advise them to do so.	2.15	0.97
Total	3.18	0.73

Seventy-seven point two percent (77.2%) of respondents *somewhat* or *strongly agree* with the statement: I feel comfortable discussing illicit drug use with patients, and

70.9% of respondents *somewhat* or *strongly agree* with the statement: I feel comfortable discussing sexual health practices with patients. On the other hand, 66.8% of respondents answered that they *somewhat* or *strongly disagree* with the statement: Most patients try to change their lifestyles if I advise them to do so.

Reported Barriers

A list of 11 potential barriers to the provision of health promotion and patient education in the ED were provided. The five-point Likert scale used in this case was from *not influential* (1) to *very influential* (5). See Table 4.5.

Table 4.5

Influence of Potential Barriers on Health Promotion and Patient Education (measured on 5 point scale)

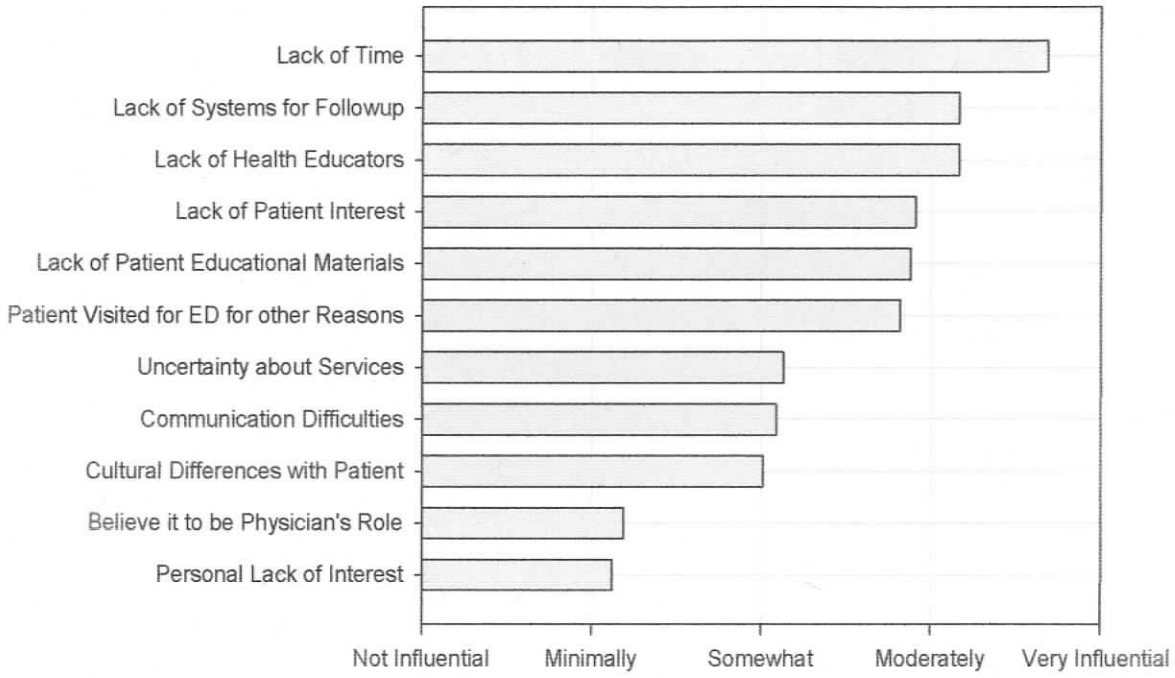
Potential Barrier	Mean	Std Dev
Lack of Time	3.69	0.67
Lack of Health Educators	3.17	1.14
Lack of Systems for Follow Up	3.17	1.05
Lack of Patient Interest	2.91	1.11
Lack of Patient Educational Materials	2.88	1.15
Patient Visited ED for Different Reason	2.82	1.27
Uncertainty about what Services to Provide	2.13	1.23
Communication Difficulties with Patients	2.09	1.28
Cultural Differences between Patients and Nurses	2.01	1.25
Believe it to be the Physician's Role	1.19	1.19
Personal Lack of Interest	1.12	1.22
Total	2.47	0.65

Lack of time was the most frequently reported perceived barrier, rated as *moderately* or *very influential* by 92.8% of respondents. The next two most frequently reported barriers were having a lack of health educators (rated *moderately* or *very influential* by 78.5% of respondents) and having a lack of support systems for patient follow up (rated as *moderately* or *very influential* by 74.0% of respondents). The least reported barrier was

the RN's personal lack of interest in health promotion and patient education. It was rated *not influential* by 40.4% of respondents. It appears that the ED RNs participating in this study believe that barriers relate to the health care system itself, as opposed to barriers related specifically to the patient or staff. See Figure 4.3 for a comparison of the barriers.

Figure 4.3

Perceived Barriers by the ED RN to Health Promotion and Patient Education Provision (N=223)



Overall Prevention Behaviour

The question posed regarding one's overall prevention behaviours in the ED was: "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…" Thirteen separate topics were included. A seven-point Likert scale from *never* (1) to *always* (7) was used. The mean score was calculated ($M = 3.49$; $SD = 0.99$). See Table 4.6.

Table 4.6

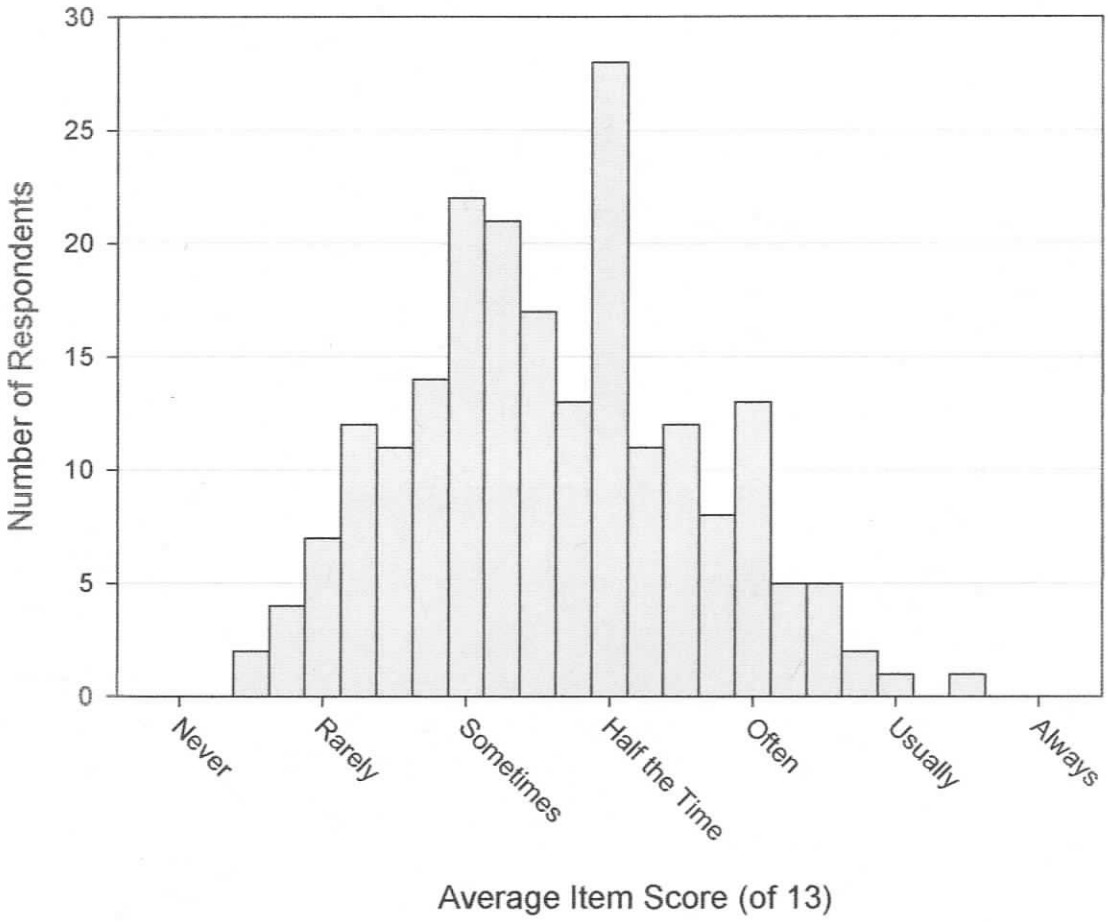
Average Frequency of Overall Prevention Behaviours of Patients Asked by ED RNs (measured on 7 point scale)

Item	Mean	Std Dev
Alcohol Use	4.45	1.63
Diet	3.53	1.56
Immunization History	4.00	1.75
Oral/Dental Health	2.02	1.00
Helmet Use	3.59	2.03
Seatbelt Use	3.98	2.00
Sexual Activity	3.17	1.62
Contraception Use	3.37	1.82
Smoke Detectors in the Home	1.30	0.73
Symptoms of Depression	3.14	1.43
Tobacco Use	5.12	1.60
Illicit Drug Use	4.74	1.59
Domestic Violence	3.40	1.86
Total	3.49	0.99

It was found that on average, respondents reported providing health promoting advice to their patients and families less than *half of the time*. See Figure 4.4.

Figure 4.4

Frequency of Overall Health Promotion Activity (N=209)



Weight Management

The weight management category contained five questions, asking about how often specific strategies were suggested to overweight or obese (in the nurse's opinion) patients. The same *never* (1) to *always* (7) seven-point Likert scale was used. The mean score was 2.29 (*SD* = 1.40). See Table 4.7.

Table 4.7

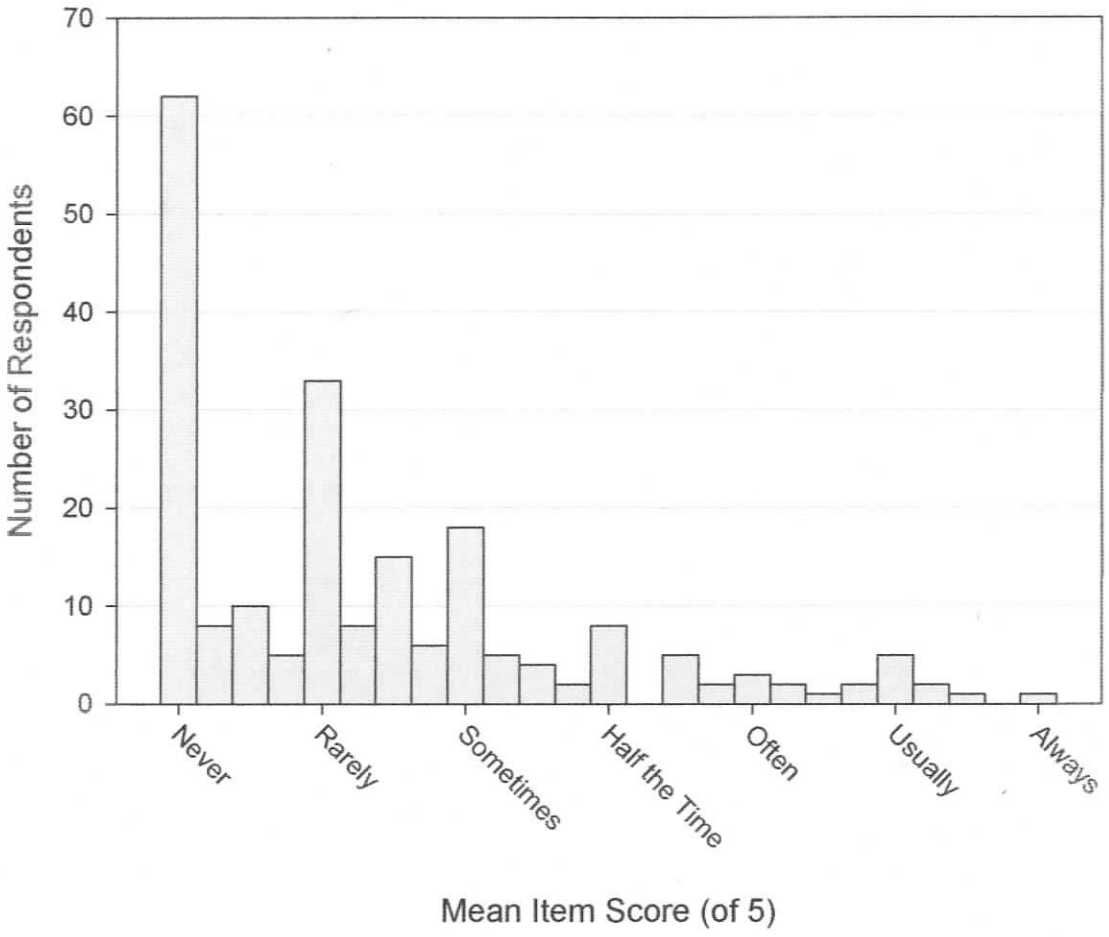
Average Frequency of Advice Given by ED RNs to Overweight or Obese Patients (measured on 7 point scale)

Item	Mean	Std Dev
Exercise Regularly	2.59	1.63
Decrease Caloric Intake	2.34	1.63
Set a Goal for Weight Loss	1.42	1.40
Decrease Dietary Fat Consumption	2.15	1.49
Increase Consumption of Fruits and Vegetables	2.51	1.66
Total	2.29	1.40

Respondents, on average, were very *rarely* found to provide health promoting advice regarding weight management to their overweight and obese patients that visited the ED. See Figure 4.5.

Figure 4.5

Frequency of Offering Weight Reduction Advice to Overweight Patients (N=208)



Tobacco Cessation

Similarly, tobacco cessation was only *rarely* to *some of the time* discussed by ED RNs. In this category, there were six questions on the seven-point Likert scale, from *never* (1) to *always* (7). The mean score of all items was 2.70 (*SD* = 1.44). See Table 4.8.

Table 4.8

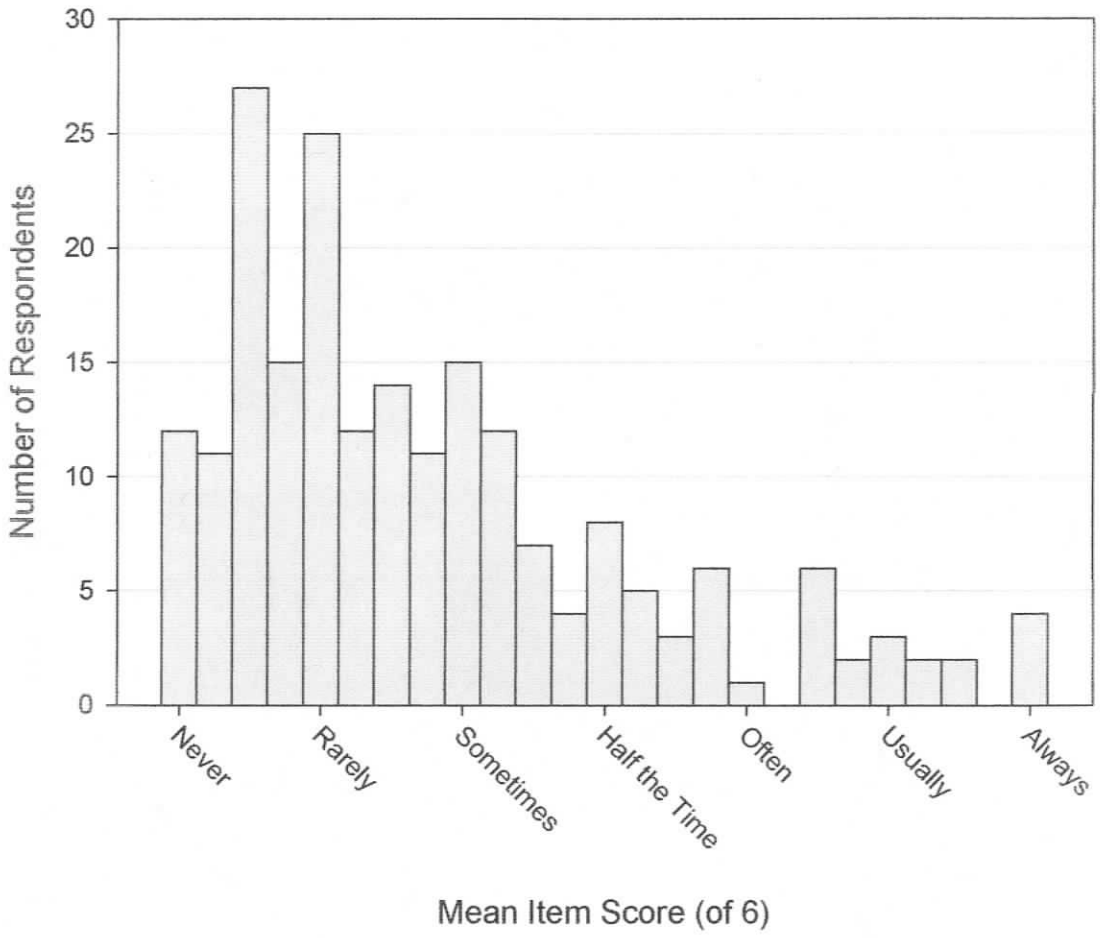
Average Frequency of Activities Done by ED RNs Caring for Tobacco Using Patients (measured on 7 point scale)

Item	Mean	Std Dev
Quit Smoking/Chewing	4.27	1.92
Set a Quit Date	2.18	1.68
Refer them to a Group Clinic or Cessation Program	2.39	1.70
Prepare them for Withdrawal Symptoms	2.47	1.77
Have the Physician Prescribe a Nicotine Patch or Gum	2.62	1.72
Provide Self-Help Materials	2.26	1.66
Total	2.70	1.44

Respondents more commonly advised their patients to quit, however were found *rarely* to refer them to a program, provide the tobacco users with self-help materials, or prepare them for withdrawal symptoms. See Figure 4.6.

Figure 4.6

Frequency of Offering Tobacco Cessation Advice (N=207)



Hypertension Management

Management of hypertension was measured by six questions on a seven-point Likert scale from *never* (1) to *always* (7). The scores were again averaged, with a mean of 3.96 (*SD* = 1.40). See Table 4.9.

Table 4.9

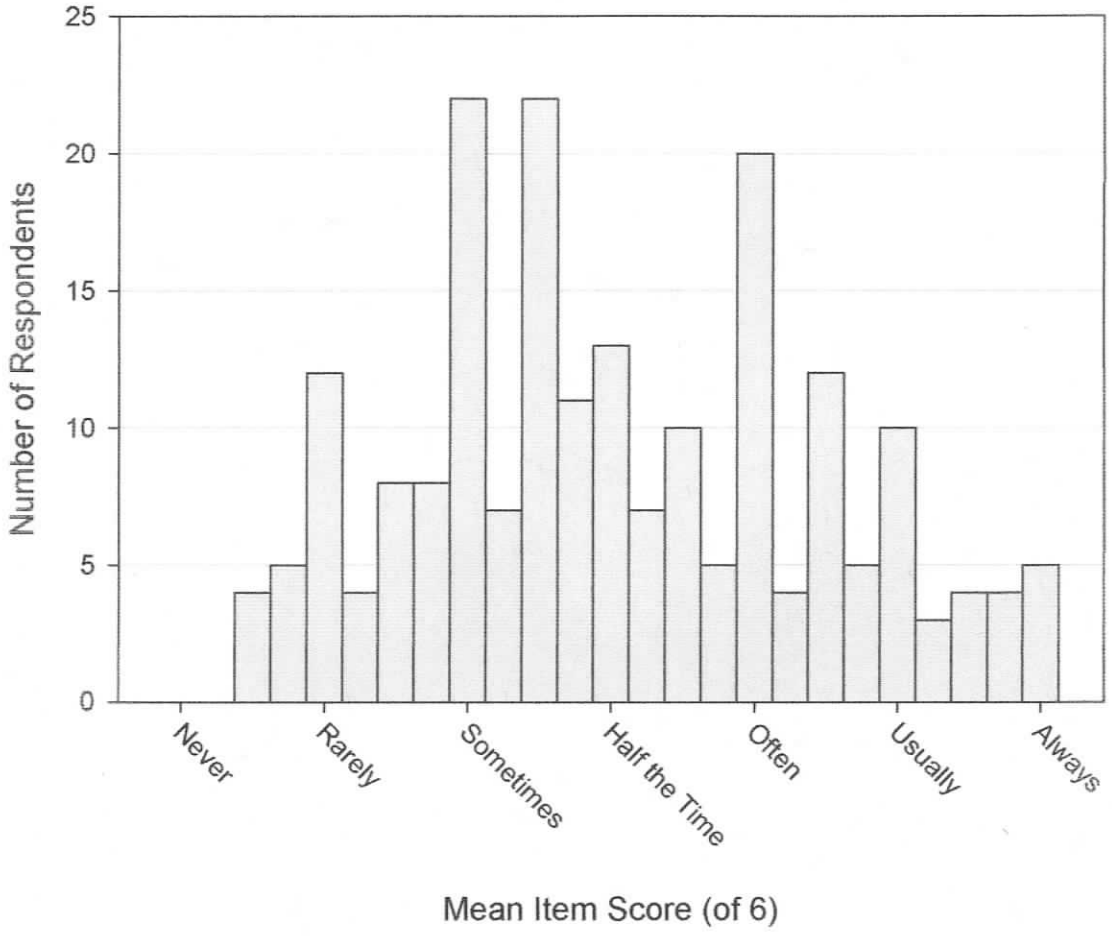
Average Frequency of Activities Done by ED RNs Caring for Patients with Hypertension (measured on 7 point scale)

Item	Mean	Std Dev
Review Health Risks of Hypertension	4.10	1.79
Advise Weight Loss	2.93	1.80
Advise Salt Reduction	2.93	1.90
Discuss the Importance of Taking Antihypertensive Medications Regularly	4.84	1.69
Discuss How to Decrease Stress	3.21	1.74
Suggest Following Up with Family Physician	5.55	1.46
Total	3.96	1.40

There were a range of answers, but on average hypertension management activities were done about *half of the time*. Referrals to the patient's general practioner and encouragement to continue with their prescribed medication routine were the most common activities reported by ED RNs in relation to hypertension management. See Figure 4.7.

Figure 4.7

Frequency of Offering Hypertension Management Advice (N=205)

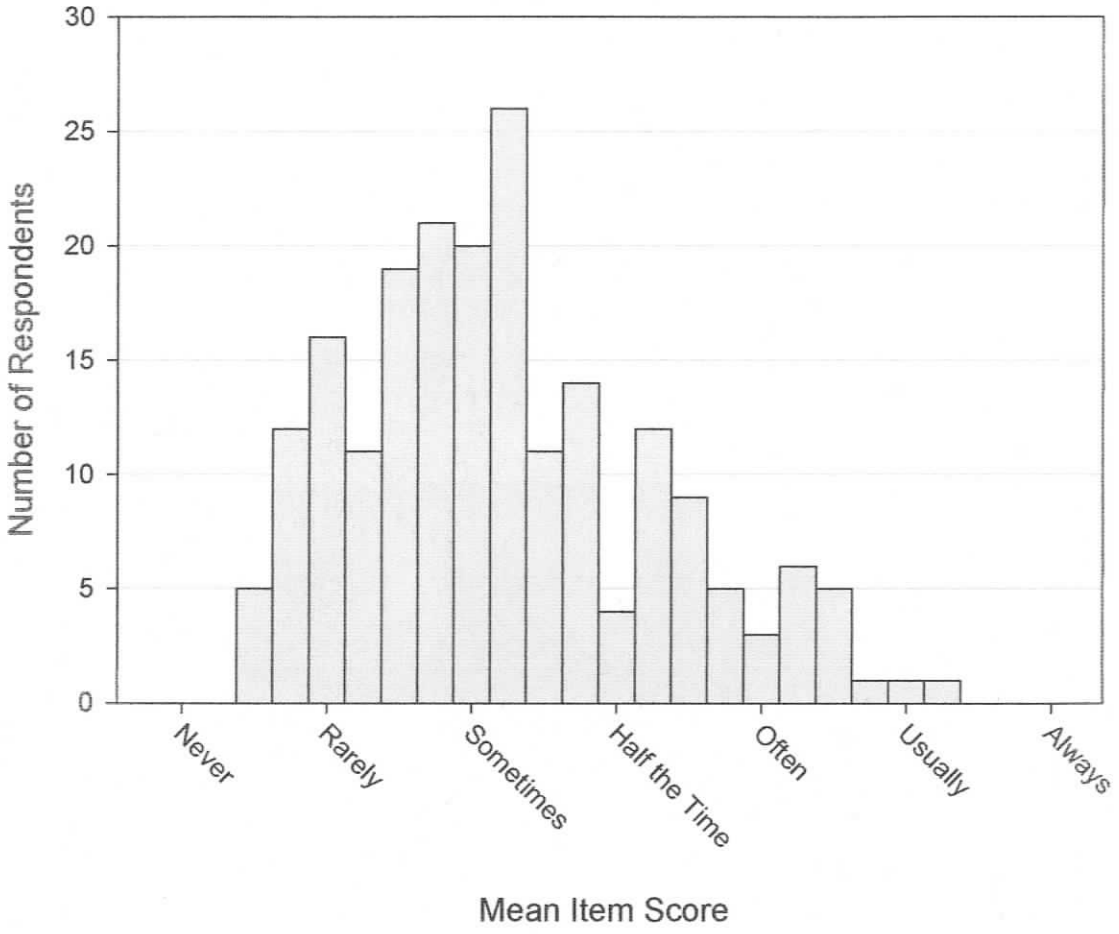


Combined Prevention Behaviour

Finally, the last four previous categories (overall prevention behaviour, weight management, tobacco cessation, and hypertension management) were combined to create the prevention behaviour variable that describes the combined health promotion and patient education activities provided by RNs in the ED. A mean score was calculated (M = 3.10; SD = 1.05). See Figure 4.8. On average, respondents were found to provide health promoting advice to their patients and families *sometimes*.

Figure 4.8

Frequency of Combined Score on Prevention Behaviour



Correlations with Frequency of Providing Health Promoting Advice

The second research question was, "What relationship do age, level of education, years of experience as an RN, years of experience as an ED RN, and perceived importance have with frequency of provision of health promoting advice?"

Demographic characteristics were found to have little relationship with the ED RNs' frequency of providing health promoting advice. Weak but statistically significant correlations were noted among years of experience as an RN, years of experience as an

ED RN, and age with the activities of providing health promoting advice, but no relationship was found to correlate with any of the attitudes examined (see Table 4.10). As well, weak but statistically significant correlations were noted mainly with Masters prepared ED RNs, namely with the tobacco cessation and reported barriers scales. A relationship is noted between the personal comfort attitude scale and those who are Masters prepared and those who have taken ED speciality courses (see Table 4.11). However, while statistically significant, these are again weak correlations. There were no other significant correlations.

Table 4.10

Correlations between Years of Experience, Age, and the Provision of Health Promoting Advice

	Years as a RN	Years as an ED RN	Age
Overall Prevention Behaviour	.179**	.136*	.187*
Weight Management	.163*	.146*	.195**
Tobacco Cessation	.140*	.073	.115
Hypertension Management	.144*	.075	.125
Perceived Effectiveness	.055	.022	.049
Perceived Importance	.040	.019	.057
Personal Comfort	.117	.025	.110
Reported Barriers	.065	.025	.074

** = correlation is significant at the 0.01 level (2-tailed)
* = correlation is significant at the 0.05 level (2-tailed)

Table 4.11

Correlations between Level of Education and the Provision of Health Promoting Advice

	Diploma	Undergrad	Masters	ED Spec	Other Spec	PhD
Overall Prevention Behaviour	-.030	-.087	.105	.031	.067	.009
Weight Management	.022	-.062	.073	-.058	.113	.036
Tobacco Cessation	-.059	-.071	.197**	-.006	.062	-.018
Hypertension Management	.049	-.085	.093	-.032	.042	-.031
Combined Prevention Behaviour	-.006	-.107	.154*	-.015	.093	-.002
Perceived Effectiveness	.123	-.122	.028	-.011	-.035	.116
Perceived Importance	.122	-.057	.050	-.109	-.010	.085
Personal Comfort	.070	-.076	.151*	-.151*	.085	.146*
Reported Barriers	.054	-.098	.133*	-.042	.014	.011

** = correlation is significant at the 0.01 level (2-tailed)
* = correlation is significant at the 0.05 level (2-tailed)

In the regression analysis, it was found that age, education, and experience alone were not significant predictors of the overall combined prevention score (frequency of ED RNs providing health promoting advice). However, adding the importance category made the overall regression equation statistically significant (see Table 4.12). Hence, the perceived importance of providing health promotion and patient education is the single largest predictor of the frequency of providing health promoting advice, when the demographic characteristics were controlled. The variables explained 24.1% of the variance of frequency of providing health promoting advice.

Table 4.12

Summary of Multiple Regression Analysis for Variables explaining Frequency of Providing Health Promotion Advice with Demographic Characteristics and Importance

Variable	*b*	*SE*	*Std. B*	*t*	*Sig.*
Constant	.030	.627		.048	.961
Age	.017	.016	.151	1.118	.265
Years Exp RN	.004	.017	.041	.259	.796
Years Exp EDRN	-.004	.013	-.034	-.313	.754
Ed. Undergrad.	.106	.176	.048	.605	.546
Ed. Masters	.570	.267	.148	2.133	.034
Ed. Spec. ED	.253	.185	.105	1.366	.173
Ed. Spec. Other	.569	.354	.107	1.609	.109
Ed. PhD	-.715	.951	-.048	-.751	.453
Importance	.633	.096	.424	6.569	.000

$R^2 = .241$	ANOVA	*df*	*SS*	*MS*
	Regression	10	52.626	5.263
	Residual	190	165.806	.873

$F = 6.031$ *Sig.* = .000

Multiple regression analysis was also used to examine the effect of not only importance, but barriers and comfort on the combined frequency of providing health

promoting advice variable (see Table 4.13). The result was that perceived comfort and perceived importance of offering health promotion advice were found to explain 27.2% of the variance of the frequency of providing health promoting advice. Barriers were not found to be significant.

Table 4.13

Summary of Multiple Regression Analysis for Variables explaining Frequency of Providing Health Promotion Advice with Importance, Barriers, and Comfort

Variable	*b*	*SE*	*Std. B*	*t*	*Sig.*
Constant	-.748	.675		-1.109	.269
Importance	.536	.101	.359	5.322	.000
Barriers	-.026	.107	-.016	-.242	.809
Comfort	.371	.131	.208	2.835	.005

$R^2 = .272$	ANOVA	*df*	*SS*	*MS*
	Regression	11	59.389	5.399
	Residual	200	159.044	.842

$F = 6.416$ *Sig.* = .000

Perceived Effectiveness in Providing Health Promoting Advice

The third and final research question was, "What relationships do age, level of education, years of experience as an RN, years of experience as an ED RN, and perceived importance have with perceived effectiveness of providing of health promoting advice?"

Demographic characteristics were not found to have any impact on perceived effectiveness in providing health promoting advice. There was no significant correlation of the ED RNs' age, education, or years of experience with perceived effectiveness. Nor was there any correlation between reported barriers and perceived effectiveness.

However, it was found that there were statistically significant correlations between perceived effectiveness of provision of health promoting advice and combined prevention behaviours ($r = .518$; $p = 0.01$), perceived importance ($r = .388$; $p = 0.01$), and personal comfort ($r = .312$; $p = 0.01$). See Appendix D.

In the regression analysis, it was found that perceived importance explained the perceived effectiveness of health promoting advice, when demographic characteristics were controlled (see Table 4.14). This equation explained 17.7% of the variance of perceived effectiveness.

Table 4.14

Summary of Multiple Regression Analysis for Variables Explaining Effectiveness When Providing Health Promotion Advice

Variable	*b*	*SE*	*Std. B*	*t*	*Sig.*
Constant	2.995	1.388		2.158	.032
Age	-.022	.034	-.094	-.651	.516
Years Exp RN	.028	.037	.130	.743	.459
Years Exp EDRN	-.008	.030	-.035	-.276	.783
Ed. Undergrad.	-.429	.395	-.100	-1.086	.279
Ed. Masters	-.254	.581	-.035	-.436	.663
Ed. Spec. ED	-.018	.425	-.004	-.042	.966
Ed. Spec. Other	-.503	.704	-.054	-.715	.476
Ed. PhD	1.968	1.966	.072	1.001	.318
Importance	1.095	.213	.374	5.149	.000

$R^2 = .177$	ANOVA	*df*	*SS*	*MS*
	Regression	8	130.679	13.068
	Residual	167	609.190	3.692

$F = 3.539$ *Sig.* = .000

With perceived effectiveness as the dependent variable, and perceived importance, barriers, and comfort as independent variables, 19.6% of the variance was explained. In this multiple regression analysis, it was found that not only importance but comfort were found to be a significant predictors of perceived effectiveness of providing health promotion and patient education (see Table 4.15).

Table 4.15

Summary of Multiple Regression Analysis for Variables Explaining Effectiveness with Importance, Barriers, and Comfort as Independent Variables

Variable	*b*	*Std. Err.*	*Std. Beta*	*t*	*Sig.*
Constant	1.744	1.510		-1.155	.250
Importance	.911	.230	.311	3.965	.000
Barriers	.110	.227	.036	.486	.628
Comfort	.615	.306	.171	2.007	.046

$R^2 = .196$	ANOVA	*df*	*SS*	*MS*
	Regression	11	145.284	13.208
	Residual	164	594.586	3.626
	$F = 3.643$		*Sig.* = .000	

Multiple regression analysis was then run with comfort as the dependent variable against perceived barriers. Barriers were found to explain the ED RNs' comfort level with providing health promoting advice (see Table 4.16). In this case, 15.1% of the variance was explained.

Table 4.16

Summary of Multiple Regression Analysis for Variables Explaining Comfort with Providing Health Promotion Advice

Variable	*b*	Std. Err.	Std. Beta	t	Sig.
Constant	2.935	.310		2.158	.000
Age	.000	.009	-.005	-.036	.971
Years Exp RN	.010	.009	.178	1.122	.263
Years Exp EDRN	-.010	.007	-.144	-1.326	.186
Ed. Undergrad.	-.065	.096	-.053	-.678	.499
Ed. Masters	.192	.149	.090	1.294	.197
Ed. Spec. ED	-.172	.106	-.124	-1.625	.106
Ed. Spec. Other	.164	.195	.056	.839	.402
Ed. PhD	1.106	.557	.127	1.987	.048
Barriers	.230	.057	.258	4.009	.000

$r^2 = .151$	ANOVA	*df*	SS	MS
	Regression	9	11.378	1.264
	Residual	212	63.884	.301

F = 4.195 Sig. = .000

Chapter 5: Discussion of Findings

The following chapter discusses the results of the study examining the relationships among demographic characteristics, ED RN attitudes toward health promotion and patient education, health promoting activities, and barriers. These findings are discussed in relation to the study's hypotheses. A conceptual model is introduced. The chapter concludes with the limitations of the study.

It was hypothesized that a relationship would exist between the ED RNs' level of education and years of experience and frequency of providing health promoting advice. However, only a few weak significant correlations were found among these variables. Whether an RN is diploma educated or PhD educated, or has undertaken ED speciality courses, has little relationship with the likelihood of providing health promotion and patient education on relevant topics to those she encounters. No other research was found that has taken into account an RN's level of education and therefore the study results cannot be compared to others.

It was also hypothesized that there would be a relationship between years of experience as an ED RN and a feeling of effectiveness in providing health promoting advice. No correlation was found. McBride (1994) compared United Kingdom's grades of nurses (C to I grades), which are similar to years of experience, and their feelings of effectiveness. She found several discrepancies among her results as well. Increased feelings of effectiveness were most notable in the extremes: the lower and higher grades. She concluded that "different grades of nurse may require different types of support for a comprehensive strategy, whilst some issues relate to all nurses irrespective of grade" (McBride, 1994, p. 97). This may have been then case for this study's sample.

None of the demographic characteristics appeared to play a role in determining an ED RNs perceived effectiveness of providing health promoting advice, nor did they show any major correlation with any of the attitudes or activities examined. It could be suggested that this is due to the fact that the provision of health promotion by ED RNs is based on individual and not necessarily demographic characteristics. Every RN comes from diverse individual life circumstances, has attended different educational institutions, practices in different health regions within the country, has a variety of nursing experiences prior to her employment in the ED, and has a range of definitions for health. With such a small sample size overall, it is even more difficult to determine any significant relationships between providing health promoting advice and the demographic characteristics.

The third hypothesis was that lack of time would be a significant reported barrier for the ED RN to effectively provide health promoting advice. While barriers overall were not significant predictors of the provision of health promoting advice, time was, in fact, reported to be the most influential barrier to its provision. This is consistent with previous literature (Bensberg et al., 2003; Haddad & Umlauf, 1998; Kelley & Abraham, 2007; Littlewood & Parker, 1992). With a larger scope of practice, increased staffing shortages, and a higher patient acuity, nurses may find it difficult to allot time to health promotion activities.

Reported Barriers

Lack of systems for follow up, lack of health educators, lack of patient interest, lack of patient educational materials, and the fact that the patient visited the ED for a different reason all were rated as moderately influential barriers to health promotion

provision. Wingard (2005) explains the need to capitalize on an individual's readiness to learn. There will be times when patient education cannot occur simply due to a lack of readiness, or interest. Patients, for example, having visited the ED for a simple laceration may be unreceptive to discussing their smoking habits with the RN while being sutured by the physician. Nevertheless, some patients who are looking for the dialogue to begin may find such a time to be most appropriate and actually welcome a nurse's support and knowledge.

Personal Comfort

Study findings suggest that the reported barriers, or perception of barriers, correlate with how comfortable one is at providing health promoting advice. It could be presumed that one will put up barriers when not comfortable in providing advice. In contrast, those ED RNs who are comfortable with providing advice to their patients will be able to look past the barriers to some degree, with time being the most difficult to overcome. Casey (2007) found that with nurse empowerment through good managerial role models and support, nurses will feel more comfortable discussing health issues with their patients, passing that empowerment onto them. This suggests then that the best way to overcome barriers is to encourage a culture of health promotion within the ED, allowing RNs to develop comfort in their position by good role modelling and easily accessible resources.

Perceived Importance

Overall, ED RNs believe that it is important to provide health promoting advice to their patients. Perceived importance was the most essential factor in explaining frequency of health promoting advice. These findings are consistent with other studies in the

literature (Allender & Spradley, 2001; Kelley & Abraham, 2007). Nurses see themselves as ideally suited to carry out health promoting activities (Littlewood & Parker, 1992). Olshansky (2007) states: "Health promotion is a critical role for nurses, and nurses are the most appropriate health professionals to address health promotion" (p.1). She further elaborates:

> Health promotion involves understanding the social determinants of health, the social context, individual situations and perspectives, and all the complexities that influence one's motivation and ability to engage in health promotion activities...It is clear that our complex nursing roles involve a complex understanding of all that is involved in promoting the health of the public. (Olshansky, 2007, p.1-2)

ED RNs often do not have a long period of contact time with the patients they encounter, and therefore, being able to identify and consider a patient's determinants of health becomes an advanced skill. As ED RNs already believe it is an important aspect of care, training should be provided to guide staff on how to make patient education most effective. A simple referral to a reputable Internet site sometimes is all that is required (Salo, Perez, Lavery, Malankar, Borenstein, & Bernstein, 2004).

Perceived Effectiveness

Personal comfort and perceived importance were shown not only to be related to each other, but to be significant predictors of prevention behaviours and of perceived effectiveness. How comfortable one is at providing health promoting advice and how important one feels it is to provide that advice in turn explains the frequency of health promotion and patient education in the ED, as well as the perceived effectiveness of providing it. McBride (1994) noted that while there were some discrepancies in how

effective nurses view their health teachings to be, "other health care professionals feel that patients notice what nurses say about lifestyle issues, and that individual nurses can change people's lifestyles" (p.97). Patients do value the health promoting advice provided by the RN. It is particularly those in the lower income and lower educational brackets that view health teachings by RNs as an important part of their care (Oermann, 2001). It is this population that frequently visits the ED.

Weight Management

Findings also suggest that ED RNs discuss certain topics more often than others. For example, hypertension management was addressed with patients on average half the time. Tobacco cessation was brought up rarely, and weight management almost never. One could speculate that this is because of Canadian cultural norms. "Weight can be a sensitive subject," states Bartlett (2003, p. 29). She found that weight management is a chronic issue, that health care professionals do not see themselves as being able to successfully change their patients weight concerns, and that there is little in the way of resources and support for staff attempting to provide health promoting advice with regard to weight management. The general population, particularly women (who make up the majority of RNs), are conscious of their weight and tend to not be comfortable with their own bodies (Cash & Henry, 1995). Attempting, then, to discuss the issue of weight management with another individual is difficult. Dieticians may be the best suited to discuss diet, eating behaviours, and physical activity. According to Barr, Yarker, Levy-Milne, and Chapman (2004), most dieticians believe that they should be the ones to counsel individuals regarding weight management, preferring to focus on prevention

prior to obesity problems than attempting to manage them. It would be ideal for ED RNs to initially address the topic with patients and suggest referral to a registered dietician.

Tobacco Cessation

While society's view on tobacco habits is changing, smoking is still quite commonplace, with 5.2 million, or 19%, of Canadians regular users of tobacco products (Health Canada, 2007). It is a well known fact that smoking is not a healthy practice and is linked to many illnesses. It is also a very difficult addiction to break. While nurses recognize these facts, O'Donavan (2007) highlights many reasons why they do not broach the subject, including time constraints, lack of training, and personal conflict regarding tobacco use. Within the ED, there needs to be specific guidelines available to RNs so that they can easily provide information to patients regarding options for tobacco cessation. Contacts for local groups and programs with varying costs and time commitments should be available, allowing for a variety of options given patient lifestyle diversity. With standardized guidelines, ED RNs will be able to provide accurate and consistent information in a timely fashion.

Hypertension Management

According to the study's results, hypertension seems to be a much easier topic for ED nurses to address with patients. This most likely because it is linked with many cardiovascular conditions that present in the ED, and is easily measurable. Holland, Segraves, Nnadi, Belletti, Wogen, and Arcona, (2008) found that the most common reasons for uncontrolled blood pressure relate to the need for patient lifestyle modification, a lack of hypertension education, and poor medication compliance. It is therefore not only important to identify individuals that are at risk for hypertension, but to

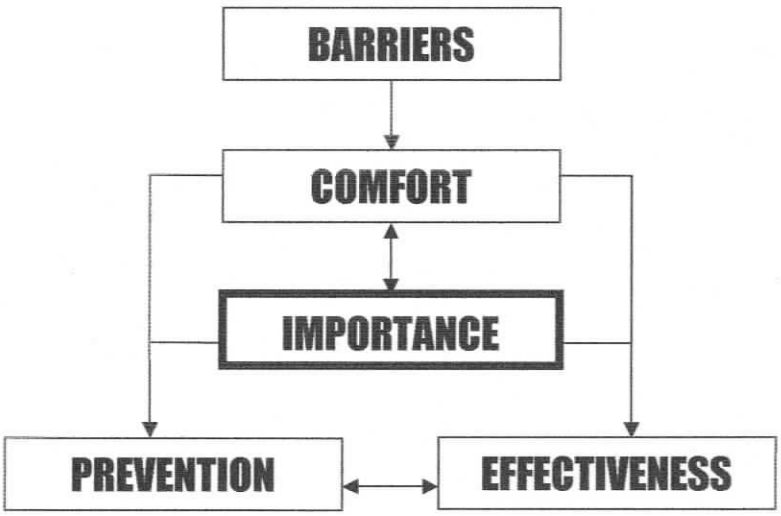
take the time to inform those patients of the up-to-date guidelines for blood pressure management. Health professionals, particularly nurses, need to take a "leadership role" when it comes to hypertension awareness and control (Campbell, Fodor, & Chockalingam 2001, p. 246). If possible, it is best to suggest treatment of hypertension naturally through a healthy low sodium diet, an increase in physical exercise, and the removal of stress. Nevertheless, it is generally easier to suggest a follow up with the patient's family practioner for an antihypertensive medication, which is a better option than nothing at all.

Conceptual Model

The following figure (Figure 5.1) shows a conceptual model of the relationship that ED RN attitudes and activities have with health promotion and patient education.

Figure 5.1

Relationship of Attitudes and Activities of RNs towards Health Promotion and Patient Education in the ED



Perceived importance is the most significant variable in explaining frequency of health promoting advice. Still, while a large number of ED RNs believe health promotion and patient education are important, it does not necessarily get carried out in practice. ED RNs are faced with barriers to health promotion and patient education. They also need to feel that the health promoting activities they are providing are effective and not a waste of their time. As well, ED RNs that are more comfortable with its provision are more likely to see it as an important aspect of the nursing role. Once they feel that are actually making a difference in their patients' lifestyle, there is a greater likelihood that health promotion and patient education will occur more frequently. (Please note that the word *prevention* was used in this model to include both health promotion and patient education activities.)

Limitations of the Study

This study's limitations are as follows.

First, this study pertains to health promotion of adult populations only. It is easier to offer health promotion advice to patients and their families in child populations as they have access to more educational materials, through day care and school, as well as the ED.

> Children are not wholly responsible for themselves although the degree of responsibility varies with age and other factors. Thus health promotion involves a relationship not only with the child but with the parents and other carers. This is a different relationship from that of the nurse with autonomous adult patients. (McBride, 1994, p. 93)

It would be interesting to compare the two populations.

Secondly, this sample was not random; rather, convenience sampling was used. Within the NENA sample, there may be a slight bias, as NENA membership is voluntary for emergency nurses; it may be that more progressive and committed nurses join the organization. One could argue that nurses who are members of NENA and who are willing to participate in a survey are likely to be more motivated than others toward health promoting activities. While the sample included a wide range of participants from across Canada, the use of this convenience sample limits the ability to generalize from the study's findings.

Another limitation to the study is the low alpha on the comfort scale. In review of the questions asked under this scale, it does not appear that all of the statements are measuring comfort. In particular, the last three questions appear to measure perceived effectiveness over personal comfort. Therefore a review of the questions and a revision of the scale are necessary should this study be repeated.

Finally, the instrument adapted for this study was based on a questionnaire designed for primary care physicians rather than ED RNs. Primary care physicians tend to see their patients again. They have a better opportunity at tracking healthy progress while ED RNs tend to spend time just once with their patients. Also, ED RNs generally encounter patients during an acute crisis of some sort, where primary care physicians often deal with more chronic issues. So while an attempt had been made to ensure its reliability and validity, the instrument may not have captured all the aspects of health promotion important for ED RNs. Therefore, further research using a more appropriate survey tool would be beneficial.

Chapter 6: Conclusion and Recommendations

Research Summary

In this descriptive exploratory study, the relationships among the frequency of providing health promotion and patient education to adult patients by RNs in the ED were examined. Specifically, perceptions of effectiveness and its importance were explored. Comparisons made regarding demographic characteristics, and perceived barriers were considered.

The convenience sample included 223 Canadian ED RNs between the ages of 24 and 63 years. The sample consisted of 203 females and 20 males working in small, large, and teaching hospitals nationwide with a variety of educational backgrounds. Most were NENA members. An adapted online form of the PMAAQ was used to collect the data for this study.

It was reported that barriers, most reportably time, make it difficult for ED RNs to provide health promotion and patient education. There is a relationship between overcoming these barriers in practice and feeling more comfortable providing health promoting advice to patients. ED RNs who are more comfortable are also more likely to see the importance of health promoting activities, explaining 27.2% of the variance of the latter variable. Overall, ED RNs believe that health promoting activities are important, but need to feel that what they are providing is effective. Perceived importance explained 17.7% of the variance of the perceived effectiveness of health promoting advice when other variables were controlled. The level of education of the ED RNs were not found to significantly predict health promoting attitudes. No relationship was found between years

of experience as an ED RN and the perceptions of effectiveness in providing health promoting advice.

Recommendations for Further Research

The use of a questionnaire in general can be quite rigid and limiting for respondents. While a comments section was included at the end of the adapted PMAAQ, it was too large of a project to analyze the qualitative data for this thesis. Recommendations for future research then include examining the qualitative data for prominent themes and patterns.

In terms of demographic data, only age, experience, and level of education were analysed in this study. The other variables, such as gender, accreditation, hospital setting, and schedule, would be worthwhile to examine.

As well, only a small proportion of the variance of the frequency of the provision of health promotion activities was explained. There are many other variables that were not considered in this study that would be valuable to explore in the future, such as ED RNs' knowledge of health promotion and patient education topics.

Further research will also be required to explore the outcomes of implementation of enhanced health promotion activities in the ED. An experimental study in which a Canadian program of health promotion activities is implemented would be a valuable contribution to the literature.

Additional work could be done to further develop and test a model of health promotion activity. The model, such as that outlined in the discussion could be tested using path analysis or structural equation modeling to further develop the theory.

Studies have been done to examine cost analysis and patient satisfaction with health promotional activities in the ED (Cummings et al., 2006; DeSalvo, Binda Rest, Nettleman, Freer, & Knight, 2000). A study of effectiveness of health promotion and patient education in the ED that looks at outcomes and rates of return to the ED would be worthwhile. If ED RNs can actually see that the extra time they take to provide health promoting advice to their patients actually makes a difference overall to patient care, then they would be more likely to carry it out.

Implications for Nursing Policy

Understanding the attitudes and activities of RNs towards health promotion and patient education in the ED has many implications for nursing policy. In particular, current EDs can be transformed into ones that support health promotion and patient education. Health promoting activities should become an expectation of employment, reinforced at initial hire, orientation, and annual recertification. "Health promotion then becomes an integrated part of an organization and not a side issue." (Bensberg & Kennedy, 2002, p.182) ED RNs already agree that health promoting activities are important; they need to become comfortable through practical reinforcement.

As well, a culture of health promotion within EDs needs to be encouraged, getting away from the traditional medical model. "Behaviour that fulfills social norms gains positive social reactions." (Bandura, 1998, p. 7) In other words, if policy change elicits a trend toward regular health promotion and patient education provision in the ED as a socially acceptable norm, then other ED RNs will follow suit.

Barriers to health promotion and patient education must be kept in mind when developing new policies. ED RNs feel, in particular, that they do not have enough time to

carry out health promoting activities. Policy makers cannot expect ED RNs to take on more responsibility within the department without some assistance. Creating policies and guidelines and providing adequate readily available resources will cut down on the barriers to patient education delivery.

Recommendations for Practice

Having an understanding of the attitudes and activities of RNs towards health promotion and patient education in the ED has many implications for practice. Health promotion is a broad concept that incorporates the patients' determinants of health and reaches into the spectrum of community. While ED RNs cannot be expected to be responsible for all aspects of society's health, the ED RNs included in this study agree that it is very important to provide their patients with health promoting advice, a belief that this affords better quality of care. Supplying patients with ample leadership, support, and resources regarding their illness can lead to an increase in self care behaviours (Crespo & Shrewsberry, 2007). Patient satisfaction with the care provided is then enhanced. A decrease in recurrent visits by clients to the ED (and therefore decreased cost to the department) would be noticeable.

Assessing the attitudes and activities of registered nurses regarding health promotion and patient education is the first step in changing practice. The results of this study suggest that believing that health promotion and patient education is important may increase the frequency of ED RNs providing health promoting advice. It is also necessary to have the support, resources, and training available so that these ED RNs can be more comfortable and effective in their role as a patient educator. It would be worthwhile to include in staff unit orientation encouragement and training on how to access and

incorporate health promotion into daily practice. Annual general inservice is a good time of year to reinforce the need for staff to continue providing health promoting advice to the patients seen in the ED.

It may be valuable in EDs, particularly in larger centres, to create a new position for an RN to specifically offer health promotion and patient education to patients. The patient education nurse would be someone who has the time to spend with patients and their families, while in the waiting room or while in the department waiting for test results, providing them with information about their health, tailored to their needs. In smaller hospitals, the staff nurse educator could supply ED RNs with the appropriate education and suitable resources for them to provide health promotion and patient education. While it is still the role of every RN to provide health promoting advice to her patient, this new role may assist in overcoming some barriers.

RNs working in the ED can make a difference in the way a busy department is run by empowering patients with health promotion strategies. Changes in practice that include a patient educational component do influence the outcomes of health care delivered to patients in the ED.

Patient encounters in the ED are most often individual. Health care providers do not often get a second chance at influencing a patient's life. It is therefore important for ED RNs to take the initiative in providing health promotion and patient education to those that they care for, when that moment arrives.

References

Allender, J., & Spradley, B. (2001). The community as client: Assessment and diagnosis. In J. Allender & B. Spradley (Eds.), *Community Health Nursing,* (5th ed., pp.353-374). Philadelphia, PA: Lippincott.

Bailey, T. (2007). Waiting for a family doctor. *Canadian Family Physician, 53*, 579-580.

Bandura, A. (1998). Health promotion from the perspective of social cognitive theory. *Psychology and Health, 13*, 623-649.

Barr, S. I., Yarker, K. V., Levy-Milne, R., & Chapman, G. E. (2004). Canadian dieticians' views and practices regarding obesity and weight management. *Journal of Human Nutrition and Dietetics, 17*, 503-512.

Bartlett, S. J. (2003). Motivating patients toward weight loss: Practical strategies for addressing overweight and obesity. *Physician and Sportsmedicine, 31*(11), 29-36, 47-48.

Bensberg, M., & Kennedy, M. (2002). A framework for health promoting emergency departments. *Health Promotion International, 17*(2), 179-188.

Bensberg, M., Kennedy, M., & Bennets, S. (2003). Identifying the opportunities for health promoting emergency departments. *Accident and Emergency Nursing, 11*, 173-181.

Campbell, N. R. C., Fodor, J. G., & Chockalingam, A. (2001). Hypertension recommendations: Are they relevant to public health? *Canadian Journal of Public Health, 92*(4), 245-246.

Canadian Broadcasting Corporation (18 June 2008). 4.1 million Canadians with family doctor: StatsCan. www.cbc.ca/health/story/2008/06/18/doctor-statcan.html

Casey, D. (2007). Nurses' perceptions, understanding and experiences of health promotion. *Journal of Clinical Nursing, 16*, 1039-1049.

Cash, T. F., & Henry, P. E. (1995). Women's body images: The results of a national survey in the U.S.A. *Sex Roles, 33*(1-2), 19-28.

Crespo, R., & Shrewsberry, M. (2007). Factors associated with integrating self management support into primary care. *The Diabetes Educator, 33*, 126S-131S.

Cross, R. (2005). Accident and emergency nurses' attitudes towards health promotion. *Journal of Advanced Nursing, 51*(5), 474-483.

Cummings, G. E., Francescutti, L. H., Predy, G., & Cummings, G. (2006). Health promotion and disease prevention in the emergency department: a feasibility study. *Canadian Journal of Emergency Medicine, 8*(2), 100-105.

Dallaire, C. Hagan, L., & O'Neill, M. (2000). Linking health promotion and community health nursing: Conceptual and practical issues. In M. J. Stewart (Ed), *Community Nursing: Promoting Canadians' Health* (2nd Ed) (pp. 317-332). Toronto: W. B. Saunders Company.

Davis, A. (2006). Theories used in IS research. Retrieved September 15, 2008, from www.istheory.yorku.ca/socialcognitivetheory.htm

DeSalvo, A., Binda Rest, S., Nettleman, M., Freer, S., & Knight, T. (2000). Patient education and emergency room visits. *Clinical Performance and Quality Health Care, 8(1), 35-37.*

Emerson, D. (2003). Promoting health for patients with coronary heart disease. *Emergency Nurse, 11*(6), 19-21.

Epp, J. (1986). Achieving health for all: A framework for health promotion. *Health Promotion International, 1*(4): 419-428.

Gastaldo, D. (1997). Is health education good for you? Re-thinking health education through the concept of bio-power. In A. Petersen & R. Bunton (Eds), *Foucault, Health and Medicine* (pp. 113-133). London: Routledge.

Glouberman, S., & Millar, J. (2003). Models for population health. Evolution of the determinants of health, health policy, and health information system in Canada. *American Journal of Public Health, 93*(3): 388-392.

Gott, M., & O'Brien, M. (1990). The role of the nurse in health promotion. *Health Promotion International, 5*(2): 137-143.

Haddad, L. G., & Umlauf, M. G. (1998). Views of health promotion among primary health care nurses and midwives in Jordan. *Health Care for Women International, 19*, 515-528.

Hall, J. J., & Taylor, R. (2003). Health for all beyond 2000: The demise of the Alma-Ata declaration and primary health care in developing nations. *The Medical Journal of Australia, 178*, 17-20.

Health Canada (2007). Canadian tobacco use monitoring survey 2007. Retrieved August 21, 2008, from www.hc-sc.gc.ca/hl-vs/tobac-tabac/research-recherche/stat/_ctums-esutc_2007/ann_summary-sommaire-eng.php#note

Holland, N., Segraves, D., Nnadi, V. O., Belletti, D. A., Wogen, J., & Arcona, S. (2008). Identifying barriers to hypertension care: Implications for quality improvement initiatives. *Disease Management, 11*(2), 71-77.

Holmes, D. & Gastaldo, D. (2002). Nursing as a means of governmentality. *Journal of Advanced Nursing, 38*(6), 557-565.

Irvine, L., Elliot, L., Wallace, H., & Crombie, I. K. (2006). A review of major influences on current public health policy in developed countries in the second half of the 20th century. *The Journal of the Royal Society for the Promotion of Health, 126*(2): 73-78.

Kelley, K., & Abraham, C. (2007). Health promotion for people aged over 65 years in hospital: Nurses' perceptions about their role. *Journal of Clinical Nursing, 16*, 569-579.

Lalonde, M. (1981). *A New Perspective on the Health of Canadians: A Working Document.* Ottawa, ON: Minister of Supply and Services Canada.

Littlewood, J. & Parker, I. (1992). Community nurses' attitudes to health promotion in one regional health authority. *Health Education Journal, 51*(2), 87-89.

McBride, A. (1994). Health promotion in hospitals: The attitudes, beliefs and practices of hospital nurse. *Journal of Advanced Nursing, 20*, 92-100.

McDonald, L. (Ed.). (2004). *Florence Nightingale on Public Health Care: Volume 6 of the Collected Works of Florence Nightingale.* Waterloo, ON: Wilfrid Laurier University Press.

O'Donovan, G. (2007). Can we talk about your smoking? *World of Irish Nursing & Midwifery, 15*(1), 45-46.

Oermann, M. H., Harris, C.H., & Dammeyer, J. A. (2001). Teaching by the nurse: How important is it to patients? *Applied Nursing Research, 14*(1), 11-17.

Olshansky, E. (2007). Nurses and health promotion. *Journal of Professional Nursing, 23*(1), 1-2.

Rifas, E. Morris, R., & Grady, R. (1994). Innovative approach to patient education. *Nursing Outlook, 42*(5), 214-216.

Salo, D., Perez, C., Lavery, R., Malankar, A., Borenstein, M., & Bernstein, S. (2004). Patient education and the Internet: Do patients want us to provide them with medical web sites to learn more about their medical problems? *Journal of Emergency Medicine, 26*(3), 293-300.

University of Twente (2004). Social cognitive theory. Retrieved September 15, 2008, from www.tcw.utwente.nl/theorieenoverzicht/Theory clusters/Health Communication/Social_cognitive_theory.doc

Wei, H. G., & Camargo, C. A. (2000). Patient education in the emergency department. *Academic Emergency Medicine, 7*(6), 710-717.

Whitehead, D., Wang, Y., Wang, J., Zhang, J., Sun, Z., & Xie, C. (2008). Health promotion and health education practice: nurses' perceptions. *Journal of Advanced Nursing, 61*(2), 181-187.

Wingard, R. (2005). Patient education and the nursing process: Meeting the patient's needs. *Nephrology Nursing Journal, 32*(2), 211-214.

World Health Organization (1978). Declaration of Alma-Ata. Retrieved June 24, 2008, from www.searo.who.int/LinkFiles/Health_Systems_declaration_almaata.pdf

World Health Organization (1986). Ottawa Charter for Health Promotion. Retrieved January 31, 2007, from www.euro.who.int/AboutWHO/Policy/20010827_2

World Health Organization (2000). Health for All in the 21st Century: Target 2020. Retrieved June 24, 2008, from www.afro.who.int/press/2000/regionalcommittee/rc5004.html

World Health Organization (2005). Bangkok Charter for Health Promotion in a Globalized World. Retrieved June 24, 2008, from www.who.int/healthpromotion/conferences/6gchp/hpr_050829_ BCHP.pdf

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

Appendix A

Adapted 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
- ☐ Masters
- ☐ ED Specialty courses
- ☐ Nursing specialty course other than ED specific
- ☐ PhD

2. Are you a Canadian Nurses Association accredited ED RN?

- ☐ Yes
- ☐ No

3. How many years of 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 part-time, full-time, or casual?

- ☐ Part-time
- ☐ Full-time
- ☐ Casual

7. What is your gender?

- ☐ Female
- ☐ Male

8. What is your age?

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? (Tick 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							
Contraception Use							
Smoke Detectors in the Home							
Symptoms of Depression							
Tobacco Use (cigarettes, cigars, etc...)							
Illicit Drug Use							
Domestic Violence							

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? (Tick 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? (Tick 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 quit smoking/ chewing							
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 their presenting complaint, how often did you do the following? (Tick 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%
Review health risks of hypertension							
Advise weight loss							
Advise salt Reduction							
Talk about the importance of taking antihypertensive medications regularly							
Discuss how to decrease stress							
Suggest following up with family GP							

13. Regardless of whether you see the patients again or not, as an ED RN, how effective do you feel you are in changing your patients' behaviour with respect to the following? (Tick 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 Rays 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? (Tick 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 Rays Exposure				
Blood Pressure Management				
Depression Management				
Helmet Use				

15. To what extent do you agree with the following statements? (Tick 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 behaviour with patients.					
Tobacco cessation counseling is an 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 lifestyles 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?

	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 ED.

Appendix B

Ethics Approval

Human Research Ethics Board
Office of Research Services
University of Victoria
Technology Enterprise Facility, Room 218
Tel (250) 472-4545 Fax (250) 721-7836
Email ethics@uvic.ca Web www.research.uvic.ca

University of Victoria

Human Research Ethics Board
Certificate of Approval

Principal Investigator	Department/School	Supervisor
Michelle Taggart **Master's Student**	**NURS**	**Anita Molzahn**

Co-Investigator(s):

Project Title: **Attitudes and Behaviours of Registered Nurses toward Health Promotion and Patient Education in the Emergency Department**

Protocol No.	Approval Date	Start Date	Expiry Date
07-422	**28-Jan-08**	**28-Jan-08**	**27-Jan-09**

Certification

This certifies that the UVic Human Research Ethics Board has examined this research protocol and concluded that, in all respects, the proposed research meets the appropriate standards of ethics as outlined by the University of Victoria Research Regulations Involving Human Participants.

This Certificate of Approval is valid for the above term provided there is no change in the protocol. Extensions and/or amendments may be approved with the submission of a "Request for Annual Renewal or Modification" form.

Dr. Richard Keeler
Associate Vice-President, Research

07-422 Taggart, Michelle

Appendix C

Letter of Consent to Study Participants

The Attitudes and Activities of Registered Nurses toward Health Promotion and Patient Education in the Emergency Department

This questionnaire is intended to obtain information about your attitudes and activities towards health promotion and patient education in the emergency department. If you choose to participate, it should take approximately 15 minutes to fill it out. Your participation is completely voluntary and anonymous.

You are invited to participate in a study entitled *The Attitudes and Activities of Registered Nurses toward Health Promotion and Patient Education in the Emergency Department* that is being conducted by Michelle Taggart.

Michelle Taggart is a graduate student in the School of Nursing at the University of Victoria and you may contact her if you have further questions by email at mtaggart@uvic.ca.

As a graduate student, she is required to conduct research as part of the requirements for a Masters in Nursing degree. It is being conducted under the supervision of Anita Molzahn. You may contact her supervisor at amolzahn@uvic.ca.

Purpose and Objectives
The purpose of this research project is to examine the attitudes and activities of registered nurses towards health promotion and patient education in the emergency department.

Importance of this Research
Research of this type is important because it highlights barriers to providing health education to patients and brings to light resources to health promoting practices.

Participants Selection
You are being asked to participate in this study because you are an emergency department nurse. The National Emergency Nurses' Affiliation Inc. is sending this Letter of Invitation on Michelle's behalf.

What is Involved
If you agree to voluntarily participate in this research, your participation will include completing a web-based survey, taking approximately 15 minutes.

Risks
There are no known or anticipated risks to you by participating in this research.

Benefits
The potential benefit of your participation in this research includes self reflection of practice which is an important aspect of professional nursing practice. Also, the recognition of your attitudes and perceptions will increase knowledge and highlight areas of need in order to create a health promoting environment for patients.

Voluntary Participation
Your participation in this research must be completely voluntary. If you do decide to participate, you may withdraw at any time without any consequences or any explanation. Please note however, that once the web survey responses have been submitted at the end of the questionnaire, it will be logistically impossible to remove your data from the rest of the data.

Anonymity
In terms of protecting your anonymity, your name and contact details have never been and will never be given to the researcher.

Dissemination of Results
It is anticipated that the results of this study will be shared with others in the following ways: thesis, presentations, and published journal article in NENA'S Outlook.

Disposal of Data
Data from this study will be disposed of by erasing the computer file after seven years.
In addition, you may verify the ethical approval of this study, or raise any concerns you might have, by contacting the Human Research Ethics Office at the University of Victoria: 250) 472 4545 or ethics@uvic.ca.

By completing and submitting the questionnaire, **YOUR FREE AND INFORMED CONSENT IS IMPLIED** and indicates that you understand the above conditions of participation in this study and that you have had the opportunity to have your questions answered by the researchers.

Appendix D

Table of Pearson's Correlations of All Scales

	Overall Prevention Behaviour	Weight Management	Tobacco Cessation
Overall Prevention Behaviour	1	.409**	.419**
Weight Management	.409**	1	.560**
Tobacco Cessation	.419**	.560**	1
Hypertension Management	.474**	.647**	.643**
Combined Prevention Behaviour	.671**	.832**	.829**
Perceived Effectiveness	.445**	.398**	.460**
Perceived Importance	.181**	.325**	.423**
Personal Comfort	.290**	.229**	.318**
Reported Barriers	.050	.026	.087

	Hypertension Management	Combined Prevention Behaviour	Perceived Effectiveness
Overall Prevention Behaviour	.474**	.671**	.445**
Weight Management	.647**	.832**	.398**
Tobacco Cessation	.643**	.829**	.460**
Hypertension Management	1	.865**	.434**
Combined Prevention Behaviour	.865**	1	.518**
Perceived Effectiveness	.434**	.518**	1
Perceived Importance	.386**	.420**	.388**
Personal Comfort	.257**	.345**	.312*
Reported Barriers	.056	.073	.098

	Perceived Importance	Personal Comfort	Reported Barriers
Overall Prevention Behaviour	.181**	.290**	.050
Weight Management	.325**	.229**	.026
Tobacco Cessation	.423**	.316**	.087
Hypertension Management	.434**	.386**	.056
Combined Prevention Behaviour	.420**	.345**	.073
Perceived Effectiveness	.388**	.312**	.098
Perceived Importance	1	.363**	.025
Personal Comfort	.363**	1	.290**
Reported Barriers	.025	.290**	1

** = correlation is significant at the 0.01 level (2-tailed)