Abstract

Nurses have a tremendous influence in health promotion since they are the largest professional group in health care. Several studies have found that many nurses smoke, which not only places their own health at risk, but others in the community as well. Smoking is considered to be the most important avoidable cause of chronic illness in the world. The purpose of this research was to describe nurses’ experiences with smoking as well as their smoking behaviors in relation to demographics and socio-psychological influences. The nurses’ perceived roles in health promotion were also described. The theoretical framework for this study was Simmons Health Promotion Self Care System Model, which integrates the constructs of Pender’s Health Promotion Model, Orem’s Self-care Deficit Theory, and Cox’s Interaction Model of Client Health Behavior (Simmons, 1990).

Researchers surveyed pediatric nurses in three urban pediatric offices in Georgia to assess their tobacco-control attitudes, advocacy, and smoking behaviors. Seventy-three surveys were distributed at the beginning of the shift at each office and collected at the end of the shift. Fifty-two surveys were returned. Convenience sampling was used to obtain participants. Data was securely stored and analyzed by researchers during a two-week period to determine the percentages of responses supporting research questions. After analysis, data was shredded and results were reported to students for educational purposes.

Problem, Purpose, and Specific Aims

There is an increasing incidence of tobacco-related illness in our society, such as asthma in children. Nurses are the primary educators of patients and families in smoking cessation and prevention of tobacco-related illness, but there is also an increased prevalence of smoking among nurses. The purpose of this study is to describe the tobacco-control attitudes, advocacy, and smoking behaviors of pediatric nurses. Better understanding of factors related to nurses’ smoking behaviors is needed before interventions that address smoking cessation and prevention can be developed. This study aims to decrease the incidence of tobacco-related illness, to increase awareness of the prevalence of tobacco use in the nursing profession, and to bring awareness to nurses about their roles in teaching...
parents and patients about preventable tobacco-related illnesses.

**Theoretical Background and Review of Literature**

According to the World Health Organization, tobacco will become the number one cause of preventable death throughout the world in the twenty-first century, resulting in a half billion deaths of the global population (WHO, 1997). Approximately forty-eight million adults and 4.5 million adolescents in the United States smoke (CDC, 2004). Smoking rates among nurses compare to the general population rate and have been clearly documented in the literature. The literature supports the need for continuing research regarding the attitudes of nurses toward smoking and their roles in advocacy and prevention of tobacco-related illnesses.

In 1990, Simmons published “The health-promoting self-care system model: directions for nursing research and practice”. Simmons integrated the constructs of Pender’s Health Promotion Model, Orem’s Self-care Deficit Theory and Cox’s Interaction Model of Client Health Behavior. The model is proposed as a framework for identifying and explaining sequential patterns among variables which influence the decision-making, performance, and outcomes of health-promoting lifestyles. Simmons’s research described variables associated with nurses’ personal experiences with smoking, demographic and socio-psychological influences related to smoking behaviors, and the nurses’ perceived roles in health promotion. This was a landmark study which provided a firm foundation for further research (Simmons, 1990).

Glass, Michaels, and Mundt published a study called “A Professional Challenge: Nurses and Smoking” in 1995. The purpose of this study was to examine the issue of smoking behaviors among nurses. The researchers selected subjects randomly from a list of registered nurses maintained by the Department of Regulation and Licensing and obtained a sample of 2,000 RNs. The researchers used a questionnaire that was developed specifically for this study. The questionnaire focused on demographic data, smoking history, attitudes and opinions about smoking, and smoking and cessation behaviors. One thousand five hundred and thirty eight of the 2,000 questionnaires were returned. They found that 903 had never smoked cigarettes, 428 had successfully quit smoking, and 207 were current smokers. Seventy percent of those who were former smokers felt that nurses should be role models, whereas only 38% of smokers felt the same. Even greater than that was the percentage of former smokers, 78%, who felt that nurses should advise clients to stop smoking. Only 57% of smokers agreed with this statement (Glass & Mundt, 1995).

In 2000, Sarna, Brown, Lillington, Wewers, and Brecht conducted a study...
entitled “Tobacco-control Attitudes, Advocacy, and Smoking Behaviors of Oncology Nurses”. The purpose of this study was to describe nurses’ attitudes, smoking behaviors, and involvement in tobacco-control policy and legislation. This cross-sectional study was made up of a random sample of 4,000 members of the Oncology Nursing Society. There were 1,508 respondents included in the final analysis. The majority of respondents indicated that involvement in tobacco control activities was important, and that nursing involvement in cessation was particularly important compared to other cancer prevention activities. Respondents also agreed that nurses should actively encourage patients to stop smoking and be actively involved in helping their patients to quit. Of the 1,508 respondents, only 106 claimed that they were smokers, but 449 claimed to be former smokers. Results of the survey used by Sarna et al. (2000) provide substantial support for tobacco control legislature and policy interventions, especially laws to prevent youth access to tobacco products. Results also indicate strong support of smoke-free environments, such as day care centers, restaurants, and public sites. Raising taxes on cigarettes obtained a low level of support. This may be due to a lack of understanding that there is a strong link between tobacco consumption and the price of tobacco. The lowest level of support was given to policies that might limit the export of tobacco (Sarna et al., 2000).

In 2001, McKenna, Slater, McCance, Bunting, Spiers, and McElwee published “Qualified Nurses’ Smoking Prevalence: Their Reasons for Smoking and Desire to Quit”. This study used a questionnaire to survey qualified nurses in Northern Ireland to determine their smoking prevalence and their desire to quit the habit. It also explored their knowledge base relating to smoking-related diseases and their motivation to act as health promoters with patients who smoke. A random sample of qualified nurses employed by the Health and Social Services Trusts, private, and voluntary organizations in the province was collected. Results showed that 25.8% were smokers, 19% were ex-smokers, and 55.2% were non-smokers. Three-quarters of respondents expressed a wish to stop smoking within six months. Almost all smokers and half of ex-smokers had started smoking before beginning work as a nurse. These findings suggest that the smoking prevalence among qualified nurses is no greater than that reported by females in the general Northern Ireland population. Results also indicated that nurses who smoke were less willing to take on the role of a health promoter with patients who smoke (McKenna, et al., 2001).

Research Questions

The researchers aim was to determine the attitudes of pediatric nurses toward smoking and the prevalence of smoking among them. They also wanted
to determine nurses’ perceived roles in education of patients and families regarding smoking cessation and tobacco-related illness. The survey included questions regarding tobacco-control attitudes, advocacy, and smoking behaviors and demographics.

**Study Setting, Design, and Sampling Procedure**

This study was conducted in three urban pediatric offices in Georgia. An eighteen question descriptive survey designed by the researchers was used to assess the attitudes, advocacy, and smoking behaviors of pediatric nurses regarding tobacco control. Demographic data was also obtained. This design was chosen because the purpose of this study was to describe nurses’ attitudes, advocacy, and smoking behaviors. Convenience sampling was used to obtain a large amount of participants. Nurses from each office were asked to complete the survey and return them to a sealed envelope, located at the front desk, before the end of their shift. Seventy three surveys were distributed in hopes of receiving 50 responses.

**Instrument and Data-Collection Strategies and Storage, Retrieval, and Analysis of Data**

The instrument used in this study consisted of 18 questions, which were split into four sections. The questions assessed attitudes, advocacy, and smoking behaviors as well as demographic variables. It consisted of nominal and ordinal data and also contained a section for demographic variables. Each question which assessed attitudes was answered by circling an option provided by researchers. Surveys were seen only by the researchers and results were shared for educational purposes. Participants remained anonymous. The surveys were stored in manila envelopes until retrieval by researchers, at which time envelopes were sealed and stored in a secure location until analysis. Researchers calculated the percentages of responses to each question and statistical analysis will be focused on general description of study variables to address the research questions. Upon completion of analysis, all surveys were shredded. This survey is located in Appendix A.

**Ethical considerations, Timetable, and Resources for the Study**

This study was exempt from ethical considerations, as researchers surveyed pediatric nurses and there was no potential for harm to subjects. Approval was obtained from the Institutional Review Board and consent was implied upon completion of the survey, as explained in the cover letter. The cover letter can be found in Appendix B. Data was collected and analyzed over a period of two weeks. Resources needed for this study were minimal, with a budget of twenty-two dollars for office supplies.
Results

The focus of the research was to describe nurses’ experiences with smoking as well as describe their smoking behavior in relation to demographics, which included age, gender, marital status, and education. Social influences were also considered. The relationship between smoking and the nurses’ perceived role in health promotion was also described in this study. Seventy-three surveys were distributed and 52 were returned and used in the data analysis. The return rate for this survey was seventy-one percent. The sample was described using demographic data. Frequency counts for all data were determined. Surveys were distributed and collected by three researchers over a two week period.

Fifty (96%) women and two (4%) men completed the survey. The age range of the sample was from 18 - 51+ years old with a mean age of 25-30 (31%) years old. Eighteen (19%) nurses reported that they had smoked at least 100 cigarettes in their lifetime and 14 (27%) reported smoking currently. Fifteen participants (29%) reported a personal experience with a tobacco-related illness.

The majority of the sample, 40 (77%), were Caucasian, 4 (8%) African American, 2 (4%) Hispanic, and 2 (4%) Native American. Eight (17%) reported being single, 30 (58%) were married, 10 (19%) were divorced, and 4 (8%) were living with a significant other. All were employed in an office setting working day shift, typically 8 o’clock a.m. to 5 o’clock p.m. The number of years as a nurse ranged from an average of less than 1 year to 40 years with a mean of 11-20 years (31%).

The first set of questions referred to the nurses’ personal experiences with smoking. Personal experiences with smoking were determined by asking respondents to indicate whether or not they had smoked at least 100 cigarettes in their lifetime, what age they began to smoke, and their current smoking status. Eighty-one percent of nurses indicated that they have not smoked at least 100 cigarettes in their lifetime while 19% indicated they have (See Appendix C, Figure 1.1). Of the 19% of nurses who are considered smokers, 14 (78%) indicated that they currently smoke. The age of initiation ranged from less than 18 years to 30+ years with the mean range of less than 18. Additional descriptive information related to nurses’ personal experience was collected in item number 16, which asked the respondents to indicate if they had experienced a tobacco-related illness within their family or close friends. Fifteen (29%) of the nurses reported having a personal experience with a tobacco-related illness.

Question number 17 on the itemized survey asked the nurses to indicate their experiences with tobacco education in clinical practice. Approximately 13% of pediatric nurses encountered patients who smoke cigarettes, chew tobacco, or smoke cigars in the past month compared to 87% who never saw patients...
who smoke. Of the nurses who encountered patients who used tobacco, 63% assessed if these patients were interested in cessation, 60% taught coping skills for avoiding relapse, and 66% referred the patients to a cessation specialist and recommended support groups. When comparing nurses who do not smoke versus nurses who have smoked at least 100 cigarettes in their lifetime, 27% versus 18% provided counseling to patients on their tobacco usage, 27% versus 11% gave tobacco cessation advice, and 44% versus 11% provided information about the health benefits of tobacco cessation (See Appendix C, Figure 1.2). Statistics indicated that nurses who smoke are less likely to counsel patients and document tobacco behaviors of patients with whom they encounter. Seventy percent of the nurses who responded to the survey indicated that they support laws to prevent access of tobacco products to minors and 65% indicated that they will continue to provide information to patients on the health effects of tobacco.

In summary, the majority of nurses (81%) indicated that they were non-smokers. Among the nurses who were considered smokers, 78% indicated current smoking and 12% reported having quit smoking. Thirty-six percent of current smokers indicated that they were considering quitting or are trying to quit. The mean range of initiation of the smokers was less than 18 years of age. Fifteen nurses reported a tobacco-related illness within their family or in a close friend. Only 13% of nurses indicated encounters with patients who used tobacco and approximately 40% of nurses believed that tobacco counseling, assessment, and education did not apply to their position. The majority of the nurses in the sample were associate degree nurses (39%). Twenty percent had diplomas in nursing, 8% had bachelor’s degrees, 15% had a master’s degree in nursing, and 8% had other certifications.

The last section of the survey tool was based on the relationship between smoking and the nurses’ perceived role in health promotion. Question number 18 asked respondents to indicate whether they agreed, disagreed, or were undecided with four statements related to nurses and tobacco control. These statements included nurses encouraging patients not to smoke, actively helping their patients in smoking cessation, and nurses’ need for additional training and/or skills in tobacco control. Sixty-six percent of those surveyed felt as if nurses should set a good example by not smoking while 8% disagreed. The rest were undecided. Eighty-six percent agreed that nurses should actively encourage patients to stop smoking. Only 70% agreed that nurses should be involved in helping patients with smoking cessation. Forty percent of nurses stated that they and their fellow colleagues should have additional training and skills in tobacco control in pediatric patients while 20% disagreed. The rest were undecided (See Appendix C, Figure 1.3).
Implications for Nursing Research

The goal of this study was to bring awareness to nurses about their roles in teaching patients and families about preventable tobacco-related illnesses and to increase the awareness of the prevalence of tobacco use in the pediatric nursing population. Further research should be conducted to gain information on the tobacco influences among nurses and their attitudes, advocacy, and behaviors in the healthcare setting. More research should also be conducted to determine and evaluate job stress and the correlation of smoking. Determining why nurses choose to smoke when they are educated about the harmful effects may also be a great benefit for future research and practice. The implications of this research include educating nurses regarding smoking behaviors, bringing awareness to hospitals and offices about tobacco use in the facility and the need for cessation programs, and educating nurses on the importance of patient and family teaching on the health risks associated with tobacco use.

Conclusion

Smoking is considered to be the most important avoidable cause of chronic illness in the world. There is an increasing incidence of tobacco-related illness in our society, such as asthma in children. Since they are the largest professional group in healthcare, nurses have a tremendous influence in health promotion. Several studies have found that many nurses smoke, which not only places their own health at risk, but others in the community as well. Despite their strong influence, in the community, nurses may hinder their role as health promoters by smoking.

The purpose of the research analysis was to describe nurses’ experiences with smoking, as well as their smoking behaviors, in relation to demographics and socio-psychological influences. While the majority of the nurses surveyed in this research stated they had not smoked more than 100 cigarettes in their lifetime, a large number of nurses admitted to currently smoking. The findings of this research suggested that nurses, whether they smoke or not, feel they are responsible to provide information on smoking cessation to patients even though a larger number of non-smokers seemed to offer counseling more often. They also felt that it was important to provide education on the risks of smoking, but were not often given the opportunity in the pediatric setting. When faced with the opportunity, the nurses surveyed indicated they have documented smoking behaviors on the patient’s record, provided counseling, assessed the patients on their attitudes towards cessation, provided cessation advice, taught coping skills to avoid relapse, and recommended support groups for those patients willing to quit. Given the number of nurses who smoke, the results of
this study presented a serious health concern regarding nurses and their smoking behaviors. It also gave rise to the need for additional studies regarding factors which threaten the health promoting behaviors of nurses. Biases which posed a threat in conducting this study included the setting being confined to only pediatric offices and day shift employees, the low acuity level of patients, the amount of nurses who did not answer all 18 questions, and a majority of female respondents. A larger sample size or return rate for the survey may have shown clearer results in some areas under consideration.

References
Appendix A

Please circle one.

Section I. These questions provide us with some personal information about you.

1. What is your age? 18 – 24 25-30 31-40 41-50 51+
2. What is your gender? Male Female
3. Describe your ethnic group:
   Caucasian    African American    Hispanic    Asian    Native American    Other
4. How would you describe your marital status/living situation?
   Single    Married    Divorced    Widowed    Living with partner
5. Have you experienced a serious tobacco-related disease (e.g., heart disease, emphysema, lung cancer)? Yes No

Section II. These questions provide information about your professional background.

6. How many years have you been a licensed nurse?
   0-10 11-20 21-30 31-40 41+
7. What is your highest level of education in nursing?
   Diploma    Associate    Bachelor    Masters    Doctorate
8. How would you describe your current employment status?
   Full time    Part time
9. How would you describe your current employment shift?
   Days    Evenings    Nights    Other

Section III. These questions provide information about your personal experiences with smoking.

10. Have you smoked at least 100 cigarettes in your lifetime? Yes No  (if no, skip to question # 19)
11. At what age did you begin to smoke?
   Less than 18 19-24 25-30 30+
12. Do you currently smoke? Yes No  (if no, skip to question # 19)
13. How many cigarettes (20 per pack) do you smoke on an average day?
   Less than 1 1-2 3-4 4+
14. Which ONE of the following statements BEST describes your smoking behavior right now?
   a. I am smoking now and am not thinking about quitting
   b. I am smoking now and I am thinking about trying to quit
   c. I am smoking now and I am also trying to quit
   d. I quit smoking in the past 6 months but started to smoke again
   e. I quit smoking in the past 6 months and have not started to smoke again
   f. I quit smoking more than 6 months ago and have not smoked for at least 6 months
g. I quit smoking and have not smoked for a year or more
h. I quit smoking, but once in a while I have a cigarette

15. Do any members of your household smoke?
   Yes  No

16. Has one of your family members or close friends experienced a serious tobacco related disease (e.g. heart disease, emphysema, lung cancer)?
   Yes  No

Section IV. These questions relate to your experiences with patients and tobacco use in clinical practice. In the following questions, please circle the number that most closely relates to your experiences using the scale below.

1 = Often  2 = Sometimes  3 = Never

17. In the past month, how often have you:
   a. Encountered patients who:
      smoked cigarettes  1  2  3
      used chew tobacco  1  2  3
      smoked cigars  1  2  3
      don’t smoke  1  2  3

   b) Assessed a patient’s use of tobacco?  1  2  3
   c) Noted a patient’s smoking status/tobacco use on the chart?  1  2  3
   d) Provided counseling to patients on their tobacco use?  1  2  3
   e) Assessed if patients are interested in stopping tobacco use?  1  2  3
   f) Given tobacco cessation advice?  1  2  3
   g) Taught coping skills for avoiding relapse?  1  2  3
   h) Provided recommendations for nicotine replacement?  1  2  3
   i) Referred patients to smoking cessation specialist?  1  2  3
   j) Recommended the use of support groups for cessation?  1  2  3
   k) Support laws to prevent access of tobacco products by minors?  1  2  3
   l) Provide information about the health benefits of cessation?  1  2  3
   m) Provide information about the health effects of tobacco?  1  2  3

Please read each statement below and circle your response.

1 = Agree  2 = Disagree  3 = Undecided

18. Tell us whether you agree/disagree with each of the following statements about nurses and tobacco control.
   a) nurses should set a good example by not smoking  1  2  3
   b) nurses should actively encourage patients to stop smoking  1  2  3
   c) nurses can and should be involved in actively helping patients to stop smoking  1  2  3
   d) nurses need additional training/skills in tobacco control  1  2  3

Citations
Appendix B

Dear Nurses,

As part of our senior research class, we are conducting a project which will assess tobacco use patterns and attitudes among nurses.

The following survey includes questions about your personal experiences with tobacco use as well as personal and clinical demographics. Your responses will be used to help us better understand future needs for nursing education, necessary changes in clinical practice, and direct future research activities. Both smokers and non-smokers can participate in this survey.

There are no right or wrong answers and you do not have to answer any question you do not wish to, but complete answers will help with interpretation of the results. Participation, or non-participation in this survey is voluntary and will in no way affect any aspect of your employment with your current employer.

The results of this survey will be kept anonymous. Consent to participation in this study is implied by the completion and submission of this survey. Following completion of the survey, there will be no contact by the researcher. The survey will take approximately 15 minutes to complete. Thank you for your assistance.

LaGrange College Senior Nursing Students

Appendix C

Figure 1.1 Behaviors of Pediatric Nurses
Attitudes, Advocacy, and Smoking Behaviors of Pediatric Nurses

Figure 1.2 Advocacy of Pediatric Nurses

Non-Smokers

Smokers

Figure 1.3 Attitudes of Pediatric Nurses

Citations