FIRST YEAR STUDENT NURSES' SMOKING BEHAVIOR

by

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ABSTRACT

This study examined the smoking behaviour of students in the first year program in the four schools of nursing in Winnipeg. Of the 240 students registered in the program, 48 individuals were absent from their classes on the days the survey questionnaire was administered. Another 40 of the students could not be readily accessed, as they did not all attend the same classes as a group. Of the 152 students in attendance at class on the days that the questionnaire was conducted, 119 volunteered to participate. Information was obtained by having them write answers to a 35 item questionnaire presented during a regular class session. Students were assured of anonymity. No data were collected on non participants nor were they asked why they did not participate. The smoking behaviour of these individuals is therefore, an unknown factor. Because of travel distances and costs, students outside of Winnipeg were not included in the sample.

Data collected indicates that 21.05% of the respondents report they smoke cigarettes. The majority of the smokers are single females ages 19 to 33 years. These results are somewhat lower than the 25.9% reported in the Canadian Nurses Study (1990). However, of particular concern is that 10 of the 119 students (40% of the current smokers) report starting to smoke cigarettes, or increased the number of cigarettes smoked after entry into the school of nursing. As well, six of the smokers indicated a high level of addiction by scoring seven or more on the Fagerstrom Nicotine Tolerance Scale.

Stress is cited as the major factor by every one of the respondents (100%) for starting to smoke and for the increase in the numbers of cigarettes smoked. Further research is needed to explore the relationship between stress and the onset of smoking and the difficulty in stopping.

While in this study 52% of the smokers stated they intend to quit in the next 12 months, none of the schools visited offer a cessation program specifically targeted to student nurses. Three recent studies report that young women want realistic, affordable, accessible, supportive and gender-based programs to help them deal with smoking prevention and cessation (WHO, 1992; Health Canada, 1993; Oakley, 1993). An opportunity exists for schools of nursing to assist in achieving this goal.

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CHAPTER ONE

INTRODUCTION

"Cigarette smoking is the chief, single avoidable cause of death in our society and the most important public health issue of our time" (Surgeon General's Report, 1985).

Nearly 30 years since the first unequivocal declaration regarding the consequences of cigarette smoking and the cause of disease, and with a significant reduction in smoking amongst the general population; there remains a group that continues to smoke. Trends in the female population indicate that the average age of starting to smoke has decreased and the number of cigarettes smoked per day by women has increased (Morison, 1980; Howe, 1984; Millar, 1985; Health and Welfare Canada, 1989).

Canada's Health Promotion Survey found that in the youngest age group (15-24), 36% of women reported smoking, compared with 35% of men. It also noted during the period from 1965 to 1985, the rate of smoking among men declined by 20 percentage points, while among women, it declined by only one percentage point (Health and Welfare Canada, 1989).

Lung cancer is now referred to as "the new women's disease" (Gilchrist, 1989). Women's death rates from lung cancer are rising faster than men's and have superseded breast cancer as the number one cause of cancer deaths in women.

The full range of other health-damaging reverberations in acute and chronic disease, prenatal and infant, drug and smoking synergistic interactions are well documented in the 1980 Surgeon General's Report on the Health Consequences of Smoking for Women (Surgeon General's Report, 1980). None of this augers well for a future of better health for women.

Indeed cigarette smoking is as much a women's issue today as a public health issue, though one that the women's movement, even its active and effective health arm, has not addressed (Milio, 1982; Howe, 1984; Edwards, 1986).

Two major reasons cited for women adopting the cigarette habit have been: (a) the increased discretionary income women now receive, and (b) the subsequent stress-inducing circumstances work outside the home has produced.

The constraints surrounding women are frightening since more than half are single heads of families in lower paying jobs (Dalton and Swenson, 1983; deKoninck, 1984; Milio, 1986). Nurses working in a largely 'women's field' bring and experience many of the same strains that underlie the social and economic position of women generally. In many studies, nurses report experiencing stress and that smoking is associated with perceived job stress (Blum, 1981; Jacobson, 1981; Tagliacozzo, 1982; Spencer, 1982; Dalton & Swenson, 1983; Hawkins, 1983; Rauch, 1986; Foley & Stone, 1988; Haack, 1988; Henke Jones, 1988; Manderino et al, 1988; Casey, 1989; Harrison & Oulton, 1990).

Nurses however, are not like other women. They see themselves as health professionals. They believe they should set an example of healthful living and should teach it to their patients (Milio, 1982; Moll, 1982; CNA, 1988). As the largest group of employees in the health professions, and with more sustained contact with patients and clients than any other health worker, nurses are in excellent positions to provide not only the health teaching, but also the role models for preventive behaviours (Smith, 1979; Elkind, 1980; Blum, 1981; Soeken et al, 1989; Canadian Nurses Association Study, 1990).

Nurses are considered as exemplars by the general public, other health care workers and by other women. Since they are women, they occupy influential positions within the family - as mothers, grandmothers, aunts, sisters, child and elder care givers and significant others (Blum and Robbins, 1981; Swenson and Dalton, 1983; Howe, 1984; Charbonneau, 1985; Harvey, 1985; Wagner, 1985; Haines, 1988; WHO, 1992).

Yet nurses have been known to smoke more than other health professionals and more than the general female population (Small and Tucker, 1978; Hay, 1980; Hillier, 1981; Murray and Swan, 1981; Milio, 1982; Elkind, 1983; Dalton and Swenson, 1983; Spencer, 1984; Wilkinson, 1984). Nurses smoking rates often exceed those of other female dominated professionals (e.g. primary school teachers, physical educators and physiotherapists) (Elkind, 1980; Hillier, 1981; Ashley, 1981; Lee, 1989; Soeker et al, 1989).

IDENTIFICATION OF PROBLEM

Entry into the profession of nursing is associated with starting to smoke regularly (Small and Tucker, 1978; Elkind, 1979; Smith, 1979; Leathar, 1980; Hillier, 1981; Murray and Swan, 1981; Casey et al, 1989; CNA, 1990). An examination of these statistics identifies a more disconcerting trend. As reported in the Canadian Nurses Association Study (CNA) (CNA, 1990), the student nurses smoking today have started smoking at an earlier age - and smoke more cigarettes per day than their middle-aged nursing contempories. It also reflects the smoking activity of young women of the same age range in Canada (Health and Welfare Canada, 1989).

Further examples in the literature reporting smoking behaviour among student nurses include a comparison of two independent studies in Buffalo and Portland undertaken by Casey in 1986 (Casey et al, 1989). Smoking rates were similiar to those of the female population in the U.S. and not unlike the 29 percent national estimates for registered nurses (Surgeon General's Report, 1985). The reported 30 percent of students who smoke in the Buffalo sample was higher than the Portland sample of 23 percent.

These findings are similiar to the first national assessment of smoking prevention and cessation needs done by CNA, where it was revealed that one in six CNA members smoke and almost one third of nursing students outside Quebec smoke. While the proportion of never-smokers in the Canadian study is similiar in both the RN and student groups, there are fewer ex-smokers in the student population (CNA, 1990).

Onset of Smoking

The onset of smoking in Canadian nursing schools was reported as declining from 46% in the Registered Nurses group to 10% in todays' student group (CNA, 1990). This is quite different from the disturbing findings from Casey's study where the students who smoke, many (75% in Buffalo and 70% in Portland) either started to smoke or began smoking more while they were in nursing school (Casey et al, 1989). The four years difference in time frames between the studies may reflect the trend toward recent decreased smoking rates in the general population.

The discrepancies suggest a need to assess student nurses' health behaviours and to evaluate how their needs for health promotion are being met in the nursing schools.

Cessation

Over three quarters of the student daily smokers in the CNA study intended to quit smoking within the year. Yet few of the respondents reported any programs in their schools of nursing designed to assist them in smoking cessation (CNA, 1990). The Buffalo study reported that 57% of the current smokers appeared to be motivated to quit smoking (Casey et al, 1989).

According to the CNA, the student group should receive special attention, given their high rates of smoking and the high proportion who indicate a desire to stop smoking. Prevention and cessation programs during the years in the school of nursing may be an ideal time for a number of reasons:

1. The group is accessible and available for interventions over a number of years;
2. Programs could be integrated in their curricula;
3. They are more likely to be in contact with the appropriate health professionals who would be able to assist them with prevention/cessation strategies; and
4. their chances of success may be greater given the shorter duration of smoking as compared to long-standing smokers and the proportion of smokers who are reported occasional smokers.

(CNA, 1990).

JUSTIFICATION FOR THIS STUDY

In view of the information now available about the decreased likelihood of nurses who smoke to teach and counsel patients about their smoking habits (Elkind, 1980; Knobf and Morra, 1983; Booth, 1985; CNA, 1990), it is clear that strategies need to be planned and implemented to discourage smoking among student nurses. Otherwise, valuable resources for patients could be seriously compromised. As well, the individual nurse exposes his/her families to the risks of passive smoking and poses a very real danger to the health of the nurses themselves.

In reviewing the previous background information, it is evident that smoking is still a problem amongst student nurses. Of particular concern are indications that for many of these students their smoking habit begins soon after entry into a school of nursing (Nursing Mirror, 1980, Murray, Swan and Mattar, 1981; CNA, 1990).

While smoking practices of nurses have been a research concern of many investigators, studies about smoking habits of nursing students are less prevalent (Casey et al, 1989; CNA, 1990). The only recent assessment in Canada of the onset of smoking in nursing school was done by the Canadian Nurses Association (CNA, 1990). They reported 10% of students starting to smoke in nursing school - a decline from earlier studies. They explain this result in part by the lower age of onset for smoking by young girls today. In other words, the students are already smokers when they enter nursing programs.

Results of previous inquiries into student nurses' smoking behaviour are difficult to compare because of differences in sampling and data collection procedures. Thus to validate findings it is important to carry out studies similiar in design.

PURPOSE OF STUDY

The purposes of this study are to :

* investigate the smoking behaviour of first year student nurses at least six months after entry to a school of nursing in Winnipeg;

* explore factors that are associated with the onset of smoking and/or, an increase in the amount of cigarettes smoked by first year student nurses after entry to a school of nursing in Winnipeg; and

* explore factors that are associated with the cessation of smoking and/or, a decrease in the number of cigarettes smoked by first year student nurses after entry to a school of nursing in Winnipeg.

Information obtained will be based on responses to a questionnaire by volunteer first year student nurses enrolled in the first year program in schools of nursing in Winnipeg.

RESEARCH QUESTIONS

The research questions of this study are:

#1. *What are the rates of tobacco use of students in the first year program in Schools of Nursing in Winnipeg?*

#2. *Which factors are identified by first year student nurses for starting to smoke and/or for increasing the number of cigarettes smoked after entry into the school of nursing?*

#3. *What factors are identified by first year student nurses for stopping smoking and/or decreasing the number of cigarettes smoked after entry into the school of nursing?*

DEFINITION OF TERMS

Terms used to describe smoking behaviour:

NEVER SMOKED – respondent reported that he/she never smoked cigarettes

REGULAR SMOKER – respondent smokes cigarettes every day

OCCASIONAL SMOKER – respondent smokes cigarettes, but not every day

CURRENT – a regular or occasional smoker

NON-SMOKER – does not smoke cigarettes. This category includes those who never smoked and those who smoked at one time.

from the Canadian Labour Force Survey
(Cantin and Mitchell, 1989)

FIRST YEAR STUDENT NURSE – an individual enrolled in a first year program in a School of Nursing

CHAPTER TWO

FACTORS AFFECTING SMOKING

"Women smoke for different reasons than men; and they will not be prevented from starting to smoke, nor will they be helped to quit by generically designed programs" (WHO, 1992).

Many studies and observations in the literature have examined the elements related to the prevention and cessation of smoking in women. One significant report by Warner (1989) in which analysis of the anti-smoking campaign since 1964 (the time of the first Surgeon General's Report on smoking), showed that men have realized a much greater collective health benefit from their responses to the anti-smoking campaign than have women (Warner, 1989). Men did stop smoking ; and fewer young men are starting the habit as compared to young women (Surgeon General's Report, 1989).

Peggy Edwards, in a rare feminist outcry against this trend in her article: "Cigarettes: A Feminist Issue", quotes Pat Zipchen, an active member of the Canadian Council on Smoking and Health: "If we are to avoid a female epidemic of death and disability, women's health groups must break the silence", asserts Pat. "Persuading young girls not to start and helping women to quit must become a priority" (Edwards, 1986).

Edwards identifies four ways that the women's movement can work towards the eventual elimination of the tobacco hazard. They are:

1. Advise and inform women of the harmful effects of smoking specific to women. (For example, e.g., the synergistic effect of oral contraceptives and smoking, damage to the unborn child and the dangers of second hand smoke);
2. Support the changing social climate for a smoke-free environment by quitting, by speaking out at women's organizations and by participating in groups who are actively seeking these changes;
3. Initiate political action by advocating legislation that restricts the tobacco industry in the third world as well as the developed countries, and seek a comprehensive approach that includes educational programs to help tobacco farmers and those using their deadly product; and
4. Press for more research on the specifics of why women smoke and lobby for prevention and cessation interventions tailored to women (Edwards, 1986, p.9).

WORLD HEALTH ORGANIZATION FRAMEWORK

The recent WHO Report on Women and Smoking (1992) has identified factors associated with young women starting to smoke and continuing to smoke. Since the majority of student nurses in Canada are female (95%), and one third of them smoke, this framework is a helpful tool to examine what may contribute to this behaviour (CNA, 1990; WHO, 1992). This literature review will be presented relative to the WHO Factor Framework.

FACTOR FRAMEWORK

A. Factors Identified with Starting to Smoke
   1. Sociological Factors
      a) Social acceptability
      b) Parental influence
      c) Peer pressure
   2. Personal Factors
      a) Self-image - how you view yourself
      b) Self-esteem - what you think of yourself
      c) Income
      d) Knowledge
   3. Environmental Factors
      a) Smoke-free areas
      b) Advertising and promotion
      c) Product development, marketing and availability

B. Factors Identified with Continuing to Smoke
   1. Physiological Factors
      a) Dependence (addiction)
      b) Weight control
   2. Psychosocial Factors (in particular stress)
      a) Negative
      b) Positive
   3. Social Environment

FACTORS IDENTIFIED WITH STARTING TO SMOKE

1. Sociological Factors

a) Social Acceptability:

One of the major social needs is 'to be part of the group'. The misconception that 'everyone is doing it' often puts pressure on a young girl to try a cigarette so as not to be seen as different (Ashley, 1986). Rausch (1987) in her study of smoking behaviour of student nurses states: "It is possible that in some social situations, social expectations have a stronger influence on decisions to perform a behaviour such as smoking than does a person's attitude or knowledge about that behaviour"(p.17).

In over 60 interviews with student nurses, Hillier (1981) claims that many students feared being ridiculed if they didn't conform. One student said: "I was frightened of appearing gauche - took it (a cigarette) and continued to smoke thereafter" (p. 29).

b) Parental Influence:

It has been shown repeatedly that smoking is more common among children if one or more of their parents smoke. Compared with girls whose parents did not smoke, the rate of smoking was elevated in girls whose father alone or the mother alone or if both smoked (Morison, 1980).

The relative ratio of smoking has been shown to be much higher in association with maternal than paternal smoking. "Mothers who smoke have daughters who smoke", says Mary Jane Ashley (1986).

In their article, 'Nurses: The professionals who can't quit', Swenson and Dalton (1983) noted that among those nurses currently smoking, a majority indicated that they started to smoke because family members smoked. A shocking, but often heard, comment from a student in the CNA focus group discussions sums up the effect of parental barriers to smoking prevention. She said: "I used to bug my Dad about his smoking. So they were happy when I finally lit up and shut up" (CNA, 1990, p.19).

c) Peer Influence:

Young girls, and indeed older women look to other women (TV and film stars, personalities and prominent females within their own group) as role models. That women are more inclined, than men, to copy hair and dress fashions is evident by the number of magazines targeted to women and the copycat clothing on high school girls (Doyle, 1980; Edwards, 1986; Greaves, 1987). Furthermore, just the perception of similiarity to a prestigous model can become rewarding and hence reinforce imitation of that model

(Miller, 1984). Unfortunately positive non-smoking role models have been singularly absent in women, and in nurses in particular (Milio, 1982; Howe, 1984; Woodman, 1990).

A brave volunteer effort by teenaged film star Brooke Shields, in a poster campaign for the American Public Health Association, was grossly mishandled when politically backed tobacco lobby groups claimed the ads were 'too sexy'. The American Lung Association picked up the TV and print material on a constitutional technicality, but by then the timeliness of the message was lost. Nursing associations have ignored the 'glamourous' approach and opted for the physiological disease-causing threats with the 'dirty lungs' posters and post mortem examination of damaged tissue (Doyle, 1980; Jones, 1982).

It is not suprising that student nurses are immune to these measures when nurses that they wish to emulate are smoking. In a series of interviews by The Nursing Mirror (1980), British nursing students repeatedly stated they began to smoke to be like their teachers and senior student nurses. They believed it made them 'look experienced', (Nursing Mirror, 1980).

The two most recent studies investigating reasons for smoking initiation by student nurses (Casey et al, 1989; CNA Report, 1990) report peer pressure as a reason for starting to smoke ranks third (43%) in the Buffalo study and second (46.5%) in the Portland group; and in the Canadian data the two most prominent factors influencing the onset of smoking were first, friends who smoked (70.6%) and second, peer pressure (44.9%) (Casey et al, 1989; CNA, 1990).

However, a heartening comment was given by a student in the CNA focus group discussing needs and priorities for smoking prevention. She said: "Peer pressure is making a change for the better. It's not cool (to smoke) anymore. The cool thing is to be fit and to be smart" (CNA, 1990, p.21).

2. **Personal Factors**

a) Self-image:

One cannot discuss women and smoking and not address the issue of weight control and the concept of what constitutes an acceptable image of beauty. Over and over, studies of nurses who smoke indicate the reason for starting to smoke was 'to lose weight' (Taglicozzo, 1980; Howe; 1984; Edwards, 1986; Haines, 1988; Casey et al, 1989; CNA 1990). Greaves (1987), in her background paper on 'Women and Tobacco', noted women using cigarettes as an appetite suppressant. "A cigarette curbs my desire to eat", said one woman (p.3). In her book, 'You Count Calories Don't', Linda Omichinski (1992)) tells of the fear

of weight gain expressed by women smokers who are on the diet yo-yo syndrome.

Glamour and sexual attractiveness are well established as images associated with smoking (Howe, 1984; Edwards, 1986; Draffin Jones, 1989; Woodman, 1990; CNA, 1990; WHO, 1992).

Lee (1989) found in a study of Australian student nurses that smokers were rated as appearing more glamourous and confident-looking by both smokers and nonsmokers (Lee, 1989). Bobbie Jacobson (1981), physician/author of 'The Ladykillers' (one of the first books dealing with the issue of why women smoke and how they can stop) said it all:

"Nurses like other women have been raised within a society which leads them to believe that being thin is more important than stopping smoking, and that being unattractive is a bigger threat than lung cancer" (p.18).

Reality versus Image

Conflict between romanticized 'Florence Nightingale' images young women hold on entry to the nursing profession, of soothing the sick, and the reality of patient care in todays' technical hospital setting, is felt by Elda Hauschildt from the Alcohol Research Foundation, to be related to alcohol and other drug problems within the profession (Hauschildt, 1986).

"The compelling image of the 'lady with the lamp', walking through a tent of wounded soldiers, laying a hand on a fevered brow, smiling here and there, is the image those who would-be nurses are imbued with"; writes Hauschildt (1986) in the Alcohol Research Foundation Journal (p.2).

But in today's real world, there are problems with these kinds of images. The modern North American hospital system is big business. It is high level technology with computers, specialized care and a plethora of skilled health care personnel.

Nursing is now likely to be a small part of patient care, which has become fragmented beyond the composite envisioned by Florence Nightingale. There are workers who deal with every part of the patient's body and every social function: physiotherapists, nutritionists, social workers and the list goes on. While once the sole patient care-giver, the nurse is struggling to determine his/her role in the health care industry. How they are perceived by their contemporaries, consumers, government and other decision-makers is dependent on how they see themselves.

In Elkind's (1980) world-wide review of nurses' smoking behaviour 'Nurses' Smoking Behaviour: Review and Implications', she suggests that the high rate of smoking among student nurses can be interpreted as a problem in

itself or as a signpost to more fundamental issues within nursing. Studies of smoking among nurses, set alongside studies of occupational stress, together suggest that the present structure of nursing offers little support to the new entrant in the period of adjustment to his/her new role.

Thus the reality of an image that cannot be defined nor met, may well be a contributing factor in the mosaic of reasons for student nurses starting to smoke and continuing to smoke.

b) Self-esteem:

Students enter the nursing world with little knowledge of the demands placed on them. The demands remain high and appear to be present in various educational programs.

They have come into the profession with high hopes and achievement records and with the anticipation of saving patients from pain and suffering. They believed they were going to be part of a life-saving team. But when the patient dies and the student plays no significant part in the drama, they begin to feel useless. Combined with the extreme competition for grades, power and survival the resulting feelings are ones of powerlessness, personal insecurity and of being devalued (Foley & Stone, 1988). Any self-confidence or high opinion of themselves seems to need to be quickly squelched by those in authority (Elkind, 1980).

As well, student nurses are subject to all the normal pressures of young people leaving home - living on their own for the first time and having to make new friends. They suffer from homesickness, loneliness, isolation at the same time as coming into contact with physical pain, mental distress and often their first experience with death (Elkind, 1980; Hillier, 1981; Tagliacozzo et al, 1982; Foley & Stone, 1988; Henke Jones, 1988).

What bothered young nurses interviewed in the Nursing Mirror studies (1980) was not so much specific events, but the continued uncertainty, frustration and lack of consideration they experienced. They felt they had no support and that their opinions were not respected by other staff and their teachers. Mary Haack (1988) suggests that this sense of inability to control one's environment, feelings of incompetence and lack of worth reduce self-esteem. She sees these periods of vulnerability as variables when appropriate interventions could be refined and initiated.

Instead what often does happen in order to cope, students form informal friendship groups in which cigarettes are used as symbols of confidence and trust.

Together, they demonstrate their feelings of anti-authority rebelliousness by - 'lighting up' (Nursing Mirror, 1980; Fleming, 1982; Edwards, 1986). Leathar (1979) contends that it is this authority structure in nursing which by its rigidity and lack of support creates problems of adjustment and low self-esteem for the new nurse learner.

It is not suprising, that one of the most effective measures currently being discussed to help prevent the onset of smoking in young persons, involves helping them develop confidence in who they are and improving their self-esteem (McNamara 1993).

c) Income:

The WHO Report on Women and Smoking notes the increase in the number of women working outside of the home has provided them with more discretionary income (WHO, 1992). That they chose to spend that money on a self-destructive product prompted Nancy Doyle to call smoking by women an 'Equal-Opportunity Tragedy' (Doyle, 1980). In fact, the lower the income (and thus the less disposable funds) the greater the number of cigarettes smoked (WHO, 1992).

In today's world, women still earn less than men. Sixty-eight per cent of Canadian women working outside the home are employed in clerical or service industry jobs which offer them little recognition or control over their working lives. These occupations (and nursing is one of them), have the second highest proportion of regular smokers. Transport, mining and construction have the highest number of smokers. They are primarily blue collar workers who have limited career opportunities (Edwards, 1986).

Government efforts to try and reduce purchasing of cigarettes by increasing taxes on them nets both federal and provincial coffers billions of dollars each year. It causes much anxiety amongst smokers who have to pay more of their hard earned dollars to support their habit; and dismay for those concerned about smoking when some of that money goes to subsidize the tobacco growers. Yet, in real terms (taking into account inflation) the actual price of cigarettes has remained relatively stable and, at times has decreased (Charbonneau, 1985).

The introduction of smaller size packages (five and ten cigarettes) to make the lower price more appealing to young smokers has had only feeble legislative attention at all levels of government. However, the current high prices for cigarettes are beginning to be somewhat of a deterrent to young persons smoking. This was reported by student nurses (chronically short of money) in the Canadian study: "Money's another thing. It's an outrageous price. Inside, my common sense tells me I'm spending four dollars to try and kill myself", said a student (CNA, 1990, p.20).

In the same study when students were asked about needs and priorities for smoking prevention, it was the high cost of cigarettes which was considered prohibitive and a barrier to those who were contemplating starting smoking. One student said: "It (the cost) will stop the first-time smokers" (CNA, 1990, p.21).

d) Knowledge:

The inverse relationship between smoking and level of education has been well documented in the recent WHO Report on Women and Smoking (1992). In the early days of cigarette use by women, the well-educated sophisticated lady was presented in advertisements as being 'clever when she chose a Lucky Strike' (Howe, 1984). As information about the hazards of tobacco became prevalent, the rate of smoking in the general population has been shown to decrease as one's level of education increased (WHO, 1992).

Studies by Rausch (1987), in an effort to see if this trend was present in student nurses, compared the prevalence of student nurse cigarette use among the three levels of nursing education in the USA, diploma, associate degree and degree. They identified a decrease in smoking from the diploma to the undergraduate level which is congruent with studies showing correlation between higher education levels and lower rates of smoking behaviour.

Knobf also reported a higher proportion of non-smokers had bachelor degrees (Knobf & Morra, 1983). This finding has also been reported in Canada. In the CNA student questionnaire, results show a significant difference between the percentage of smokers in diploma programs and those in baccalaureate programs, 32.4% as compared to 16.3% respectively (CNA, 1990).

Student's Knowledge About Smoking:

A closer review of what students actually know about the effects of smoking indicates that new measures to enhance their total knowledge base are necessary.

Early studies done by Small and Tucker (1978) and Wilkinson et al (1984) with student nurses in the United Kingdom, reported specific knowledge about the part that smoking plays as a causative agent in many conditions, was poor. As well, 40% of smokers and 45% of the nonsmokers said they would like a health education program on smoking with the majority of them wanting more factual medical information on the hazards of tobacco (Small & Tucker, 1978; Wilkinson et al, 1984). Canadian physician Mary Jane Ashley found student nurses' knowledge of smoking and stress reduction to be seriously inadequate (Ashley, 1979).

Students in the CNA focus groups who discussed prevention, said that education on the health risks might have stopped them from starting to smoke (CNA, 1990).

Two other reports are presented that also tend to refute students knowledge about smoking and health. Investigators Swenson and Dalton in a study done in 1983 noted that only three quarters of nurses in their study correctly identified the synergistic effects of smoking and oral contraceptives; and approximately 20% did not correctly reply to the question on the relationship between low infant birth weight and maternal smoking. And, although essentially all the respondents recognized the relationship between emphysema and smoking, only 50 - 60% correctly answered the question on the physiologic effect of smoking on lung cilia (Swenson & Dalton, 1983).

An extensive review of the curricula dealing with smoking during pregnancy in all medical, nursing and physiotherapy schools in Canada was done by Agnes Choi-Lao and her colleagues. A total of 173 schools were contacted - 145 nursing, 16 medical and 12 physiotherapy. They reported that when the topic of smoking during pregnancy was taught, the subject was covered in most of the schools in two hours (Choi-Lao et al, 1980). And except for journal articles, the reported resource materials of textbooks and other printed materials were inadequate in their coverage of the subject. An overwhelming majority of the articles tended to have a physiological approach and nothing about counselling clients to not start smoking or to stop. She calls this an incomplete tutoring strategy.

Recent findings in the studies by Casey (1989) and the CNA (1990) indicate that while students felt quite confident with their knowledge of active and passive smoking hazards; they were underconfident in their knowledge about available cessation programs, their skills in teaching about smoking and assisting clients to quit. They were even less confident in their knowledge about lobbying on the tobacco issue. Only 13.4% reported being taught this aspect of tobacco control (CNA, 1990).

It is obvious that approaches to the whole issue of smoking and health education for nurses needs to include more than the provision of facts alone. Indeed, both the American and Canadian reports recommend nursing interventions that include smoking cessation counselling and teaching techniques be included in every basic nursing education curriculum (Casey et al, 1989; CNA, 1990).

3. Environmental Factors

a) Smoke Free Areas:

As information about the hazards of smoking and second hand smoke has been confirmed, policies to provide smoke-free areas are being implemented (Surgeon General's Report, 1989). However, efforts to eliminate smoking from health care facilities and related health professional organizations have lagged behind these warnings and the activities of the community at large. For example, the Winnipeg Clean Indoor Air By-law was enacted in 1983, yet it was not until 1987 that the Manitoba Association of Registered Nurses (MARN) introduced a policy statement on Smoking and Health (MARN Policy Statement, 1987). And this came only after the Canadian Nurses Association Board of Directors finally issued a document supporting policies that result in a ban on smoking in public places and in the workplace (CNA, 1986). The MARN building became a smoke-free space in 1987. Hospitals as well, have been slow to exercise restrictions and there are still bastions of resistance throughout the health care system (Charbonneau, 1985).

Recently, the author was invited by the St. Claude Hospital in rural Manitoba to conduct a smoking cessation program. The classes were held during the working time at no cost to employees. While there was an excellent response from all levels of workers not one registered nurse attended the sessions. Yet a prior staff survey had identified over half the nurses as smokers. During informal chats at the hospital, the changing rooms, cafeteria, staff lounges and in the local town restaurant several nurses told the author: "they weren't going to stop smoking;" and "they resented being told what to do." These nurses also confided that they had not been consulted about the plans to create a smoke-free workplace, nor about the kind of smoking cessation program that would meet their needs.

Once again nurses felt powerless in their own working environment.

Knopf and Morra reported half of the current nurses in their study of nurses in Connecticut smoke more at work than elsewhere (Knopf & Morra, 1983). Over 78 per cent said they smoke at work in the North Carolina group described in the study 'The Professionals Who Can't Quit' by Dalton and Swenson (1983). An overwhelming majority (79.7 %) say they smoke at work because of habit (Dalton & Swenson, 1983).

All over the world, psychiatric nurses, more than other groups of nurses, continue to smoke, and to be exposed to excessive tobacco smoke on the job (Wagner, 1985). Yet the Scottish Health Education Council excluded psychiatric nursing from its recommendations to curb

smoking in hospital environments. Why? They believed smoking helped break down communication barriers with their psychiatric patients (Feldman, 1984).

In another study done in North West England, any form of compulsion regarding smoking restrictions was seen as counter-productive by students and graduates. It was found that although nurses felt guilty about their habit many of them considered that a direct assault by "policy" would be unhelpful (Booth, 1985).

Wilkinson & Tylden-Patterson and others identify location as a factor which influences nurses smoking behaviour and recommend more restrictions on smoking in hospitals (Surgeon General's Report, 1984; Wilkinson & Tylden-Patterson, 1987). Hillier reported a greater increase in the proportion of smokers occurs during the first year of nurses' training and the students attributed it (the increase in smoking) mainly to "social reasons". Smoking lounges were identified as socialization sites. She suggests concentrating on smokers to change their habits, and the restrictions on places to smoke is one way to reduce the number of locations for students to carry out the habit (Hillier, 1973). Clearly nurses must initiate and practise these recommendations to create smoke-free areas for themselves and their patients.

b) Advertising and Promotion:

The history of smoking among women is a fascinating story of social revolution - women's emancipation leading them to equal self-destruction. At the turn of the century, the negative moral connotations attached to women smoking set the stage for the cigarette as a symbol of freedom - an image that the tobacco industry fosters to this day (Edwards, 1986).

Tobacco companies began testing the public's reaction to women in cigarette ads during the mid 1920's. A 1926 Chesterfields' advertisement shows a nonsmoking woman imploring her male companion to "blow some my way". This was followed in 1927 by Marlboro showing a woman's hand holding a cigarette (Howe, 1984).

The public responded favourably to these promotions and the tobacco industry expanded the target audience to permanently include women. In 1929 one of the most successful advertising campaigns in recorded history was launched. American Tobacco in a brilliant marketing maneuver targeted at women, introduced a significant new slogan: "Reach for a Lucky Instead of a Sweet". Lucky Strike cigarette sales soared and the cigarette has remained the companion of the weight conscious woman to this day (Edwards, 1986; WHO, 1992).

Two world wars saw women gaining further entrance to the mans' world. Smoking was linked with patriotism. A familiar picture of nurses in wartime saw them sharing a smoke with the wounded hero. 'Rosie the Riveter, a symbol of this new age, is credited with stating that: "A woman doing a bang-up job wants a bang-up smoke" (Edwards, 1986, p.10).

Increasing numbers of pictures of women smoking appeared in American and European magazines up to the early 1970's. Of course not only the print media portrayed women who smoked as independent, glamourous, energetic and above all - slim. Films, radio and television reinforced the look with the gravel-voiced, sultry sounding heroines who now blew smoke in the mans' eyes. Billboards lined the roadways as cigarettes sales catapulted tobacco manufacturing into one of the richest industries in the world.

There were decreases in cigarette advertisements in all media during the period 1964-68 and from 1972-78. The first dates coincide with the cause-effect link between cigarette smoking and lung cancer. Identified in the Surgeon Generals' Report (1964), it was the basis for the health warnings appearing on cigarette packages in 1965.

Unfortunately, these early reports on the association between cigarette smoking and lung cancer were assumed to be sex-linked since only male cancer rates were studied. This lack of analysis of study results by gender was to have far-reaching effects. It soon became apparent that too little time had passed by the 1950's and early 1960's, for the many young women who had begun smoking in the 1940's to get the disease, and few studies were initiated.

The 1972-78 dip in cigarette consumption is believed to be the results of the strong anti-smoking lobby of the group ACTION ON SMOKING AND HEALTH, which prompted the United States Federal Trade Commissions' Fairness Doctrine. This legislation guaranteed equal time for opposing views in the interest of public service, thus television had to air free public service anti-smoking messages for an equal amount of time as that purchased by the tobacco companies.

Effective lobbying efforts at the same time saw a total ban of cigarette advertising on television by 1971 (Howe, 1984). However, no true statistics were readily available about cigarette consumption by women, as numbers for both the per capita consumption and level of cigarette sales did not differentiate between male and female smokers.

Student nurses (the majority of them being women), a captive group in the early 1960's, became handy subjects to study the smoking behaviour of women.

Initially much of the behaviour reported, paralleled that of women in the general population. Gradually concerns were being noticed however, regarding the discrepancies between what the nurses said they knew about the health effects of smoking and the amount of smoking occurring within the nursing community (Elkind, 1980; Dalton & Swenson, 1983; Charbonneau, 1985; Haines, 1988; CNA, 1990; and many more reports).

Nurses, the predominantly female health professional group were affected by the tobacco industry's promotion efforts the same as other women. In Dalton and Swenson's (1983) study, it (cigarette advertising) was quoted by nurses as the second reason for starting to smoke:

"because advertising made the habit appealing".

When Virginia Slims advertisements headlined : "You've Come a Long Way, Baby", the women's' movement protested. But it was the word "baby" that troubled them, not the danger to health of the cigarettes.

Dr. Alice Baumgart, Dean of Nursing at Queen's University in Kingston, Ontario, calls smoking a feminist issue. She reminds us of the ample evidence demonstrating how the tobacco industry spends a fortune each year to maintain high levels of smoking amongst women and forestalls any feminist opposition by promoting events such as sports and cultural programs that appeal to women.

In Canada until recently, except for two nursing organizations, the Canadian Nurses Respiratory Society (the nursing arm of the Canadian Lung Association) and the Canadian Council of Cardiovascular Nurses (of the Canadian Heart Foundation); calls from within the profession to look at reducing the number of nurses who smoke have been muted (Charbonneau, 1985). The first national study was conducted by the Canadian Nurses Association in 1990 (CNA, 1990). But counter advertising efforts both in the professional journals and in the general media have been few and fragmented. In view of the success in the early 1970's with the Fairness Doctrine, it is an opportunity that has been missed.

c) Product Development, Marketing, Availability

Initially, cigarettes were not offered to women. The product was first designed and then a market found. Direct appeals of the low tar and nicotine and filtered cigarettes were made to women. They were milder, tastier and easier to smoke. The filters were the result of a dislike by many women to have the tobacco residue on their tongues and to prevent lipstick from coming off on the end of the cigarette. Promotion of the filters emphasized the health features with the removal of the harmful effects of the inhaled smoke (Howe, 1984). Women were impressed.

So the physical characteristics of the cigarette changed. They were now slim, lean, lighter in weight, pure white or colour coordinated. They arrived in elegant glittering packages resembling jewel cases or cosmetic holders. Their names told you who they were for: Virginia Slims, Elegant Lady, Eve and hundreds of others (Doyle, 1980; Howe, 1984; Edwards, 1986; Woodsman, 1990 and WHO, 1992).

Advertising now focuses on these new targets - young women. It is not suprising that young women student nurses, much like other young women their age, would be tempted to try a cigarette. And when they are easy to obtain - just a handy machine on the corner or a friend who is always willing to share, they are hooked (Nursing Mirror, 1980; Knobf and Morra 1983; Gritz, 1986; CNA, 1990; WHO, 1992; Oakley, 1993).

FACTORS IDENTIFIED WITH CONTINUING TO SMOKE

The factors which encourage one to start smoking are often the same ones that promote the continuation of smoking. However, there are some specific concerns which impact the persistence of the smoking behaviour and impedes cessation.

1. Physiological Factors:

a) Dependence (Addiction)

"I think what I find difficult is that people don't realize how addicted we are. I guess I feel I know how an alcoholic feels because of the scorn and distaste because they're weak", said a nurse (CNA, 1990, p.21).

The physiological dependence on nicotine creates one of the major obstacles to smoking cessation. Indeed the fear of withdrawal discomfort causes those who have made attempts to quit delay trying again. "That's what makes it hard to quit another time, is that you are familiar with that uncomfortable feeling", said a nurse (CNA, 1990, p. 19).

The most common barrier to stopping smoking mentioned by students in the CNA Study focus groups was the strength of the nicotine addiction (CNA, 1990). Several of the recent studies of nurses and smoking are beginning to address the issue of addiction (Haines, 1988; Lee, 1989; Gilchrist, 1989; CNA, 1990; Oakley, 1993).

Nicotine gum and the patch are welcome tools in dealing with the addictive factor. However, although nicotine gum was the third choice for RN's in the CNA Study to assist them in stopping smoking, not one of the students identified it as a cessation aid. The high price of the nicotine supplements and the need for a medical prescription may have been a deterrent. The majority of the students said they had tried to quit 'cold turkey' and found it very hard (CNA, 1990).

b) Weight Control:

"That's the worst part. It's the weight gain. You get so depressed" said a student (CNA, 1990, p.19).

Smoking is widely used as a technique to control weight. Female smokers are more apt to use smoking to avoid weight gain and curb increased appetite (WHO, 1992).

Linda Omichinski (1992) in her book 'You Count Calories Don't', notes that nicotine increases metabolism (the number of calories you burn at rest) by about 10% for heavy smokers; but is clearly not a recommended way to burn

up calories to keep weight down. She encourages an increase in physical activity to offset the decrease in metabolic rate that occurs when you stop smoking.

Smoking inhibits insulin secretion causing blood sugar levels to remain high. This suppresses appetite. Many smokers reach for a cigarette when they are actually hungry (Omichinski, 1992).

The issue of weight control and smoking is one of the most frequently mentioned physiological factors in the majority of studies reviewed for this paper (Ashton & Stepney, 1982; Mennies, 1983; Shiffman, 1986; Greaves, 1987; Omichinski, 1992; Walters, 1992; WHO, 1992).

2. Psychosocial Factors

a) Negative Emotions:

"For me, giving up smoking isn't a gain; it's a loss", said a nurse (CNA, 1990).

Smoking is associated with feelings of helplessness (Jack, 1989), frustration (Hillier, 1981), anger and rebellion (Fleming, 1982) and for a majority of nurses - stress (Gritz, 1986; CNA, 1990). Stress, and the use of smoking as a means of coping with the workload, the studies, the pressures of the nature of the work and the complicated way it (smoking) leads to further stress and guilt, has been the most frequent factor identified by nurses as a cause for continuing to smoke.

Rauch (1987), in her analysis of beliefs suggests that attempts to change attitudes toward cigarette use may be most effective if they are directed toward the beliefs that differentiate smokers from nonsmokers. She identified the main areas where they differ is in their perception that smoking helps to ease the stress related to nursing practise and nursing education. It had about two and a half times greater weight in accounting for intention to continue to smoke than the exemplar role and four times the weight of concerns about personal health.

The long held theory that nurses smoke because they believe it reduces stress would seem to be reinforced by the factor analysis of the data. However, it should be noted that while stress often is a continuation factor - it is social pressure that initiates smoking (Small & Tucker, 1978; Burke, 1975; Elkind, 1980; Hillier, 1981; Murray, 1981; Tagliacozzo et al 1982; Charbonneau, 1985; Haack, 1988; Casey et al 1989; CNA, 1990; and WHO, 1992).

Denial of the facts about the health hazards of smoking and lack of knowledge of the health effects are frequently cited determinants of the illusion of thinking "just one puff won't hurt" (CNA, 1990).

In his study, Wagner (1985) found that nurses who smoked saw less of an association between smoking and specific diseases. Whether these nurses continue smoking because they really don't believe that cigarette smoking is a major cause of the health problems, or whether they deny the relationship between smoking and disease because they continue to smoke is not known. The answer may be a combination of both. Feelings of being less vulnerable to the risks of smoking have been further identified by Tagliacozzo (1990) and Gritz (1986). As one participant in the CNA Study (1990) stated:

"I don't wheeze; I don't cough. I can basically do the sports I want to do without any problem. I don't have any reason to quit".

b) Positive Emotions

"If smoking wasn't hurting my health, I'd smoke forever. I love it. I absolutely love it!" says a Canadian nurse (CNA, 1990).

Participants in the CNA Study claimed giving up smoking would mean major changes in their lifestyles as well as losing something that gave them a great deal of pleasure. They said the pleasure of smoking outweighs the pleasure of any substitute (CNA, 1990). For many smokers the relationship between the act of smoking and "good times" was just too ingrained - they couldn't imagine having any fun without one.

Friendship and feelings of camaraderie while sharing a smoke have been noted by several researchers (Fleming, 1992; Gritz, 1986; Oakley, 1993). The WHO Study reported women calling the cigarette "their friend" (WHO, 1992). Dr. Bobbi Jacobson (1981) in her book 'The Ladykillers' tells stories of how women turn to the cigarette for companionship.

Dr. Ellen Gritz (1986) quotes nurses: "Taking a cigarette break is the only 'officially' recognized way to get a few minutes of relaxation off the floor" (p.2). And as well as giving them permission to take a break, many see it (smoking the cigarette) as a reward for working so hard. Oakley (1993) expresses this phenomena in the metaphor of the smoke ring. She describes a young, overburdened, socially disadvantaged mother of several normal, but demanding children who secures a break from her unrelenting work by sitting down, having a cigarette, and retiring for a moment to the world inside the smoke ring where she can forget her situation and find enough energy to carry on (p.2).

The nurses in Dalton and Swenson's (1983) article, 'The Professionals Who Can't Quit' say they continue to smoke primarily because it is a habit they enjoy. Their motivation to quit smoking appears to be

overwhelmed by the gratification smoking brings and - to some degree - close proximity to others smokers (their friends).

3. **Social Environment**

Earlier discussions regarding social acceptance, parental and peer influence identified the impact of one's family and friends on the decision to take up smoking. However, as well as being one of the reasons for starting to smoke - social reasons are one of the major factors in continuing to smoke.

Many of the studies cited note that smokers have parents, role models and friends who smoke (Ross, 1990; Nursing Mirror, 1980; Hillier; 1981; Swenson and Dalton, 1983; CNA, 1990 and WHO 1992). Over 34.9% of the students in the CNA Study claimed living with smokers as the fourth most common barrier to quitting (CNA, 1990).

> "Everybody's doing it - smoking that is", said a student (CNA, 1990).

Both smokers and nonsmokers tend to overestimate the number of persons who smoke. Lee (1989) in her study of Australian student nurses found both groups rating smokers not only more prevalent, but also more popular.

Addressing these myths and providing social support in efforts to create policies both at work and in the community are supportive actions to provide a social environment which enables nurses to stop smoking.

SUMMARY OF LITERATURE REVIEW

The four major factors identified in the literature as impacting on both the onset and continuation of smoking are:

1. Stress
2. Image (most often related to weight management)
3. Social Acceptability (most frequent reason for starting)
4. Peer Influence

With regards to the continuation of smoking in relation to cessation needs, the greatest barrier to quitting was the addiction to nicotine and the stress related to withdrawal. The extent of this addiction is described as stronger than non-smokers could imagine and must be addressed in any discussion of attempts to plan strategies for stopping smoking.

CHAPTER THREE

INVESTIGATIVE APPROACH

> *"It may be argued that a nursing profession which demands a health education function from its' members must have an obligation to help those same people protect their own health. And for any such help to be effective it is necessary to learn more about the subject from the viewpoint of the nurses themselves"* (Booth, 1985 p.1).

This study attempted to do just that.

Student nurses were asked to participate in the search for understanding about how they can be helped to not start smoking and, if they are smoking, to stop.

1. Methodology

The self-reporting technique utilized in this study was the administration of a 35 item questionnaire to the students who volunteered to participate. (Appendix A)

The questionnaire provided a written guideline for obtaining information. In this structured approach all subjects were asked to respond to exactly the same questions, in exactly the same order, and they all had the same set of options for their responses.

Measurement of these findings removes much of the guesswork in gathering data. The strength of quantification is that an objective measurement can be independently verified and/or compared by another researcher. It is more likely to be precise. For example, 30% of the 914 student respondents in the CNA report were current smokers (CNA, 1990).

Finally, the questionnaire provided data that will do a reasonably good job of communicating information to a broad audience (Polit & Hungler, 1987).

2. Procedure

A. Process

a) Pilot and Revisions

A pilot of the questionnaire was carried out with a selected number of comparable students who were not study subjects. Some revisions were made. The questions on level of addiction were included and those related to weight and diets were eliminated. It was felt by the researcher and reinforced by the students that this topic (smoking and weight control) could be another major study in itself.

b) Access to the participating Schools of Nursing for permission to seek volunteer participants was obtained informally by telephone and in person.

c) Appropriate access protocol and documentation forms were completed for the respective schools.

d) A formal letter of request was sent to the Directors of the Schools of Nursing. (Appendix B)

e) Information to students participating in the project and their consent was in the form of a survey cover letter to each participant. (Appendix C)

f) Administration of the Questionnaire

The questionnaire was administered to students in the first year program in schools of nursing at the four sites in Winnipeg at a time which was selected by, and convenient to, both school authorities and students.

B. Analysis of data

The data collected on the questionnaire provided the information necessary to answer the research questions that were based on the purpose of the study.

Question #1:

What are the rates of tobacco use of students in the first year program in Schools of Nursing in Winnipeg?

The smoking status of students in the first year program was identified, as to whether they never smoked, are former smokers or are current smokers.

Information about the smoking behaviour of the students was collected according to the respondents: age, gender, age of onset, friends and family who smoke, level of addiction and interest in quitting.

Question #2:

Which factors are identified by first year students for starting to smoke and/or for increasing the number of cigarettes smoked after entry into the school of nursing?

Students responded to an open-ended question which asked them to state in their own words the most significant factor (reason) for starting to smoke and/or for increasing the number of cigarettes smoked after entry into the school of nursing. These replies were recorded and categorized.

Question #3:

What factors are identified by first year students for stopping smoking and/or decreasing the number of cigarettes smoked after entry into the school of nursing?

Students responded to an open-ended question which asked them to state in their own words the most significant factor (reason) for stopping smoking and/or decreasing the number of cigarettes smoked after entry into the school of nursing. These responses were recorded and categorized.

Data obtained were discussed and compared to the findings about the smoking behaviour of student nurses that has been reported in the literature.

3. Limitations

Due to cost factors and travel restrictions only the four schools of nursing in the city of Winnipeg were approached to participate in the study. This limited responses to a primarily urban segment of the student population.

The current programs in the schools of nursing are in the process of change. Two of the former hospital-based programs are conducting their classes at the University of Manitoba, a new site and format for teachers and students. The university nursing program while actually a combination of three separate schools was considered as one for purposes of this study. Three other schools of nursing (one a college program and two hospital-based schools) assisted in the project for a total of four schools.

An unexpected variable may be related to the presence of some students listed as enrolled in a first year nursing course who have been in attendance at the university taking other classes and, therefore are not participating in their first post secondary educational experience. In the four participating schools 240 students were registered in the first year program at the time of the study. There were 48 students absent from class and 40 did not attend classes as a group in the time frame available.

In one of the classes a test had been scheduled prior to the presentation of the questionnaire and many students left the room after writing the test and did not return. It was also noted that in every class which participated in the research and, with no prior announcement of the project, there were several individuals who "just didn't come to class". They may or not may be smokers.

Answers to the questions are presumed to be honest and reflect the true behaviour of the students regarding smoking. However, current media focus on the consequences of smoking and second hand smoke may sway responses to questions as students may want to appear to be doing what they think is expected of them.

Often discussion about smoking activity tends to polarize individuals' beliefs. They may be either strongly for, or against smoking behaviour controls. Some people view smoking as a human rights issue while others feel that it is a personal choice and not anybody elses' business. This may have affected responses. A possibility exists that because the researcher is known for conducting smoking cessation classes, the respondents may be hesitant to answer questions regarding relapse or reluctance to try and quit smoking.

CHAPTER FOUR

RESULTS AND DISCUSSION

A. STUDY SUBJECTS

There were **240** students registered in the first year program in the four schools of nursing in Winnipeg. All four schools gave consent for the researcher to seek volunteers for the project from their first year classes. Because of travel distances and costs, students in programs outside of the city were not included.

On the days of the administration of the questionnaire 48 individuals were absent from their classes. Since there had not been prior notice given to students of the project, it may be assumed they had other reasons for not attending class. Another 40 of the students could not be readily accessed, as they did not all attend the same classes as a group. This appears to be due to changes in the class location of two of the schools of nursing.

The **152** students attending class were invited to volunteer for the project. **(See TABLE 1).** The presentation of the research project and administration of the questionnaire were done by the researcher. Students were reminded that partici-pation was voluntary and assured of anonymity.

TABLE 1. PARTICIPATION

Number of students offered questionnaire	**152**
Number of students completing questionnaire	**119**
Number of students not participating	**33**
Rate of response = 78.29%	

A total of **119** students completed the questionnaire **(Table 1).** Of the 33 not participating, **19** in one class left the room after a test and did not return to the next session. The **14** students who did not participate from the other three classes, either stayed in the classroom but did not pick up the questionnaire, or left the room after the presentation describing the project. Two of the questionnaires were returned with no markings. **No data were collected on nonparticipants nor were they asked why they did not to participate in the project.** The smoking behaviour of these individuals is therefore, an unknown factor.

According to Polit and Hungler (1987), the response rate of **78.29%** is however, sufficiently high to indicate the absence of serious biases relative to the target population.

B. FINDINGS

In order to reflect the purposes of the study and research questions posed, results of the data analysis and discussion will be organized under three main categories: **Smoking Behaviour, Changes in Smoking Behaviour, and Factors Affecting Changes in Smoking Behaviour.**

RESEARCH QUESTIONS

1. What are the **rates** of tobacco use of students in the first year program in Schools of Nursing in Winnipeg?

2. Which **factors** are identified by first year students for **starting to smoke** and /or for **increasing the number of cigarettes smoked** after entry into the school?

3. What **factors** are identified by first year students for **stopping smoking** and/or **decreasing the number of cigarettes smoked** after entry into the school?

SMOKING BEHAVIOUR

To address the first research question a review of the smoking behaviour of the students provides the **rates** of: **current tobacco use,** characteristics for example, **age, gender, age of onset, marital status and best friends who smoke, level of addiction, cessation interest and attempts to quit smoking.**

CHANGES IN SMOKING BEHAVIOUR

Changes in smoking behaviour since entry into the school of nursing related to: **starting to smoke and/or increasing the numbers of cigarettes smoked, and stopping smoking and/or decreasing the number of cigarettes smoked** will be examined.

FACTORS AFFECTING CHANGE

Answers to the second and third research questions were sought by exploring those **factors** identified by students for **starting to smoke and/or increasing the number of cigarettes smoked,** as well as those **factors** identified by students for **stopping smoking and/or decreasing the numbers of cigarettes smoked. Reasons for stopping smoking cited** by **former smokers** and **estimates by students regarding the smoking behaviour of their classmates** were considered in the investigation process.

SMOKING BEHAVIOUR

TABLE 2. CURRENT SMOKING STATUS

Status	No. of students	%
Never smoked	54	45.76
Former smokers	39	33.05
Regular and occasional	25	21.19
Total	118 *	100

*** Frequency missing = 1**

The percentage of **current smokers (21.19%) (Table 2)** is lower than the CNA study (1990) which reported almost a third of nursing students outside Quebec smoke. The percentage of **former smokers (33.05%)** was higher in the Winnipeg study than the 28.5% reported by the CNA, as was those who **never smoked (45.76%)** compared to national figures of 41.3% (CNA, 1990).

CHARACTERISTICS OF SMOKERS

TABLE 3. AGE

Age	Never Smoked	Former Smoker	Current Smoker	Total
19 to 23	27	7	8	42
24 to 28	12	12	5	29
29 to 33	7	10	6	23
34 to 38	4	2	2	8
39 to 50	3	4	2	9
Total	53	35	23	111 *

*** Frequency missing = 8**

Nineteen (76%) of the current smokers were between the ages of 19 and 33 years **(Table 3).** This is significant because they have had fewer years of smoking and are deemed to have a better chance of quitting than long standing smokers (CNA, 1990). **A high percentage (50%) of the students ages 19 to 23 years report having "never smoked". This is higher than any other age group and may reflect a new generation of nonsmokers.**

TABLE 4. GENDER OF SMOKERS

Sex	Never Smoked	%	Former Smokers	%	Current Smokers	%	Total
Female	46	48.42	29	29.47	20	21.05	95
Male	7	36.84	8	42.11	4	21.05	19
Not given	0	0.00	2	66.67	1	33.33	3
Total	53	45.30	39	33.33	25	21.37	117* 100%

*** Frequency missing = 2**

The **21.05%** (20 out of 95) female smokers reported in this study **(Table 4)** is lower than the **25.9% in the CNA** study, and the **21.05%** (4 out of 19) rate for male smokers is considerably lower than the **33.3%** reported nationally (CNA, 1990). This difference is difficult to explain as there were no data given in the CNA Study regarding male smokers.

While the sample of male student participants reflects the lower number of men entering the profession, a significant change in their representation seems to be occurring. The number of male registered nurses in Manitoba reported by the CNA Study (1990) was 2.5%, whereas there were 15.9% male student nurses reported in the CNA Study (1990) and 16% reported in this study. Whether these changes will alter smoking trends in student nurses remains to be seen.

WOMEN AND SMOKING

Of particular concern is the information revealed in this study that **16** of the **20** female smokers **(83.3%)** are **between the ages of 19 and 33 years of age.** These young women are in their prime child bearing years and at considerable health risk, if they continue to smoke. As early as the 1980 Surgeon General's Report, the harmful effects of smoking were noted on the fetus and more recently the dangers of osteoporosis in postmenapausal women who smoked in their younger years (Surgeon General's Report, 1980; Phillips, 1980; Ashley, 1986; HEC, 1986; Walters, 1992; WHO, 1992; Oakley, 1993).

NOTE: Knowledge about the effects of smoking was not addressed in this study.

Of further significance, is that 8 of the 16 female and all of the male smokers were identified as married and could possibly be parents. Children of smokers are reported having more respiratory problems than children of nonsmokers (Ashley, 1986; Surgeon General's Report, 1989; WHO, 1992).

NOTE: Information about parental status was not investigated in this study.

TABLE 5. AGE OF ONSET FOR FORMER AND CURRENT SMOKERS

AGES	NUMBER
11 - 14 years	18
15 - 18 years	32
19 - 25 years	9
26 - 47 years	1
Total	60

NOTE: 4 individuals did not give their age

The figures in **Table 5** are a concern as **50** of the **60 (83.33%)** student nurses who have smoked or currently smoke reported starting to smoke before they were 19 years of age. They also reaffirm findings from the CNA report which notes student nurses are starting to smoke earlier than their R.N. contempories (CNA, 1990).

TABLE 6. SMOKERS' SPOUSE/PARTNERS/BEST FRIENDS WHO SMOKE

Females	No.	S/P	BF(M)	BF(F)
Single	10	NA	8	5
S/P	8	4+(4NR)	3	7
Div.	1	NA	1	1
Sep.	1	NA	NR	NR
Males				
Single	0	NA	NA	NA
S/P	4	2+(2NR)	2	0
Div.	0	NA	NA	NA
Sep.	0	NA	NA	NA
Total	24*	12	14	13

*** One single individual did not indicate gender**

DISCUSSION OF TABLE 6

One of the major reasons for starting and continuing to smoke reported in the literature indicates, that having a best friend or spouse who smokes will increase your chances of starting and, reduce your chances of stopping (Swenson & Dalton, 1983; Casey et al, 1989; CNA, 1990; Health Canada, 1994). In both Casey's study in Portland and Buffalo and the CNA report, the most prominent factor influencing the onset of smoking (70%) was friends who smoked. Friendship and feelings of camaraderie while "sharing a smoke" have been noted by several nurse researchers (Fleming, 1982; Gritz, 1986; WHO, 1992).

Among the smokers, all but one single female smoker and two of the male smokers report that their best friends smoke **(Table 6)**.

Over 34.9% of students in the CNA study claimed living with smokers as the fourth most common barrier to stopping smoking (CNA, 1990). The students in this study either lived with smokers or had friends who smoked as well as a spouse.

ADDICTION DISCUSSION

Addiction to nicotine is the most common barrier to stopping smoking mentioned by students in the Canadian study (CNA, 1990). The difficulty in quitting worried them deeply and the majority were well aware of being addicted to nicotine. The extent of the addiction to nicotine was described as stronger than nonsmokers could imagine. They stated withdrawal pains are severe and could interfere with daily functioning to the point of jeopardizing work and school.

In the focus groups conducted in the CNA Study (1990), one of the students said about the dependence on nicotine; "Every time I think, okay, I'm going to cut back or quit, I seem to crave it all the more. And so it increases from a pack to a pack and a half instead of decreasing it" (CNA, 1990, p.17).

Six of the twenty-five students who reported smoking in this study, scored 7 or more on the Fagerstrom Nicotine Tolerance Scale **(Table 7)**. Based on the definition for the scale these students are highly dependent on nicotine.

TABLE 7. LEVEL OF ADDICTION
(Based on the Fagerstrom Nicotine Tolerance Scale - a test to help determine strength of nicotine addiction)

Students were asked the questions from the Scale and a summary of their scores is below:

Question	points:	0	1	2
How soon after you wake up do you smoke your first cigarette?		After 30 mins	Within 30 mins	-
RESPONSE (NR 1)		14	10	-
Do you find it difficult to refrain from smoking in places where it is forbidden?		No	Yes	-
RESPONSE		22	3	-
Which of all the cigarettes you smoke in a day is the most satisfying one?		Any other than first one in a.m.	First one in a.m.	-
RESPONSE (NR 4)		9	12	-
How many cigarettes a day do you smoke?		1-15	16-25	26+
RESPONSE (6 smoked less)		13	4	2
Do you smoke more in the a.m. than rest of day?		No	Yes	-
RESPONSE		18	7	-
Do you smoke when you are so ill that you are in bed most of the day?		No	Yes	-
RESPONSE		20	5	-
Does the brand you smoke have low, med or high nicotine content?		Low	Med.	Hi
RESPONSE		12	9	4
How often do you inhale smoke from you cigarette?		Never	Sometimes	Always
RESPONSE		0	6	19

SCORE:

7 or more: Highly dependent on nicotine and may benefit from a smoking cessation program based on treatment for nicotine addiction.

6 or less: A low to moderate dependence on nicotine, however this does not rule out a smoking cessation program based on treatment for nicotine addiction.

TABLE 8. LENGTH OF TIME SMOKING

Time frame	Responses
Less than a year	1
1 - 5 years	8
6 - 10 years	8
over 10 years	8

The longer you smoke the harder it is to stop, are claims made by students in the CNA study and the focus group members in the National Roundtables: Women and Tobacco report (CNA, 1990; Health Canada, 1994).

With **16 students reporting smoking for six** or **more years (64%) (Table 8)** and the levels of addiction identified in **Table 7**, consideration must be given to providing a smoking cessation program based on treatment for nicotine addiction.

TABLE 9. CESSATION METHODS USED BY STUDENTS

Method Tried	Responses
Cold turkey	15
Individual (do it yourself)	7
Group programs	2
Nicotine patch	4
Nicotine inhalers	0
Hypnosis	2
Acupuncture	1
Others	4
Nicotine gum (2) Laser Therapy (1) and Cutting down (1)	

* *Figures show multiple responses from individuals.*

DISCUSSION OF CESSATION METHODS

The most common method of trying to stop smoking reported in the CNA focus groups by students **(68%)** was **'cold turkey'** (CNA, 1990). **Table 9** from this study shows **42.9%** have tried that method. The second means of trying to quit listed by the national group was **'gradually cutting down'** whereas students in this study **(20%)** indicated they used an **individual (do it yourself) program.** Other methods were tried by fewer students.

Few of the students in the national focus groups and in this study showed an interest in current group smoking cessation programs. However, it should be noted that the majority of group programs are generic in their focus. The only one available to women in the Winnipeg area (as listed in the phone book) is the 'Catching our Breath' program offered through the Women's Health Clinic.

The availability of group programs in participating schools of nursing was not investigated, but informal discussions with students suggests that there are few, if any, conducted at present in the schools of nursing in Winnipeg and none specifically targeted to student nurses.

ATTEMPTS TO STOP SMOKING

TABLE 10a. TIMES ATTEMPTED

No. of times	Responses
Never	9
1 - 3 times	10
4 - 5 times	1
more than 5 times	5

TABLE 10b. ATTEMPTS IN THE LAST 6 MONTHS

Yes	9
No	7

TABLE 10c. INTEND TO STOP IN NEXT 12 MONTHS

Yes	13
No	10
NR	2

Results in the CNA Study noted a resistance to cessation as one third **(33%)** of respondents reported never attempting to quit (CNA, 1990). **Table 10a.** from this study reflects a similiar response with **9 out of 25 smokers (36%)** never having attempted to quit. **Table 10b.** indicates that **7 out of the 16 (43.8%)** students replying have not tried to stop smoking in the last six months. Further resistance to cessation is noted from this group as **10 of the 25 (40%)** smokers state they do not intend to stop in the next 12 months **(Table 10c.)**

However, the number of attempts to try and stop smoking **(16)** times in all **(Table 10a.)** and the recent efforts within the last six months where **9 smokers have tried to quit (Table 10b.)**, indicates a desire by students to change their smoking behaviour.

INTENTION TO STOP SMOKING

There is a high proportion **(13 out of 25 or 52%)** of smokers who reported they intend to quit in the next twelve months **(Table 10c.)**.

This group is accessible and available now, to health professionals who are able to assist them. And although a significant number have been smoking for over ten years **(8)**, the majority of them **(17)** have been smoking ten years or less and their chances of success may be even greater (CNA, 1990).

CHANGES IN SMOKING BEHAVIOUR SINCE ENTERING SCHOOL

TABLE 11. STOPPED/DECREASED AND STARTED/INCREASED

	Female	Male	Total
Stopped	1	2	3
Decreased	5	1	6
Total	6	3	9
Started	2	1	3
Increased	6	1	7
Total	8	2	10
Unchanged	7	1	8*

*** one smoker did not indicate gender**

The onset of smoking after entry to a school of nursing is reported by the Canadian nurses study to be about 10% (CNA, 1990). Researchers Casey and colleagues claim that 75% in their Buffalo study and 70% in the Portland group started or began smoking more while in nursing school (Casey et al, 1989).

In this study, **10** of the **119** students reported starting to smoke or increased the number of cigarettes smoked after entry into the school of nursing **(Table 11.)**. This group makes up **8.4%** of the total respondents and **40%** of the current smokers. And an almost equal number, **9 of the 119 (7.6% of the students)** stated that they had stopped smoking or decreased the number of cigarettes smoked.

FACTORS AFFECTING CHANGE

Students were asked to state in their own words the reason (factor) for increasing the number of cigarettes smoked or for starting to smoke after entering the school of nursing.

TABLE 12. FACTORS FOR STARTING/INCREASING SMOKING

Reason given	Response	%
Stress	9 (2 males + 7 females)	
A release	1 (female)	
Total	10	100%

One student wrote the word *STRESS STRESS STRESS* across the space on the questionnaire. Stress is the most frequent factor identified by nurses as a cause for smoking (Gritz, 1986; Rausch, 1987; CNA, 1990). Oakley (1993) tells of women 'escaping into the smoke ring'. Smoking is a way of coping and the nurses in this study are no exception **(Table 12.)**. One hundred percent of them gave stress (including a release as stress reduction) as their major reason for starting to smoke or increasing the number of cigarettes they smoked.

TABLE 13. FACTORS FOR STOPPING/DECREASING SMOKING

Reason given	Response
Health risks	4
Cost of cigarettes	2
Less time (to smoke)	2
Needed more energy	1
Total	9

Health risks as a major reason for stopping smoking cited by the 10 smokers in this study **(Table 13.)** coincide with those reported in the Canadian nurses' study. Those in the CNA group who wanted to quit immediately were concerned about their health. Some of those participants said if they were contemplating getting pregnant, they would quit (CNA, 1990). This is an area where changes could be initiated in the school curricula to teach the health hazards early in the program. Young women (most student nurses are women) want more information on gender-specific effects of smoking according to recent reports from the National Roundtables: Women and Tobacco (Health Canada, 1993).

The **cost of cigarettes** is another factor given by the students. This reason was quoted by a student in the CNA report. She said, "Money's another thing. It's an outrag-eous price. Inside, my common sense tells me I'm spending four dollars to try and kill myself" (CNA, 1990, p.20). In the same study when students were asked about needs and priorities for smoking prevention, it was the high cost of cigarettes which was considered prohibitive and a derrent for those who were contemplating starting smoking.

Other reasons, such as **less time and needing more energy**, provide valuable clues as to possible ways to discourage students from taking up smoking.

TABLE 14. REASONS LISTED BY FORMER SMOKERS FOR STOPPING

Reason	Response
Health risks	**18**
Felt sick	**7**
Pregnant	**3**
Spouse didn't smoke	**2**
Decided to quit	**2**
Tasted bad	**2**
Cost	**2**
Didn't enjoy it anymore	**2**
Smelled bad	**1**
Pressure from family	**1**
Death of a friend	**1**
No response	**2**
Total	**43**

NOTE: Several students gave more than one answer.

The main reasons for quitting given by both RN's and students in the CNA study were concern for future health, cost, pressure from spouse/family, the effect of smoking on others and readiness to quit (CNA, 1990). In **Table 14.** the overwhelming reasons listed by former smokers for stopping were 'health related' (health risks, felt sick or pregnancy).

However, for some in the CNA study the threat to health had to be highly individual and immediate to make them consider quitting. As one respondent said, "If it were something drastic, yes. If I knew I would have a disease and it would be in my best interests to quit smoking, then I would probably give it a stab. But I must say until that time occurs, no, I am certainly not interested in giving it up". Another claimed, "You need something to scare you, and it hasn't scared me yet" (CNA, 1990, p.20).

The priority for smoking cessation that emerged from discussions in the national study was that smokers must have a desire to quit in order to initiate the cessation process. They felt the emphasis should be placed on increasing the motivation to quit among smokers. The focus groups revealed that motivation stems from a real or perceived health risk, social pressures and the high price of cigarettes (CNA, 1990).

The clues provided by the students who have quit smoking **(Table 14.)** could be helpful in developing cessation programs for their colleagues. What is needed is a method of utilizing this readily available expertise.

NOTE: Students who are current smokers were not asked what would motivate them to stop smoking. This is an area that warrants further research.

ESTIMATING NUMBERS OF SMOKERS

Supportive and nonsupportive actions that their colleagues take to assist smokers to quit are often based on beliefs held about the incidence of smoking. Persons who feel that only a few smokers have a 'problem' may be reluctant to acknowledge the need (and accompanying funds) for cessation programs sponsored by a facility or the community. Others who believe that there is a high rate of smokers might be more tolerant of the difficulties in helping smokers quit (Lee, 1989; CNA, 1990).

TABLE 15. ESTIMATES OF NUMBERS OF STUDENTS SMOKING

Estimate	Never smoked	Former smoker	Current smoker	Total
Less than 5%	5	3	6	14
5 to 10%	17	16	8	41
10 to 20%	18	9	6	33
20 to 30%	7	4	4	15
30 to 40%	2	2	0	4
40 to 50%	4	3	0	7
No response	0	2	1	3
Totals	53	39	25	117*

Frequency missing = 2

Only **15** of the students were accurate in their estimates of **20 to 30%** smokers in their class **(Table 15.)**. The majority underestimated the incidence of smoking amongst their classmates.

Results in this study, about beliefs that student have regarding the numbers of smokers in their group, do not reflect other studies that report both smokers and nonsmokers have a tendency to over-estimate the numbers of smokers in their group (Lee, 1989). These views often perpetuate the myth that 'everybody's doing it' - smoking that is (CNA, 1990).

What these wide deviations in estimates may demonstrate is a need for more information about current smoking behaviour being made available to students and the public.

SUMMARY OF FINDINGS

* **21% OF THE STUDENTS (25 out of 119) SMOKE**
* **20 OF THE 25 SMOKERS ARE FEMALES 19 TO 33 YEARS OF AGE**
* **16 (64%) HAVE BEEN SMOKING 6 YEARS OR MORE**
* **MAJORITY OF SMOKERS HAVE BEST FRIENDS WHO SMOKE OR LIVE WITH SOMEONE WHO SMOKES**
* **SIX OF THE 25 SMOKERS ARE HIGHLY ADDICTED TO NICOTINE**
* **40% (10 OUT OF 25) REPORT STARTING TO SMOKE OR INCREASING THE NUMBER OF CIGARETTES SMOKED AFTER ENTRY TO THE SCHOOL OF NURSING**
* **100% OF THESE SMOKERS CITE STRESS AS THE MAJOR FACTOR FOR STARTING TO SMOKE OR INCREASING NUMBER OF CIGARETTES**
* **HEALTH RISKS, THE COST OF CIGARETTES AND LACK OF TIME AND ENERGY WERE PRIMARY REASONS FOR REDUCING OR STOPPING SMOKING**
* **52% OF SMOKERS WOULD LIKE TO QUIT IN THE NEXT 12 MONTHS**

CHAPTER FIVE

CONCLUSIONS

This study contributed new data from the Winnipeg region to add to the national body of knowledge about the smoking behaviour of student nurses.

Question #1: What are the rates of tobacco use of students in the first year program in Schools of Nursing in Winnipeg?

Responses to research questions to determine the rates of tobacco use by students in four participating schools of nursing, indicate that cigarette smoking continues to be a concern in the nursing population.

The incidence of smoking reported by student nurses in the Winnipeg research was (21%) of the study population. While this is a lower level than reported in the CNA study (1990) which found almost one third of student nurses outside of Quebec smoke; the (40%) of student smokers who stated that they began smoking after entry to the school of nursing, is troublesome.

The majority of smokers in the schools that participated are single females 19 to 33 years of age and have friends of both sexes who smoke. Those who were married had spouses that smoke. These findings closely correspond to data from a recent document on women and tobacco which revealed that young women aged 20 to 24 are now the group most likely to smoke (Working Group on Women and Tobacco, 1994). Stephens reports that two out of every five women in this age group smoke (Stephens, 1991).

Other characteristics identified by the respondents show that six of the 25 students who reported smoking in this study scored seven or more on the Fagerstrom Nicotine Tolerance Scale (Table 7). According to the definition on the scale these students are highly dependent on nicotine and may benefit from a smoking cessation program based on treatment for nicotine addiction.

Question #2: Which factors are identified by first year students for starting to smoke and/or for increasing the number of cigarettes smoked after entry into the School of Nursing?

The second research question asked students who reported starting to smoke or increased the number of cigarettes smoked after entry to the school of nursing to state in their own words the factors (reasons) for this change in their smoking behaviour. The results showed 100% of the respondents cited STRESS as the major factor. These findings coincide with the literature reports on using smoking as a coping tool (CNA, 1990; WHO,1992).

Question #3: What factors are identified by first year students for stopping and /or decreasing the number of cigarettes smoked after entry into the School of Nursing?

Answers to the third study question identified factors for quitting or decreasing the number of cigarettes smoked by students after entry into the school of nursing. Worry about increased health risks along with the cost of cigarettes and a lack of time and energy to smoke were the primary reasons reported.

Data collected from former smokers reaffirms the concern for health. It also provides important clues for developing prevention and cessation programs targeted to student nurses.

Finally, over half of the students who currently smoke (52%) stated they intend to quit in the next twelve months. The opportunity exists to help them achieve that goal.

RECOMMENDATIONS

1. Continuing research is needed to measure trends and determine ongoing patterns of tobacco use and related needs of student nurses.

2. Information about the health hazards of tobacco use, knowledge about prevention and cessation programs, and skills in teaching about smoking and assisting clients to quit should be considered for inclusion in basic nursing curricula.

3. More information is needed about barriers to quitting, the extent of addiction to nicotine, the fear, anxiety and stress of withdrawal, and the use of smoking as a form of weight control.

4. The recurring factor of STRESS as both a cause for starting to smoke and a reason for continuing to smoke, needs to be examined by the nursing profession. The question is: What is it within the profession that creates such levels of stress that members choose a method of coping that is the number one public health concern and the chief, single avoidable cause of death (Surgeon General's Report, 1989)?

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Appendix A

STUDENT NURSES QUESTIONNAIRE

Thank you for participating in this project. Answer the questions as candidly as you can. It should take you approximately 15 minutes to complete the questionnaire. All responses are confidential and anonymous. Please mark your selection by **circling the number of the answer you choose or write in the comments where requested.**

PART A SMOKING HISTORY

Which of the following best describes your experience with tobacco: **PLEASE CIRCLE YOUR RESPONSE**

NON SMOKER - Does not smoke cigarettes. Includes those who never smoked and those who smoked at one time.

1. I do not smoke cigarettes.

   (a) I never smoked.....1
   PLEASE GO TO QUESTION # 20
   (b) I used to smoke occasionally 2
   (not every day)
   PLEASE GO TO QUESTION # 15
   (c) I used to smoke regularly.....3
   PLEASE GO TO QUESTION # 15

CURRENT SMOKER - A regular or occasional smoker.

2. I smoke cigarettes

occasionally (not every day)	1-15 a day	16-25 a day	25 or more a day
1	2	3	4

3. How soon after you wake up do you smoke your first cigarette?

After 30 minutes	Within 30 minutes
1	2

4. Do you find it difficult to refrain from smoking in places where it is forbidden, such as the library, theater, doctor's office?

YES	NO
1	2

5. Which of all the cigarettes you smoke in a day is the most satisfying one?

The first one in the morning.....1
Any other than the first one in the morning.....2

6. Do you smoke more during the morning than during the rest of the day?

YES	NO
1	2

7. Do you smoke when you are so ill that you are in bed most of the day?

YES	NO
1	2

8. Does the brand you smoke have a low, medium, or high nicotine content?

Low	Medium	High
1	2	3

9. How often do you inhale the smoke from your cigarette?

Never	Sometimes	Always
1	2	3

10. How long have you smoked?

Less than a year	1-5 years	6-10 years	over 10 years
1	2	3	4

11. How many times have you attempted to stop smoking?

Never*	1-3 times	4-5 times	more than 5
1	2	3	4

*** NOTE: If you answered NEVER please go to QUESTION # 14**

12. Have you attempted to stop smoking in the last 6 months?

YES	NO
1	2

13. Which of the following methods have you used to try to stop smoking? **PLEASE CIRCLE ALL THAT APPLY**

Cold Turkey.....1
Individual cessation (do it yourself).....2
Group programs.....3
The patch (nicotine).....4
Nicotine inhalers.....5
Hypnosis.....6
Acupuncture.....7
Other.....8
(describe)_____

14. Do you intend to stop smoking in the next 12 months?

YES	NO
1	2

PLEASE GO TO **QUESTION # 19**

THE FOLLOWING QUESTIONS ARE TO BE ANSWERED ONLY BY THOSE WHO REPLIED TO **QUESTION # 1 (b) and (c)**
I used to smoke occasionally or regularly.

15. How long did you smoke cigarettes?

Less than a year	1-5 years	6-10 years	over 10 years
1	2	3	4

16. I smoked cigarettes

Occasionally (not every day)	1-15 a day	16-25 a day	25 or more a day
1	2	3	4

17. How long have you been a non-smoker?

Less than a year	1-5 years	6-10 years	over 10 years
1	2	3	4

18. Please state the *most significant factor (reason)* for you stopping smoking.

_____
_____

PLEASE CONTINUE

19. How old were you when you started to smoke?
age _____

20. Since you entered the school of nursing, have you ?
(a) **Decreased** the number of cigarettes smoked 1
(b) **Stopped** smoking.....2
(c) **Increased** the number of cigarettes smoked.....3
(d) **Started** smoking.....4
(e) **Not changed** the number of cigarettes smoked.....5
(f) **Remained a non-smoker**.....6

* If you answered (a) or (b) please go to **QUESTION # 21.**

* If you answered (c) or (d) please go to **QUESTION # 22.**

* If you answered (e) or (f) please go to **QUESTION # 23.**

21. Please state the most significant factor (reason) for you **stopping smoking or decreasing the number of cigarettes you smoked** since entering the school of nursing._____
_____
_____

22. Please state the most significant factor (reason) for you **starting to smoke or increasing the number of cigarettes you smoke** since entering the school of nursing._____
_____
_____

PLEASE CONTINUE

PART B GENERAL INFORMATION TO BE COMPLETED BY ALL.

23. Year of birth: 19__

24. Sex: female 1 male 2

25. Marital status:

single (never married)	married	separated	divorced	widowed
1	2	3	4	5

26. Current living arrangements:
    Live alone.....1
    Live with spouse or partner.....2
    Live with room-mate(s).....3
    Live in school residence.....4
    Live with parent(s).....5

Please indicate which of the following people in your household smoke cigarettes:

	YES	NO	NOT APPLICABLE
27. Mother or Step-mother	1	2	3
28. Father or Step-father	1	2	3
29. Sister	1	2	3
30. Brother	1	2	3
31. at least one other female adult (e.g. spouse/partner, room-mate)	1	2	3
32. at least one other male adult (e.g. spouse/partner, room-mate)	1	2	3

Which people in your circle of friends smoke cigarettes?

	YES	NO
33. a) My best female friend	1	2
34. b) My best male friend	1	2

35. What is your estimate of the number of students in your nursing school class who smoke cigarettes?

    Less than 5%.....1
    5 to 10%.....2
    10 to 20%.....3
    20 to 30%.....4
    30 to 40%.....5
    40 to 50%.....6

THANK YOU

Appendix B

SCHOOLS OF NURSING

Dear Director/ Department Head:

I am a graduate student in the Master's in Health Education program at the University of Manitoba studying the smoking prevention and cessation needs of Manitoba student nurses.

The purposes of this study are to:

* investigate the smoking behaviour of students after entry to schools of nursing in the Province of Manitoba; and
* explore factors that are associated with the onset of smoking, and/or an increase in the amount of cigarettes smoked.

Permission is requested to have students enrolled in your school participate in this research. Students in the first year of the nursing program will be invited on a volunteer basis to answer a questionnaire which takes approximately 15 minutes to complete. Students should be under no pressure to answer the questionnaire if they so choose. They may withdraw from the study at any time.

All information obtained in the responses will be strictly confidential. No student or school will be identified in the data reported. Copies of the findings will be made available to the schools upon completion of the study.

You assistance is very much appreciated. If you have any concerns, please telephone me at the above number.

This research is being supervised by Dr. Dexter Harvey, Department of Maths and Science, Faculty of Education at the University of Manitoba. He may be contacted at 474-9223.

Thank you.

Arlene Draffin Jones R.N., BScN.

Appendix C

April 1994

Dear Student Nurse:

I am a graduate student in the Master's in Health Education program at the University of Manitoba studying the smoking prevention and cessation needs of Manitoba student nurses.

The purposes of the study are to:

* investigate the smoking behaviour of students after entry to schools of nursing in the Province of Manitoba; and
* explore factors that are associated with, the onset of smoking or an increase in the amount of cigaretttes smoked, and/or the cessation of smoking or a decrease in the amount of cigarettes smoked.

You are invited to participate in the study on a voluntary basis by answering a questionnaire which takes approximately 15 minutes to complete. All the information obtained is strictly confidential and no school or individual will be identified. You are under no obligation to answer the questions and may withdraw from the study at any time.

The data you provide will assist us in understanding student nurses' rates and patterns of tobacco use while in the school of nursing. Your views on the current needs and priorities regarding tobacco use are valuable.

Whether you are a non-smoker, former smoker or current smoker, your input is needed to have a more complete picture of student nurses' habits and opinions about smoking. Your help is greatly appreciated. Again, only grouped school data will be reported, so feel free to respond to the queries candidly.

If you have any concerns about the study you may contact me at the above address and telephone.

Thank you.

Arlene Draffin Jones R.N., BScN.