HIGH SCHOOL STUDENTS' PERCEPTIONS OF NURSING

AS A CAREER CHOICE

by

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Abstract

The purpose of this study was to identify high school students' perceptions of nursing as a career choice. The conceptual framework used in this study was based on Osipow's self-concept theory (1983) and Gottfredson's (1981) theory of career aspiration. In this framework, career decision-making was viewed as a four stage process involving six factors: self-concept, career image, career preference, career accessibility, range of acceptable careers, and career choice. The three concepts from the conceptual framework explored in this study were, career image, preference, and accessibility. Students from three senior secondary schools in the Richmond School District and one high school in the Vancouver School District participated in the study. The sample consisted of 602 students in grades 11 and 12 from seven different classes. There were 262 males and 340 females. Data was collected using an adapted version of the Career Questionnaire developed by Kohler and Edwards (1990).

Results showed that overall, high school students perceived nursing positively. In all three sub-categories, the mean scores were high, which indicated that students perceived nursing favourably. The possible range for the total mean score was 41 to 205. Males had a mean total score of 133.1, and females were significantly higher at 137.5 (p = 0.001). Students were frequently undecided in their responses, particularly in relation to questions involving money. Informational sources about nurses were primarily observation, followed by television, knowing someone who was a nurse, printed material, and lastly, through school. Although high school students had a positive image of nursing, few (8%) were considering it as a career choice.
Recruitment in nursing is an under-explored and poorly understood phenomenon. Given the reluctance of high schools students to select nursing as a career choice, further research is needed to discover effective and efficient recruitment strategies. Therefore, it is important to determine those factors that are most influential during high school students' career decision-making.
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CHAPTER ONE

Background to the Study

Historically, the issue of recruitment has not been an area of concern for most schools of nursing. Until very recently in the United States, there were waiting lists of highly qualified candidates, but this is currently not the case (Sullivan, Printz, Shafer, & Schultz, 1988). In Canada, Baumgart and Larsen (1992) state that "recruitment into schools of nursing is arguably the most serious challenge confronting the nursing profession today" (p. 389). Kerr and MacPhail (1991) also recognize recruitment as a central issue facing schools of nursing today.

An important factor in the recruitment issue is the poor image of nursing (Barkley & Kohler, 1992; Kerr & MacPhail, 1991; Mishoe, Valeri, & Beveridge, 1993). Up until approximately fifteen years ago, nursing was seen as a valued and highly respected career. Those students who chose nursing for altruistic and humanitarian reasons were rewarded with career satisfaction, opportunity, financial remuneration, and job security. While these rewards are still offered by the profession, the common belief is that they are diminishing (Canadian Nurses Association [CNA] & Canadian Hospital Association [CHA], 1990; Marriner-Tomey, Schwier, Maricke, & Austin, 1990).

Nursing is now perceived to be a career with low status and salary relative to its level of responsibility (Baumgart & Larsen, 1992; Naylor, 1990). Perceived arduous and unsafe working conditions and shift work are believed to be detrimental to personal and family life, and are not consistent with the image of a profession (CNA & CHA, 1990; O'Brien, Knutson & Welch, 1987).
Nursing characteristically is a female-dominated profession. Limited career options for women and the practice of using students as hospital labour, thereby reducing the cost of their education, created an abundant supply of qualified applicants (Armstrong, Choiniere, & Day, 1993; Kalisch & Kalisch, 1987; Rosenfeld, 1994). Today, however, the number of career opportunities open to women has expanded. Many of the traditionally male-dominated professions and technical careers are being inundated with women seeking alternate careers (Baumgart & Larsen, 1992; Muff, 1982). With the advent of feminism and expanded career options, women are often discouraged from entering such a traditional field. Indeed, the question "Why doesn't a smart girl like you go to medical school?" is characteristic of a general attitude toward nursing as a career choice (Muff, 1982).

In the United States and Britain, declining enrolment in schools of nursing is a well documented problem (Beyers & Damore, 1987; Donaho, 1987; Nornhold, 1987; Shaw, 1987; Welcome to nursing, 1988). Similar enrolment data are not available in Canada, but statistics from Canadian university nursing programs compiled by Pringle (1991) (cited in Baumgart & Larsen, 1992) show a 23% drop in applications. Baumgart and Larsen (1992) indicate that a similar decline has occurred in diploma programs, although specific data are not provided.

The best source of potential candidates for nursing is still believed to be high school students (Ducket, Brand & Fairbanks, 1990; Kohler & Edwards, 1990), but this group of applicants is continually shrinking. Holtzclaw (1983) indicates that nursing acquires three-quarters of its applicants from high school women, and recent studies continue to reflect this trend (Lippman & Ponton, 1993; Stevens & Walker, 1993).
However, nursing is beginning to experience a shift in its applicant pool. Many students entering the field are older and more experienced, and for some, nursing is a second career (Baumgart & Larsen, 1992; Kazanjian & Wood, 1993). The average age of a nursing graduate in the U.S.A. was 25 in 1982 and 31 in 1990 (National League of Nursing [NLN], 1993). This increase in the average age of graduates is expected to continue in the future (Rosenfeld, 1994). The shift in the applicant pool from a younger to an older candidate may be problematic because the increasing age of students at graduation results in a decrease in the number of working years for the average nurse. In addition, a mass exit of the "baby boomers" from the nursing profession in the early 21st century due to retirement is inevitable.

The shifting emphasis in the health professions from cure to care is expected to increase the demand for nurses (B.C. Ministry of Health, 1993; Epp, 1986; Health & Welfare Canada, 1987; Kazanjian & Wood, 1993; Lalonde, 1974; Meltz & Marzetti, 1988; R.N.A.B.C., 1990). Traditionally physicians have been the "gatekeepers" of the health care system, but the efficacy of this is being questioned (Watt, 1990; Rachlis & Kushner, 1994; R.N.A.B.C., 1992). Rachlis and Kushner (1994) suggest the "gatekeeping" function could be done more effectively and economically by nurses, nurse practitioners, and mid-wives. If this shift in function and other proposed changes occur, "the number of nurses working in community settings of all types [would] more than double" (p.313).

The number of individuals who were 65 years or older comprised 8.2 % of the population in 1971, but by 1986 this figure had rises to 10.7 %. This increase is projected to increase to 14% in 2000 and to 25% by the year 2036 (Statistics Canada, 1994). In the
United States a similar trend exists. By the year 2000, the number of individuals over age 65 will double, those over 85 will triple and by 2030 people over age 65 will comprise 21% of the population (Spradley, 1991). Health problems and disability are greatest in the older population (65 years and older). Statistics Canada (1994) predicts that "hospital bed-day" utilization of the elderly will rise from 50% in 1987 to 74% by 2036. The U.S. Census Bureau projects a corresponding rise, quoting an increase of 40% from 1987 to the year 2000 (Eliopoulos, 1990). This change in demographics, along with the escalation of the incidence of lifestyle diseases and increasing acuity levels of clients will further increase the demand for nurses (CNA & CHA, 1990). Effective recruitment strategies in nursing aimed at high school students are essential if demands for nurses are to be met and a crisis avoided.

**Problem Statement**

The majority of nursing students have traditionally been recruited directly from high school. However, the number of students of high school age in Canada is decreasing, and the range of career choices, particularly for women, is expanding. Research regarding high school students' perceptions of nursing as a career choice is limited.

Several American studies have indicated that the popularity of nursing as a career choice among high school students is declining (Grossman, Arnold, Sullivan, Cameron & Munro, 1989; Grossman & Northrop, 1993; Kohler & Edwards, 1990; Lippman & Ponton, 1993; Marriner-Tomey, Schwier, Maricke & Austin, 1990). The only Canadian study found on this topic is an unpublished Master of Science in Nursing thesis at the University of British Columbia (Grieve, 1991).
If the nursing profession is to attract intelligent, well-qualified high school students, it must develop effective recruitment strategies. High school students' perceptions of nursing as a career choice must be determined before these strategies can be developed.

**Purpose**

The purpose of the study was to describe the perceptions of grade 11 and 12 students about nursing as a career choice.

**Conceptual Framework**

The conceptual framework used in this study is based on Osipow’s self-concept theory (1983) and Gottfredson’s (1981) theory of career aspiration (Figure 1). In this conceptual framework, career decision-making is viewed as a four stage process involving six factors: self-concept, career image, career preference, career accessibility, range of acceptable careers, and career choice. Students progressively narrow their career choices as they pass through each decision-making stage. The six factors are believed to hold varying degrees of importance (Gottfredson, 1981). The two most important factors, self-concept and career image, are explored in the first stage. Students progress to the next stage, which involves an examination of career preference and career accessibility. This leads them to stage three, where they consider their range of acceptable careers. Gradually, students thus build perceptions of careers until they arrive at the final stage, career choice. The following is an overview of each factor and its relevance to the conceptual framework.

**Self-concept**

Self-concept is believed to be a key factor in students' explorations of possible career options. According to career development theory, individuals choose careers they believe
Circumcirculation and compromise: A developmental theory of occupational aspirations. "Occupational Aspirations Model."

Figure 1. Adaptation of Condron's (1981) "Occupational Aspirations Model."

Career Accessibility

Career Preference

Self-Concept

Values
Interests
Intelligence
Social Class
Gender

Stage I
Stage II
Stage III
Stage IV

Conceptual Framework Diagram
match their self-concept (Osipow, 1983; Gottfredson, 1981). It is comprised of four elements.

Gender involves the perception that a particular career is or is not appropriate to one's sex. This element is especially important for males when nursing is considered (Soothill & Bradby, 1993). Second, students consider their social standing. Upper-class students may not believe nursing will allow them to maintain their current social standing, while lower-class students may believe a career in nursing will elevate their social standing. The third element is the perceived corollary between one's own intelligence and the cognitive demands believed necessary for a particular career. Students will consider only a career that they perceive to be feasible given their intellectual capabilities. The final component of self-concept relates to the interests and values of the student and their perceived fit with a particular career. If nursing is not of interest or is not valued, it will not be investigated. The student's interests and values, both of which are socially derived, will therefore have an impact on career choice.

Career Image

Career image consists of two major elements, prestige level and field of work (Gottfredson, 1981). Career image refers to the stereotyped perception students commonly have about a career. These perceptions may not necessarily be accurate, but are determining factors in career choice. However, it is during this period of career exploration that perceptions can be modified or corrected (Sharf, 1992).

Generally, high-prestige careers are most desirable, as they are considered to have a high degree of control, power, and monetary reward (Kalisch & Kalisch, 1987; Sharf, 1992).
Nursing has not traditionally been known to offer this level of prestige. Indeed, a lack of prestige is frequently offered as one of the main reasons for nursing's poor image (Naylor, 1990).

Field of work refers to the context, setting, job description, tools and technology, and the personality type suited to a career. Unfortunately, students do not have a complete and accurate perception of the field and range of settings involved in nursing (Droes, Hatton, & Kramer, 1993; Grossman et al. (1989), & Munro, 1989; Grossman & Northrop, 1993; Kiger, 1993; Pillitteri, 1994; Stevens & Walker, 1993). Students continue to perceive nursing in a very traditional manner (Anderson, 1993; Kiger, 1993).

Career Preference

Individuals progressively narrow their career options in response to certain developing perceptions about themselves in regard to potential careers. Preference is the subjective and hierarchical "wish list" of a student, the careers one likes the most, or the career choices one would make without regard to any objective criteria. Careers that are seen to be compatible with one's self-concept are judged to be the most desirable. Career preference is not necessarily realistic; preferred careers may therefore be beyond the capabilities of the student.

Career Accessibility

Accessibility relates to the amount of effort that is perceived to be required to pursue the desired career. The individual weighs the amount of effort he or she thinks is required against his or her preference for a given career. The ratio of preference to perceived effort (intellectual, financial, and personal) influences the range of possible career options.
Range of Acceptable Careers

The range of acceptable careers refers to the list of career possibilities that the student seriously explores. This list has been derived from those careers which the student perceived as preferable and accessible. Students will end their exploration when they encounter a career they perceive is satisfactory (Gottfredson, 1981). The student who holds a negative or inaccurate image of nursing by this time will not even explore this option.

Career Choice

The final component of this framework, career choice, may not necessarily occur during high school. Many students remain uncertain about their career choices long after high school, but it is during these years that serious career exploration occurs. Near the end of high school, career choice becomes a salient issue for most individuals (Herr & Cramer, 1988; Sharf, 1992; Smith & Smith, 1989; Soothill & Bradby, 1993). Students are pressured into making career decisions by peers, teachers, and parents. In a society where personal identity and self-worth are largely determined by one's career, students are compelled to select one in an effort to direct and confirm their own identity. The student will most likely pursue a career that closely matches his or her self-concept, and, more importantly, has a positive image.

The conceptual framework presented here describes a four stage process that is used during career decision making. This study focuses on three of the six factors involved in career decision making: career image, career preference, and career accessibility. These three factors have been chosen because they have been identified in the literature as having
the most impact on career choice for high school students. The questionnaire used in this study evaluates these three areas.

**Research Question**

What are the perceptions of grade 11 and 12 students regarding nursing as a career choice?

**Definition of Terms**

1. High school student: a full-time grade 11 or 12 student attending a secondary educational institution.

2. Career choice: the single profession "named as one's best alternative at any given time" (Gottfredson, 1981, p. 548).

3. Perception: the mental image students have regarding a career.


5. Career preference: the most desirable profession resulting from the relationship between self-perceptions linked with perceptions of a career.

6. Career accessibility: the amount of effort required to overcome various obstacles to achieve a career (financial, geographic, intellectual).

7. Range of acceptable careers: the final list of possible choices.

**Assumptions**

1. Students in grade 11 and 12 are making career decisions.

2. Students have perceptions about nursing.

3. Students consider certain identifiable factors when making a career choice.
4. Kohler and Edwards' (1990) adapted Career Questionnaire measures the perceptions of high school students regarding nursing as a career choice.

Limitations

1. The participants self-selected and self-reported. Therefore, findings cannot be generalized beyond this study sample.

2. Perceptions of nursing as a career choice were measured at one point. Observing changes over the entire career choice process was not possible in this study.

3. English competency was necessary in order for participants to give meaningful responses. The cultural diversity of the sample may have affected the accuracy of the results. Participants who were not familiar with idioms may not have understood culturally specific words and phrases (e.g. dead-end job).

4. Modifications were made to Kohler & Edwards' (1990) Career Questionnaire. Validity and reliability were not re-established.

Significance of the Study

No Canadian studies and only one unpublished master's thesis on high school students' perceptions of nursing as a career were found in the literature. The few available American studies in this area have not produced any definitive results. Based on these studies, various remedies to increase enrolment are being attempted, although their success has yet to be determined. Mendez and Louis (1991) caution against the "quick fix" solutions of the past to remedy declining enrolments in schools of nursing and advocate a comprehensive investigation of the problem. This study provides data that will assist in the development of effective recruitment strategies.
The enrolment trend in today's colleges and universities is moving away from the more traditional careers such as nursing. Schools of nursing are competing for an ever-shrinking pool of qualified candidates who tend to be attracted to more lucrative careers such as law, engineering, and medicine. This study is similar to that of Kohler and Edwards (1990) and Barkley & Kohler (1992), but only senior high school students are included. Given the lack of definitive research in the area and the lack of Canadian studies, this perspective is needed. A more in-depth knowledge of the perceptions of high school students toward nursing as a career, and the factors that create them, are needed in order to develop effective recruitment strategies.

Summary

Research regarding the attitudes of high school students toward nursing as a career choice is limited and primarily from the U.S.A. Little is known about the images or perceptions of Canadian students. This research attempted to describe the perceptions of high school students toward nursing as a career choice. The study contributes to the development of knowledge in the area of recruitment and can be used to help produce more effective recruitment strategies.

Chapter two provides a review of the literature regarding self-concept, career image, preference, and accessibility.
CHAPTER TWO

Literature Review

The review of literature relevant to nursing as a career choice for high school students focuses on self-concept, career image, preference and accessibility, and is presented in the respective four sections.

Self-Concept

According to Gottfredson (1981), self-concept "refers to one's view of one-self, one's view of who one is and who one is not" (p.547). Self-concept is comprised of four factors: gender, social class, intelligence, interests, and values (Figure 1). During career exploration, individuals examine their current self-concept along with how they imagine themselves in the future. Certain aspects of the self are more important than others, and gender is recognized as the most important, followed by social class, intelligence, and finally interests and values. Self-concept is used to assess the fit between one's self and a career (eg. "job-self compatibility").

Individuals successively refine their self-concept over time and as they mature (Super, 1964, cited in Walsh & Osipow, 1990). Super (1964) states that individuals compare their interests and abilities with those of other people in a particular career. If one's interests, abilities, or self-concept does not correspond with the career being examined, the career will be rejected. Holland (1985) uses the term "personal characteristics" in reference to self-concept. The factors comprising one's personal characteristics are such things as culture, social class, biological heredity, and the environment. He claims individuals compare these personal characteristics with those believed to be necessary for a particular career.
Krumboltz (1988) (cited in Sharf, 1992) also recognizes the importance of self-concept in career decision-making and lists four factors that comprise self-concept: genetic endowment, environmental conditions, learning experiences, and task-approach skills. Knowing how you approach and prepare for a task, your particular learning style, work habits, study skills, and emotional response are all part of self-concept. All of these factors are considered when individuals begin to make generalizations about themselves in relation to a particular career.

Self-concept is a crucial component in the career counselling literature. Although it is termed differently by various authors, all recognize self-concept as a major factor in career choice. In this study, self-concept was not explored separately, but was seen to inform and augment each stage of the decision-making process.

**Career Image**

The most-in depth study of the image of nursing in the media was a historical study conducted by Kalisch and Kalisch (1987). The study showed that media images of nursing were seldom accurate and indeed, often quite damaging to the profession. Both print and non-print media were explored, leading to the identification of five dominant types of images of nurses, each corresponding to a particular time period.

The first image of a nurse was that of the "angel of mercy". From 1850 to the early 1900's the predominant view of the nurse was that she was religious, moral, virginal, and self-sacrificing. Later, from approximately 1919 to 1930, the "girl friday" image held sway. According to this perception, the nurse was subservient, unquestioning, and loyal to the hospital and its directors. The third image, "the heroine", more positively portrayed nurses
as brave, dedicated, and autonomous. This image arose out of the 1930's and 1940's when nurses were being actively recruited to help with the war effort.

During the period between 1945 and 1965, the "mother image" developed when women returned to their traditional roles in the home after working in challenging careers during the war. However, the final and arguably the most damaging image arose in the mid-sixties: "the sex object". This image of a sensual, promiscuous, and frivolous nurse is currently portrayed in the mass media and is believed by some authors to be a contributing factor in nursing's declining popularity as a career choice (Baumgart & Larsen, 1992; Kalisch & Kalisch, 1987; Kerr & MacPhail, 1991).

Thus, the "careerist" image has been proposed to counter the current negative image of nurses (Baumgart & Larsen, 1992; Kalisch & Kalisch, 1987; Kerr & MacPhail, 1991; Kerr & MacPhail, 1996). This image presents the nurse (male or female) as an intelligent, competent, assertive, and committed individual. This "careerist" image informed the portrayal of nurses in the American television dramatic series "China Beach" (Chenevert, 1993) and "Emergency". This image is also surfacing more often in the print media (Baumgart & Larsen, 1992; Kerr & MacPhail, 1991; Kerr & MacPhail, 1996; Lesage, 1993).

The work of Kalisch and Kalisch (1987) continues to be recognized as the most comprehensive and accurate study involving nursing's image (Baumgart & Larsen, 1992; Kerr & MacPhail, 1996; Lesage, 1993; Schweitzer, et al. 1994).

Auber and Hawkins (1992) examined the portrayal of nurses in medical and nursing journals. The research found that nursing was generally not portrayed accurately. Every published nursing journal in the United States that carried picture advertisements was
examined. The sample consisted of 35 nursing and 48 medical journals. During the year 1990, three issues of each nursing journal and six issues of each medical journal were examined. A larger number of medical journals were selected because they contained relatively fewer advertisements involving nurses. A total of 313 different advertisements were explored. The advertisements were grouped into eight categories: job, product, military, malpractice insurance, professional organization, nursing role, retirement plan, and nursing education. The findings in this study were similar to those of Kalisch and Kalisch (1987). Nurses were portrayed as clean and white, sex objects, often idle, handmaidens, and in need of protection. They were not seen as professionals making important decisions or occupying positions of power. Auber and Hawkins (1992) refer to this type of negative stereotypic portrayal as a "freezing" of the image of nursing. They see the image of nursing as remaining stagnant, or frozen in time. Only military advertisements consistently represented nurses accurately. Nurses were depicted with dignity, and when females were shown, they were seen to be equal or superior to men in rank.

The results of this study are noteworthy given the magnitude of the research. This research is disturbing for those in the nursing profession. Although such inaccuracies are difficult enough to accept in the mass media, it is particularly disturbing to see these same inaccuracies perpetuated in nursing journals.

A public opinion survey was conducted by Turner, Cook, and Associates (1989) on behalf of the Alberta Association of Registered Nurses' (AARN). The study involved a random telephone survey of 1,100 subjects throughout the province. The findings were grouped according to age. Participants under 24 years of age were least comfortable
recommending nursing as a career and least likely to believe it was challenging and interesting. Participants in the 25 to 44 years category showed the next lowest level of support.

The results showed that the majority of people participating (95%) saw nursing as a mentally and physically demanding career requiring a special type of person, and therefore not as easily accessible as some other careers. Most participants stated they had obtained these perceptions from personal contact with a nurse. The general public saw nurses in the hospital setting, in a "supporting the physician" role. These results reflect a public attitude that may appeal to a certain students. These findings are distressing, for although the general public in Alberta respected nurses, the critical age groups (those under 24 years) generally did not have a realistic image of the profession, and did not see it as desirable or accessible. Consequently, they did not consider it a viable career choice.

Another study was conducted by Canwest Opinion (1989) at the request of the Saskatchewan Registered Nurses' Association (SRNA) to determine the public's image of nursing. A total of 602 randomly selected subjects from across Saskatchewan participated in a telephone survey. Participants aged 25 years and younger made up 12% of the sample, those aged 25 to 34 years 23.6%, and participants 35 to 44 years 24.8%. Members of these three age groups, who are prime nursing school candidates, accounted for 60.4% of participants responding. Participants 45 years or older accounted for 39.6% of the sample.

The results were somewhat similar to those of Turner, Cook and Associates (1989). Nurses were perceived to be caring, competent, and genuinely concerned about helping people. Nurses were also regarded as an important source of health care information; indeed,
many respondents felt nurses should be involved in setting health care policy. The majority of participants in this study had also obtained their perceptions of nursing from personal contact with a nurse. As in Turner, Cook and Associates' (1989) study, nurses were seen not as autonomous practitioners making independent decisions, but more as traditional hospital nurses. Concerns such as safety, increased patient loads, working conditions, and wages were seen as areas that needed to be addressed. Although nurses were regarded as having an important career, they ranked second last in order of prestige behind those of physicians, lawyers, and social workers. They did, however, rank ahead of police officers. The results indicated that the general public in Saskatchewan held a negative image of nursing.

University students are generally considered to have committed themselves to a career path and are in the final stage of the career decision making process: career choice. Career choice was considered to be beyond the scope of this study, so for this purpose, the literature regarding college and university students' images of nursing was only briefly explored. The studies mentioned below are European and cannot necessarily be applied to a Canadian population. However, the similar results of both studies are unsettling. If student nurses have faulty images of nursing, what does this say about the images of perspective applicants, namely high school students?

The images of university student nurses toward their profession was explored by Anderson (1993). This was an ethnographic study involving 41 nursing students from a Swedish university. The study found that the students' perceptions of nursing were very traditional and went unchanged throughout their education.
Kiger (1993) looked at the image of nursing that student nurses held of themselves during training. A total of 24 Scottish students were interviewed on three separate occasions. The interviews occurred prior to the student's first clinical experience and at various points during their first and second years of a three year training program. The study found that students pictured the typical nurse as an adult medical-surgical nurse and this attitude persisted throughout their education.

A review of the literature involving career image found that in the past, as well as the present, nursing has been portrayed inaccurately or unfavourably. This type of portrayal existed in the media and in both medical and nursing journals. The general public did not have a realistic image of the profession, nor did nursing students themselves. The literature indicates that overall, there is a negative image of nursing.

**Career Preference and Accessibility**

May, Champion, and Austin (1991) conducted a study to determine the public's perception of an ideal or preferred career and that of nursing as a career. The overall aim of the study was to enhance recruitment and reduce the nursing shortage Indiana was experiencing in the late 80's. A total of 1,155 randomly selected subjects responded to the mailed questionnaire. Students aged 11 to 14 years accounted for 29.6% of respondents. A description of the remaining respondents or response rates was not given.

This study used a wide cross-section of the general public. Since high school students can be expected to acquire their perceptions of nursing from similar sources, these results are relevant to this study. Generally the field and prestige level of nursing was not seen as favourable. Caring for people and the resulting appreciation and respect shown by clients
were seen as a positive attributes. Power, leadership, independent decision making, respect, a safe working environment, and money were identified as qualities inherent in an ideal career.

Nursing was not recognized as a readily accessible career for the average person. The participants indicated only strong, dedicated, and intelligent people were suited to such a profession. Nurses were seen as busy, hard working individuals who worked with their hands, and required good technical skills. Nursing was perceived to demand a high degree of intelligence.

Several factors were recognized as having an impact on the selection of nursing as a career. The work environment was perceived to be less than desirable. Specifically, nursing was viewed as an unsafe, arduous, and low paying career that offered few opportunities for leadership or personal autonomy. Overall, the public saw nursing as less accessible and desirable than the other careers.

A study involving 300 students in grades seven and eight titled "High School Students' Perceptions of Nursing as a Career: A Pilot Study" was conducted (Grossman et al., 1989). Convenience sampling was used to obtain participants from schools in the Mid-Atlantic and Southeastern American states. The study used a questionnaire designed by the authors, who tested it for content validity and obtained an alpha of .92. Reliability of the tool was not established. The results support those reported by May, Champion, and Austin (1991). Students believed nursing was not a respected career; however caring for people was viewed as positive. Many did not recognize the expanded role and variety of opportunities available within nursing, and only 17% indicated that they were considering nursing as a career.
According to Grossman, et al. (1989) such a percentage is inadequate to meet current enrolment demands in schools of nursing in America. Although 17% indicated they were considering nursing, the number who can be expected to eventually select nursing would be much smaller.

To determine high school students' perceptions of nursing as a career choice, Kohler and Edwards (1990) used an investigator-designed questionnaire. Prior to its use the instrument was reviewed by three content experts and pilot-tested to determine content validity. The participants were 306 students in grades 9 through 12, from three public high schools in the United States. The method of sampling was not described.

High school students did not perceive nursing to be accessible. They believed nursing education was costly (70%) and difficult (66%) considering the return on their investment. Nursing was viewed as a profession (91%) and a technical occupation (70%). It was seen as a career with low social status and little monetary reward. Only 8.6% percent of the students surveyed were considering nursing as a career, 14.6% responded maybe, and 76.9% said they were not. Nursing was definitely not viewed as a preferred career.

The authors stated that a limitation of the study may have been over-representation of Caucasian middle-class urban participants. Therefore, the results of this study can not be generalized beyond the given population. However, the results are informative and support previous research.

Barkley and Kohler (1992) used the Career Questionnaire developed by Kohler & Edwards (1990) to determine male high school students' perceptions of nursing as a career.
choice. The questionnaire was administered to 126 male high school students in grades 9 through 12, in three public schools.

The results showed that overall, male high school students had a positive image of nursing and of men as nurses. However, in spite of their positive view nursing was still not seen as a preferred career. Only 6% of the respondents indicated they were either probably or definitely considering nursing as a career. Five percent answered maybe and 89% indicated they were probably or definitely not considering nursing. These results are supported by Kohler and Edwards (1990) who studied both males and females. Seeing the same results repeated two years later is discouraging yet informative. Such information gives us a better understanding of the issues involved in recruitment into nursing.

The only Canadian study found in this area of research was conducted by Grieve in 1991. The convenience sample consisted of 36 students in grade 12 from one high school on the east coast of Vancouver Island. The questionnaire did not have proven reliability or validity. The findings showed that high school students had definite perceptions of nursing, but that these were not always accurate. Students were found to lack information about the variety of employment opportunities and the possibility of private practice. They perceived nursing as a career that lacked autonomy, money, and prestige. The small and non-representative sample does not permit these findings to be generalized beyond the study group, but such findings lend support to the assertion that a negative career image decreases the possibility of a student considering nursing as a career.

Stevens and Walker (1993) conducted a study involving 641 high school seniors from 16 schools, both private and public, in Washington, D.C. The sample was shown to
accurately represent the metropolitan area. The researcher-designed questionnaire was examined by content experts and pilot tested to increase its content validity. Stevens and Walker stated that their purpose "was to determine the reasons college-bound high school seniors did not select nursing as a career more frequently" (p. 13).

The findings indicated that age, ethnicity, and race were significant in students' decisions to consider nursing as a career. Students who were black, female, and age 16 to 17 were more likely to choose nursing while those who were white and 17 to 18 years were least likely to choose nursing. The majority (92.3%) of respondents in the sample would not choose nursing as a career, although the overall opinion about nursing was favourable. The small number of subjects (7.7%) considering nursing as a career choice was believed to be problematic. The reasons given for deciding against nursing included: salary, working conditions, and past experiences with death and illness. The reasons given for choosing nursing were the excitement and respect for the profession.

These results support those of Barkley and Kohler (1992). The majority of the participants had a favourable opinion, yet only 7.7% chose nursing. If these findings are characteristic of high school students, then enrolment in schools of nursing can be expected to decline markedly. These studies on career preference and accessibility show that a more positive image of nursing is necessary but not sufficient to attract high school students to the profession.

Summary

A review of the literature related to self-concept, career image, preference, and accessibility has been presented. This literature suggests many areas that could be targeted to
improve the image of nursing and thereby increase nursing recruitment. However, the factors involved in the fit between nursing and high school students career choices are only beginning to be explored. The factors that have the most impact on high school students' career decision making are not known. The limited research available shows that the true image of nursing needs to be more accurately presented to high school students, since it is during the high school years that recruiters are believed to have their biggest impact (Sharf, 1992; Zunker, 1990). Determining the perception of Canadian high school students regarding nursing as a career choice would prove valuable to both nursing school recruiters and high school vocational guidance counsellors. In the following chapter the research methodology for this study is presented.
CHAPTER THREE

Methodology

In this chapter the research design, sample and setting, instrument, and data collection procedures are described. Data analysis and the methods used to ensure the protection of human rights are also presented.

Research Design

A descriptive survey design was used to determine the perceptions of high school students toward nursing as a career choice. Polit and Hungler (1983) indicate that surveys or questionnaires are appropriate when factors regarding characteristics, opinions, or intentions are being examined.

Sample and Setting

The intended sample for this study was 750 to 1000 randomly selected students in grades 11 and 12 in high schools (grades 8 to 12) in the city of Vancouver, British Columbia. A sample from a compulsory class such as English was desired. The tool used to obtain the data, the Career Questionnaire, assessed three factors. Polit and Hungler (1991) indicate a sample size of 20 subjects per variable is desirable, so any sample size greater than 60 was statistically acceptable. However, due to access problems, randomization could not be achieved and only one school in the Vancouver School District could be used. A total of 166 subjects were from this school. The remainder of subjects (436) came from senior secondary high schools (grades 11 and 12) in the Richmond School District, a suburb of Vancouver. The convenience sample size was 602. The condition of student attendance at a compulsory
class, with its intent to help ensure representativeness of the sample, was not achieved due to problems with access.

Procedure for Data Collection

A letter of introduction was sent to the director of each school board asking for permission to conduct the study (Appendix A). After official consent was obtained from the school boards, consenting principals were telephoned and additional information regarding the study was given. Following this discussion, the names of interested teachers were provided by the principals. Permission to conduct the study was then obtained from the teachers involved and a convenient time for administration of the questionnaire was determined. The researcher introduced and explained the study (Appendix C) and administered the questionnaires. This approach ensured that all respondents received consistent instructions. Respondents answered the questionnaire using computer answer sheets. These sheets were familiar to high school students due to their frequent use in multiple choice exams. Data collection occurred during class time and the researcher collected the completed questionnaires at the end of class.

Instrument

The instrument used in this study was a modified version of the Career Questionnaire designed by Kohler and Edwards (1990) (Appendix C). This tool was selected because of its ease of use with high school students. Permission to use the questionnaire, modify the Likert scale, and adapt the instrument for the Canadian context was obtained from Kohler and Edwards (1990).
The questionnaire was modified to obtain students' exact ages and grade levels. The response options for students' grade levels were changed, since only grade 11 and 12 students participated in this study, while Kohler and Edwards' (1990) obtained students from grades nine through eleven. A question asking students to identify their age was added to determine if age effected students' career decision-making. A question determining ethnicity, which could be offensive, was replaced with a question asking students to identify the language most often spoken at home. By using this question, the researcher hoped to obtain ethno-cultural information similar to that obtained by Kohler and Edwards (1990). The linguistic categories were selected from the four most common languages spoken in households in Vancouver, identified in the 1991 Statistics Canada Census Data.

At the request of the school boards, one question was eliminated, "Most nurses have loose morals." and another, "Men nurses are "wimps." was changed to: "Nursing is a female occupation." The school boards as well as the researcher believed these questions would otherwise offend the participants. The question "It takes a college degree to become a nurse." was changed to "It takes a University degree to become a nurse." This change was made to reflect the Canadian educational system. The wage scale was replaced to better indicate British Columbian rates.

Upon consultation with and encouragement from the designers of the questionnaire (Kohler & Edwards, 1990), and other experts in the field (S. Acorn & V. Hayes, personal communication, February 22, 1993), the Likert Scale was modified to include the response category "undecided". It was believed the original questionnaire did not allow for a sufficient range of responses.
Although modifying the instrument affected the reliability and validity, the changes were believed to have enhanced the data that were obtained. The undecided category allowed the researcher to identify areas where the students may have been lacking knowledge and information. Alterations to two of the Likert scale questions were necessary to ensure the participation of the school boards and avoid offending the subjects. These two changes were not believed to have greatly effected the overall scoring of these questions. The alterations to the additional questions were required for the Canadian context.

The Career Questionnaire consisted of 48 questions and took approximately 20 minutes to complete. All questions were designed to give single item responses which were recorded on computer answer sheets. A Likert Scale was used for 41 of the 48 questions. The Likert scale allowed the researcher to obtain a quantitative measure for students' perceptions of nursing as a career choice. When the questionnaire was originally designed, counter balancing was done, yet exact categorization of items as positive or negative was not provided. Items were worded so that approximately 50% of the items were positive and 50% were negative. According to Polit and Hungler (1991), anonymity and counter balancing help avoid response-set bias.

Based on the conceptual framework, the factors that hold particular significance for high school students are career image, preference, and accessibility. The Likert Scale questions were grouped into the categories of career image, preference, and accessibility and identified as positive or negative (Appendix D). This categorization was a characteristic unique to this study. Categorization and determination of positive or negative value for the questions was done by a panel of three nurse educators operating by majority opinion. The
members of the panel were considered content experts. When categorization and positive or negative value according to this method was not achieved, the researcher arbitrarily categorized the question.

The remaining seven questions provided information about participants' beliefs regarding nurse's wages, determined whether they were considering nursing as a career, identified their primary source of information about nursing, and obtained demographic information. These seven questions were answered from the fixed alternatives provided.

**Data Analysis**

Responses for each question were calculated and reported using percentages of the total number of respondents (Appendices E, F & G). Responses to the Likert scale questions that contained statements exhibiting a positive perception of nursing were coded using the following ordinal scale: 1 = strongly disagree, 2 = disagree, 3 = undecided, 4 = agree and 5 = strongly agree. Responses to questions portraying a negative perception were reverse coded.

An overall score was obtained by summing the response values of the 41 items that were coded using the Likert scale. Thus, high scores represented a positive perception of nursing as a career choice, whereas low scores represented a negative perception (Appendix D). The possible range of values for the total score was 41 to 205. Scores were also obtained for each of the three sub-categories. The range of possible scores for each sub-category was image score 18-90, preference score 16-80, and accessibility score 7-35.

Any missing data for the Likert scale items were categorized as undecided. Categorizing the missing data as undecided allowed for ease of data analysis without affecting
the overall results. Missing data for any given item on the Likert Scale questions (questions 5 through 45) accounted for less than 1% of the total and were statistically insignificant.

Bivariate relationships between the scores (total score, image score, preference score, and accessibility score) and the demographic variables (gender, age, high school, grade level, and language) were assessed using the parametric t-test for independent variables. Spearman's rho was used to assess the degree of consistency for answers to positively and negatively worded questions.

**Ethical Considerations**

Protection of the human rights of the participants was ensured. Official consent was obtained from the University of British Columbia Behavioral Sciences Screening Committee for Research and Other Studies Involving Human Participants and the school boards. A letter of introduction and explanation of the study was given to the director of each school board, principal, and teacher (Appendix A). Although no school required formal parental consent, an information letter and a written consent was available (Appendix B). Verbal permission to conduct the study was obtained by the researcher from each principal and teacher involved.

Student participation was voluntary and a completed questionnaire implied consent. Students' knowledge and understanding of the study was ensured through a written description of the study, which was on the first page of the questionnaire. This description was also read to students by the researcher prior to the questionnaire administration (Appendix C). Students were informed that refusal to participate did not affect their grades or education in any way. Neither student nor school names appeared on the questionnaires, thereby ensuring anonymity. All raw data were destroyed after the study was completed.
Summary

The methodology of the study has been presented, including the research design, setting and sample, data collection procedures, the instrument, data analysis, and ethical considerations. The following chapter contains a presentation and discussion of the findings.
CHAPTER FOUR

Presentation and Discussion of the Findings

The findings of the study are presented and discussed in six sections. The sample characteristics are described in the first section. In the second section, the approach to data analysis is discussed. In section three the results related to students' perceptions of nursing as a career choice, determined using the Likert scale items of the Career Questionnaire, are presented and discussed. This section is organized using the three elements of the conceptual framework examined in this study: career image, preference, and accessibility. In the fourth section, the findings for the alternate response questions related to nurses' wages, sources of views of nursing, and nursing as a career choice are presented and discussed. The overall findings are discussed in section five. Lastly, the utility of the Career Questionnaire is considered.

Sample Characteristics

A total of 604 students participated in the study. Two questionnaires were missing substantial data and were excluded. Therefore, the sample consisted of 602 senior high school students, 340 females and 262 males (Table 1). Three hundred and twenty-six students (54%) were in grade 11 and 276 (46%) in grade 12. They ranged in age from 15 to 19, with a mean of 16.9 years of age.

The sample was obtained from four high schools: one secondary high school in Vancouver (grades 8 - 12) and three senior secondary schools in the Richmond School District (grades 11 & 12). There were 166 students from the Vancouver School District and 436 from the Richmond District. Subjects were from seven different classes. Three hundred
Table 1

Characteristics of the Sample

<table>
<thead>
<tr>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>(n=602)</td>
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</tr>
</tbody>
</table>

Gender

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>262</td>
</tr>
<tr>
<td>Female</td>
<td>340</td>
</tr>
</tbody>
</table>

Years of Age

<table>
<thead>
<tr>
<th>Age</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
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<td>1</td>
</tr>
<tr>
<td>16</td>
<td>219</td>
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</tr>
<tr>
<td>17</td>
<td>246</td>
<td>41</td>
</tr>
<tr>
<td>18</td>
<td>104</td>
<td>17</td>
</tr>
<tr>
<td>19</td>
<td>25</td>
<td>4</td>
</tr>
</tbody>
</table>

Minimum Age 15
Mean Age 16.9
Maximum Age 19
Standard Deviation 0.9

and twenty-five were from English class, 81 from Computer Studies, 56 from Career Program, 43 from Consumer Education, 36 from Home Economics, 24 from Family Management, and 11 from Physics class (Table 2).

The language most frequently spoken at home was English (54%), followed by Chinese (27%), Punjabi (7%), Vietnamese (2%), and other (10%) (Table 3). As discussed in chapter three, this question was designed to determine the ethno-cultural identity of the subjects. The response categories used in this study followed those of Statistics Canada
Table 2

Class of Questionnaire Administration

<table>
<thead>
<tr>
<th>Class</th>
<th>Number (n=602)</th>
<th>Percent</th>
</tr>
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<tbody>
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<td>English</td>
<td>351</td>
<td>58</td>
</tr>
<tr>
<td>Computer Studies</td>
<td>81</td>
<td>13</td>
</tr>
<tr>
<td>Career Program</td>
<td>56</td>
<td>9</td>
</tr>
<tr>
<td>Consumer Education</td>
<td>43</td>
<td>7</td>
</tr>
<tr>
<td>Home Economics</td>
<td>36</td>
<td>6</td>
</tr>
<tr>
<td>Family Management</td>
<td>24</td>
<td>4</td>
</tr>
<tr>
<td>Physics</td>
<td>11</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 3

Language Spoken at Home

<table>
<thead>
<tr>
<th>Language</th>
<th>Number (n=602)</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>325</td>
<td>54</td>
</tr>
<tr>
<td>Chinese</td>
<td>161</td>
<td>27</td>
</tr>
<tr>
<td>Punjabi</td>
<td>42</td>
<td>7</td>
</tr>
<tr>
<td>Vietnamese</td>
<td>14</td>
<td>2</td>
</tr>
<tr>
<td>Other</td>
<td>60</td>
<td>10</td>
</tr>
</tbody>
</table>

(1991) who also assumed that language spoken at home reflected ethno-cultural identity. It is of interest to note that the distribution of language obtained in this study was identical to that found by Statistics Canada (1991) for all of the Lower Mainland of British Columbia. The sample appears to be characteristic of the population of the Lower Mainland in regards to
language and culture, to the extent that culture is indicated by the language spoken in the home.

Females were more highly represented than males (57% females; 43% males). It is not known if this is characteristic of the gender distribution in high schools, but the researcher believes this finding may be related to the subject of class instruction (eg. Home Economics class, Family Management class, and Consumer Education class).

**Approach to Data Analysis**

In this section the methods used for scoring of the Likert scale items, determining internal consistency and handling of the response categories are presented and discussed. A total score was obtained by summing the response values for the 41 Likert scale questions (questions 5 - 45). Scores for each of the three sub-categories, career image, preference, and accessibility, were also obtained. High scores represented a positive perception of nursing as a career choice whereas low scores represented a negative perception. Responses for each question were also calculated and reported using percentages of the total number of respondents (Appendices E, F, & G).

Polit and Hungler (1991) suggest the use of the "split-half technique" when determining internal consistency. This method of analysis was used for the Likert scale questions. The statistical test Spearman's rho was used to assess the degree of internal consistency for answers to the positively and negatively worded questions.

Overall, internal consistency existed between all positively and negatively worded questions ($r_s = 0.2$, $p = 0.0001$). Internal consistency was also assessed for the questions in each of the sub-categories. Internal consistency existed for career image ($r_s = 0.4$, $p =$
0.0001) and career accessibility (r_s = 0.3, p = 0.0001), but not for career preference (r_s =
0.02, p = 0.6178).

The lack of internal consistency for career preference was attributed to the method
used for category placement of questions. The questions within the category of career
preference were not found to be mutually exclusive. For example, the question "Nurses
make high salaries" might pertain to career preference for one student (when money is the
measure used for determining the preferred career), or to career image for another student
(when money is seen to reflect prestige level). The lack of consistency in one sub-category
was not believed to have affected the results, since overall, internal consistency was proven
(r_s = 0.2, p = 0.0001).

To facilitate the identification of meaningful results, the strongly agree and agree
responses were combined, as were the strongly disagree and disagree responses. Findings
were considered noteworthy when the strongly agree/agree or strongly disagree/disagree
responses were greater than or equal to 60% of the total. Sixty percent was chosen because it
conclusively indicated the majority response. It was assumed that individuals who are
knowledgeable about a topic generally commit to a positive or negative answer when
completing an anonymous questionnaire. For this reason, the undecided results were
considered noteworthy when 30% or more of students answered undecided for any given
item.
Perceptions of Nursing

In this section the results of the Likert scale questions are presented and discussed. Each of the sub-categories is considered first, followed by a discussion of the total mean score.

Perceptions of Career Image

The findings in this section are related to the two elements comprising career image, prestige level and field of work (see Conceptual Framework Figure, p. 6). Students' responses identifying their perception of nursing in relation to each question relevant to career image are shown in Appendix E and the total mean score for career image is included in Table 4. Only those questions having noteworthy results are considered. Results were noteworthy for 15 of the 18 questions in this category. Of these 15, eight related to prestige and the remaining seven involved field of work.

Scores for the questions in this category ranged from 39 to 80 (possible range 18 - 90) with a mean score of 63.9 and a standard deviation of 6.5 (Table 4).

Prestige level refers to the amount of power, control, and monetary reward that is believed to be involved in a career. Eighty-eight percent of students agreed or strongly agreed nursing was a profession and 69% disagreed or strongly disagreed that it was low in status. Thirty-eight percent were undecided if nurses were equal to physicians and 34% were undecided if nurses had the same social standing as secretaries. Fifty-seven percent of students were undecided if nurses made more than teachers, 44% were undecided if plumbers were higher paid and 37% answered undecided to the question "Nurses don't get paid well".

Table 4

Scores for the Likert Scale Items Related to Career Image, Preference and Accessibility

<table>
<thead>
<tr>
<th>Score</th>
<th>Possible Range</th>
<th>Range</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image Score</td>
<td>18-90</td>
<td>39-80</td>
<td>63.9</td>
<td>6.5</td>
</tr>
<tr>
<td>Preference Score</td>
<td>16-80</td>
<td>32-66</td>
<td>49.8</td>
<td>4.7</td>
</tr>
<tr>
<td>Accessibility Score</td>
<td>7-35</td>
<td>11-34</td>
<td>22.0</td>
<td>3.3</td>
</tr>
</tbody>
</table>

Field of work refers to the context, setting, job description, tools and technology, and the personality type suited to a career. Seventy-four percent of students felt nurses cared for many people, 70% believed nursing was well respected, 63% disagreed or strongly disagreed that nursing was a "dead-end job" and that nurses spent most of their time socializing with doctors. Seventy-one percent of students disagreed or strongly disagreed that nursing was a female occupation, 69% disagreed or strongly disagreed that nurses were mean and didn't care, while 37% were undecided if nurses were kind and compassionate people.

Undecided was the answer given for six of the eight questions regarding prestige. A surprisingly large number of students answered undecided when responding to questions involving money. Money is generally believed to be one of the more tangible factors high school students consider when determining the prestige level of a career (Sharf, 1992). The amount of indecision involving salary can be expected to have an impact on student decision-making. Students were also undecided if nursing was a technical occupation and if nurses had the same social standing as doctors or secretaries.
In the remaining two questions involving prestige, students were definite in their responses. The majority of students rejected the idea that nursing was a low level occupation and an even larger majority saw it as a profession.

As stated in chapter one, the literature related to high school students' perceptions of nursing as a career choice is limited. The only studies found that explored this topic in detail were those of Barkley and Kohler (1992) and Kohler and Edwards (1990). Therefore, these authors are believed to be the most influential and informative on the topic. However, their research is not directly comparable to this study due to the different methodology used. In Barkley and Kohler's (1992) study the sample consisted of only male high school students and in both studies subjects selected their answers from a four item response set (strongly agree, agree, disagree & strongly disagree). In this study the sample included both males and females. Students selected their answers from a similar response set, however, a fifth category was added; "undecided" (strongly agree, agree, undecided, disagree & strongly disagree). The different sample populations and response sets should be remembered when the findings of Barkley and Kohler (1992) and Kohler and Edwards (1990) are compared with this study.

Some of the findings of this study support those of Barkley and Kohler (1992). Eighty-six percent of the male students believed nursing was a profession, and 38% were undecided if nurses were equal to physicians. In Barkley and Kohler's study the male high school students did not see nursing as financially rewarding. Sixty-two percent did not think nurses made high salaries and 46% believed nurses were not paid well. The different results obtained for questions involving money may reflect gender differences in the sample. In the
present study, although individual results for males and females were not determined for each question, they were determined for the overall mean score, $M = 133.1$, $F = 137.5$ ($p < 0.001$) and for the score in the career image sub-category, $M = 61.8$, $F = 65.5$ ($p < 0.001$). These results showed that a significant difference existed between male and female students' perceptions of nursing related to career image (Table 5).

Kohler and Edwards' (1990) research on high school students in grades nine through twelve found students' perceptions of the prestige level of nursing to be negative. Again, it must be remembered that the results are not directly comparable since Kohler and Edwards used a four item response set that did not include an undecided response. Ninety-one percent of students believed nursing was a profession, which is consistent with the study presented here. Fifty percent of students did not think nurses were paid well, yet 35% felt nurses made high salaries. Seventy-four percent thought nurses made more than teachers and slightly more than 50% believed plumbers made more than nurses. Kohler and Edwards' (1990) results indicate that students perceived nursing to be a poorly paid profession.

In this study nursing's field of work was perceived positively. Over three-quarters of the students rejected the idea that nursing was a female occupation and just under 70% disagreed/strongly disagreed that nurses "were mean and didn't care." The context in which nurses worked was perceived as both positive and negative. Nursing was not seen as a "dead-end job" or as a job where nurses spent most of their time socializing with doctors, but as a well-respected occupation. Students also saw nurses as caring for large numbers of people. Since the question "Nurses are mean and don't care" was rejected by 69% of
students and a similar result would be expected for the question "Nurses are kind and compassionate people." However, 37% answered undecided.

The field of nursing was perceived as positive in Barkley and Kohler's (1992) study involving male high school students. Seventy-eight percent of students viewed nurses as kind and compassionate, and a considerably larger number, 91%, rejected the statement that nurses were "mean and didn't care." Seventy-three percent of students rejected the idea that only women should be nurses, which is also consistent with this study. Students were aware of the less positive aspects to nursing, since 86% of students saw nurses as caring for large numbers of people. Other results related to the field of nursing were not provided.

The findings of this study differ from those of other researchers who examined nursing's image. In Kalisch and Kalisch's (1987) research involving the image of nursing in the media, nursing's image was found to be poor. They attributed nursing's declining popularity as a career to an image problem where unrealistic and false images of nursing were being portrayed in the media. In addition to these research studies, Baumgart and Larsen (1992) and Kerr and MacPhail (1991) also credited nursing's declining popularity as a career choice to an image problem. They believed nursing's poor image was related to a perceived lack of autonomy and respect in nursing. This image problem has not been supported in this study. Students perceived nursing to be a profession that possessed a positive field of work and prestige level.

The high mean score of 63.9 in this sub-category supports and confirms the findings related to prestige level and field of work. This result occurred despite the fact that in seven of the eighteen questions in this category, 30% of the students responded undecided. When
all findings for this sub-category were combined they indicated students had an overall positive perception of nursing in relation to career image. According to Gottfredson (1981) and Sharf (1992), occupations with a positive image are rated as most desirable during career decision-making. Therefore, the results suggest that in terms of image, nursing was a desirable career choice for these students.

Perceptions of Career Preference

Career preference involves the subjective, hierarchical "wish list" of students' career choices without regard to any objective criteria. There were a total of 16 questions in this category. Results showing students' responses to each of the questions identifying their perception of nursing in relation to career preference are presented in Appendix F. Internal consistency was not achieved in this sub-category. The number of undecided responses in this category (8 out of the total 16) suggests there may have been a lack of knowledge regarding nursing as a preferred career. This shortage of knowledge may have also contributed to the difficulty with internal consistency. As mentioned in the discussion regarding the approach to data analysis (p. 34) this was not considered to have had a major effect on the overall results. However, the results in this sub-category should be interpreted with caution.

The scores in this category ranged from 32 to 66 (possible range 16-80) with a mean score of 49.8 and a standard deviation of 4.7 (Table 4). Eighty-four percent of students saw nurses as being responsible and 72% believed nursing was challenging and stimulating. Seventy-nine percent disagreed that it was a low-level skill occupation and 68% felt it
required a high degree of skill. Sixty-six percent felt nurses do unpleasant things, and work under a lot of stress.

Students were undecided in their responses for eight of the sixteen question in this category. Fifty percent of students responded undecided when asked if nurses made high salaries, 40% were undecided if nurses had high standards of behaviour, 38% were undecided if they had opportunities for advancement, and 32% were undecided if they could always find jobs. Forty-three percent were undecided if nurses told other people what to do and 31% were undecided if nurses could choose the days, and hours they wanted to work. Thirty-three percent of students were undecided if nurses work too hard and 30% were undecided if nurses worked at night and on the weekends.

Noteworthy results were obtained in 14 of the 16 questions in this category (strongly agree/agree or strongly disagree/disagree were $\geq 60$%; undecided responses $\geq 30$%). The overwhelming majority of students felt nursing was a responsible, challenging and stimulating career. The majority also strongly agreed/agreed that it required a high degree of skill. These qualities are known to be characteristic of an ideal or preferred career (Fouad, 1994; Gottfredson, 1981; Sharf, 1992).

However, students also perceived that nursing had undesirable aspects. The majority agreed/strongly agreed nurses work under a great deal of stress and do unpleasant things. Although these results show students also possessed negative perceptions of nursing, these perceptions were evident in only two of the sixteen responses in this category.

Half of the questions relating to career preference were answered as undecided (8 of 16). Some of the aspects of nursing appeared to be unknown to students, since they were
undecided if there were always jobs and opportunities for advancement in nursing. Job security and advancement opportunities are known to be characteristic of the ideal or preferred career (May, Champion, & Austin, 1991). A large number of students were uncertain if nurses had high standards of behaviour, a quality known to be characteristic of a preferred profession (Sharf, 1992). Fifty percent of students were undecided when asked if nurses made high salaries, a factor which is considered important when career preference is being examined (Sharf, 1992; Stevens & Walker, 1993). Students were undecided if nurses had to work too hard, at night or on weekends. They were uncertain about the amount of autonomy involved in nursing, since they were undecided if nurses could choose the days and hours they wanted to work or if they told others what to do. These results indicated students were not familiar with the nature of the work involved in nursing.

Some of these findings are similar to those of previous research. However, the sample populations and different answer sets must be remembered when results are compared. Barkley and Kohler (1992) found that male high school students, responding on a four point scale that did not allow for a choice of undecided, perceived nursing to be a preferred career. Sixty-nine percent of the students saw nursing as challenging and stimulating. This finding is similar to the results reported here. Fifty-five percent believed there were opportunities for advancement and 47% thought nurses told others what to do. Over 30% of the students in this study were undecided in their responses to these two questions. The male students, like the students in the present study, were aware there were undesirable aspects to nursing. Eighty-three percent felt nursing involved unpleasant tasks and 78% saw the work as stressful. Fifty-seven percent believed nurses work too hard, while students in this study
were undecided. Other results in this sub-category were not provided by Barkley and Kohler (1992).

Kohler and Edwards' (1990) findings generally differed from those in the present study and nursing was not seen as a preferred career. However, in one question similar results were found: 82% of students believed nurses perform unpleasant tasks. Results were provided for two additional questions. Eighty-eight percent did not believe nurses could choose the days or hours they worked and over half did not feel that nurses could always find jobs. Over 30% of students in this study were undecided in their responses to these questions, indicating they were unfamiliar with the working conditions or job opportunities available in nursing. In Kohler and Edward's (1990) report of their study other results in this area were not provided.

Generally, high school students in this study perceived nursing to be a preferred career (overall mean score 49.8). Therefore, these students can be expected to include nursing in their list of preferred careers.

**Perceptions of Career Accessibility**

Accessibility refers to the amount of intellectual, financial, and personal effort that is perceived to be required to pursue a career. The range and mean scores for the Likert scale items are shown in Table 4 and results showing students' responses as percentages of the total are presented in Appendix G.

There were a total of seven questions in this category. Scores for these questions ranged from 11 to 34 with a possible range of 7 to 35. The mean score was 22 with a standard deviation of 3.3.
Percentage scores for five of the seven questions in this category were noteworthy and are reported here. Seventy-eight percent of students believed both males and females should be nurses and 78% believed nurses needed to know a lot about different things. Students were undecided on three questions. Forty-four percent of students answered undecided to the question: "It costs a lot of money to go to nursing school" and 33% were unsure if "Anyone can afford to go to nursing school". Thirty-one percent of students answered undecided to "It doesn't take very long to be a nurse."

Students saw nursing as accessible both for men and women, and they perceived that it involved knowing about many different things. Students were undecided about the length and type of education needed and were unsure of the academic and financial demands of the profession. It was difficult to draw conclusions based on these results since committed responses were evident for only two of the seven questions in this category and for the remaining five, students were mostly undecided. However, based on the high mean score obtained in this category (mean = 22; range 7-35) and the absence of any strong negative perceptions, students were seen to have perceived nursing as an accessible career.

Barkley and Kohler (1992) do not comment on or report any results related to career accessibility. The findings of Kohler and Edwards (1990), while not directly comparable to this study, were nonetheless informative. Fewer than 20% of the students believed nursing education was affordable and 70% felt it took considerable money to attend nursing school. Thirty-six percent believed it took too long to be a nurse while 32% believed it did not. Eighty-eight percent of students saw nursing as requiring considerable knowledge.
In this category, like the previous two categories, students were often undecided in their responses, especially when responding to questions regarding financial requirements. Students did not appear to know the important aspects involved in obtaining a nursing education. Unlike Kohler and Edwards' (1990) sample, the students in this study had no strong negative perceptions about the accessibility of nursing as a career; rather, they perceived it positively.

**Overall Score**

The mean total score for the students on all Likert scale items was 135.6 with a range of 108 to 161 (possible range 41 - 205) and a standard deviation of 10.1 (Table 4). These results reflect and confirm the findings of the three categories of career image, preference, and accessibility. In spite of the number of undecided responses, positive results were obtained in each of the sub-categories. Generally students believed nursing had a positive prestige level and field of work. It was also seen as a preferred and accessible career. Therefore, the high total positive score for all Likert scale items was not surprising and could have been predicted based on the results obtained in each of the three sub-categories. High school students in this study were found to have positive perceptions of nursing as a career choice as measured by the positive scores on the Likert scale items.

**Alternate Response Questions**

The last three questions of the questionnaire were alternate response questions and are reported individually. These questions provided specific information about students' perceptions regarding nurses' wages, how students obtained their views of nursing, and the
likelihood that students were considering nursing as a career choice. These results are presented in this section.

Nurses' Wages

Students were asked "How much money do you think a staff nurse gets paid an hour?". Five percent answered between $30 to $35 per hour, 17% said $25 to $30 per hour, 34% stated between $20 to $25, 31% answered $15 to $20, and 13% believed it to be $10 to $15 per hour (Figure 2). The majority of students did not know the average wage of a nurse (66%). A large number of students underestimated the wage of a nurse (54%) and only 22% overestimated the wage. Thirty-four percent answered accurately.

These results are supported by the findings of the Likert scale questions involving wages. Students were undecided if nurses made more money than teachers (57%), made high salaries (50%), if plumbers made more than nurses (44%), and if nurses were well paid (37%). The results indicate that students were either uncertain about nurses' wages or they perceived nurses to be poorly paid, indicating an unfavourable perception of the prestige level of nursing.

Barkley and Kohler (1992) found male high school students did not perceive nursing's prestige level quite as favourably. The majority (91%) did not know the average wage of a nurse. A large number of students underestimated (84%) and only 7% overestimated the wage. Nine percent answered accurately. These results were supported by other questions in their study that reflected the prestige level. Fifty percent of students saw nursing as a poorly paid profession, where plumbers made more than nurses.

The findings of Kohler and Edwards (1990) indicate an even less favourable
perception of the prestige level of nursing. The overwhelming majority of students did not know the average wage of a nurse (92%). Eighty-seven percent underestimated and a still smaller number (5%) overestimated the wage. Only 8% were accurate in their perceptions. Other questions in the study relating to prestige, as discussed earlier, also support this finding.

Based on this result and the high number of undecided responses related to prestige, the literature suggests that nursing would therefore be an undesirable career choice for these students based on their lack of knowledge and negative perceptions (Fouad, 1994; Gottfredson, 1981; May, Champion, & Austin, 1991; Sharf, 1992).
Sources of Students' Views on Nursing

Students were asked where they had primarily obtained their views about nursing. The largest group (29%) indicated that their views came from observing nurses at work. Twenty-seven percent said from television, 24% said from knowing someone who was a nurse, 9% stated they obtained their views from books, magazines and newspapers, 5% indicated they had learned about nursing in school and 6% did not respond to this question. (Figure 3).

Almost one-third of the students (29%) stated they had observed nurses at work. It would be interesting to know the nature and extent of the exposure that these students had with nurses. The next highest source of influence, not surprisingly, was television at 27%, followed by knowing someone who was a nurse (24%). Responses were fairly evenly divided among these three sources. A small number of students (9%) obtained their views from books, magazines, and newspapers, and only 5% learned about nursing in school. Recruitment personnel in schools of nursing rely heavily on school guidance counsellors to impart career knowledge to students, so these figures should send a strong message to them.

These results reflect the findings of previous research. Barkley & Kohler (1992) found that approximately 30% of students obtained their views from observing nurses, television, and knowing someone who was a nurse. Exact figures for the sources were not provided. Seven percent obtained their views from books, magazines, and newspapers, and only 3% learned about nursing in school.

Kohler and Edwards' (1990) results were similar. Thirty-four percent stated they had observed nurses at work, 30% said television, 26% said from knowing someone who was a
Percent

Did not respond

School

Printed Material

Know a Nurse

T.V.

Observing nurses

Percent

Based on this study and previous research, the most influential source of nursing information for high school students, next to knowing someone who is a nurse, is the media. It is therefore reasonable to assume that high school students' perceptions could effectively be altered through the media.

Students Considering Nursing as a Career

Students were asked, "Are you considering nursing as your career choice?" To this question 77% of students answered probably not or definitely not, 15% answered maybe, and nurse, 7% from books, magazines, and newspapers, and 3% indicated they had learned about nursing in school.
only 8% responded probably yes or definitely yes (Figure 4). These results are troubling. In spite of the positive perceptions of students in the categories of career image, preference, and accessibility they were still not considering nursing as a career choice.

This result is supported by previous research. Barkley and Kohler (1992) found that although high school males had an overall positive perception of nursing, few indicated they were considering it. To the question "Are you considering nursing as a career?", 5% answered maybe and 89% responded probably not or definitely not and only 6% indicated they were considering nursing.

Kohler and Edwards (1990) obtained identical results for this question, but their subjects had an overall negative perception of nursing. The results were: 8.6% probably yes or definitely yes, 14.6% maybe, and 76.9% answered probably not or definitely not. The results for this study were 8%, 15%, and 77% respectively. It is impossible to surmise why students with opposing perspectives would produce similar results.

The results of a study by Grossman et al. (1989) involving 300 high school students were slightly more favourable. They found that the majority of high school students perceived nursing positively. Eighteen percent said they were considering nursing as a career. This result is higher than that obtained in this study where only eight percent said they were probably or definitely considering nursing as a career. The differing results between the two studies may be related to the answer sets. Grossman et al. (1989) asked students to respond to a yes or no question. In comparison, the study presented here allowed for a wider range of responses (definitely yes, probably yes, maybe, probably not and definitely not).
Overall Findings

Bivariate relationships between the dependent variables (total score, image, preference, and accessibility scores) and the demographic variables (gender, age, high school, grade, class, and language) were assessed using the parametric t-test for independent samples. No significant differences were found regarding student grade, age, high school, class, or language. However, when gender scores were compared, a significant difference was identified (Table 5). Female students had a higher mean total score when compared to the males (137.5 versus 133.1; $p < 0.001$). Female students also had a significantly higher mean image score (65.5 versus 61.8; $p < .001$). The high positive score for females
indicated they perceived nursing more positively than did males. Nonetheless, a total mean score of 133.1 for the males, from a possible range of 41 to 205, was still considered high. Gender differences in relation to nursing as a career choice have been identified in both nursing and career counselling literature. Males and females have been found to hold traditional attitudes when career options are being explored (Barkley & Kohler, 1992; Gottfredson, Jones, & Holland, 1993; Grieve, 1991; Hesketh, Hesketh, Hansen, & Goranson, 1995; Thompson, Miller, Shargey, Smith & Denk, 1991). It was therefore not surprising that males scored lower when a traditionally female career was presented.

The strong influence of gender on the perceptions of nursing as a career choice found in this study is consistent with the findings of previous research. Grossman et al. (1989) found that high school students had significantly different mean opinion scores according to their sex and the decision to consider nursing as a career, although exact results were not provided. Grossman and Northrop (1993) found that Hispanic males had a lower mean opinion score (mean score = 38) than did females (mean score = 44). These differing gender results may be related to economic factors, since Barkley and Kohler (1992) found that males placed a heavy emphasis on salary during career decision-making. Johnson, Goad, and Canada (1984) found that male college students believed nurses should be only female, male nurses were poor role models, and there was a homosexuality stigma associated with male nurses.

The question asking students to identify the language most frequently spoken at home was designed to detect ethno-cultural differences. Analysis consisted of comparing total scores for Likert scale items. Total scores for English speaking students were compared
Table 5

Differences Between Male and Female Scores

<table>
<thead>
<tr>
<th></th>
<th>Male (n = 262)</th>
<th>Female (n = 340)</th>
<th>p</th>
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<tbody>
<tr>
<td></td>
<td>Possible Range</td>
<td>Mean  S D</td>
<td>Mean  S D</td>
</tr>
<tr>
<td>Over All Score</td>
<td>41 - 205</td>
<td>133.1  10.9</td>
<td>137.5  9</td>
</tr>
<tr>
<td>Image Score</td>
<td>18 - 90</td>
<td>61.8  7</td>
<td>65.5  5.7</td>
</tr>
<tr>
<td>Preference Score</td>
<td>16 - 80</td>
<td>49.5  4.8</td>
<td>49.9  4.5</td>
</tr>
<tr>
<td>Accessibility Score</td>
<td>7 - 35</td>
<td>21.8  3.4</td>
<td>22.1  3.3</td>
</tr>
</tbody>
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against the total for all other language groups using the t-test for independent samples. However, no significant differences were found (English: mean score = 135.8; all other language groups: mean score = 135.4, p = 0.654). The researcher postulated that English speaking students would reflect Canadian high school students' perspectives, while students from other language groups would exhibit their ethno-cultural perspective. This question may not have captured differences based on ethno-cultural origin; however, this aspect merits further investigation.

The subject for class instruction (e.g. English class, Physics class, Computer Studies class) during which the questionnaire was administered was also expected to affect the results. However, no significant differences were found. The total scores for students completing the questionnaire in English class were compared with the total score for all other classes of questionnaire administration. English class was the desired class of administration, since the
researcher believed this would promote student comprehension. English as a Second Language (E.S.L.) classes and classes that contained E.S.L. students were expected to affect the results. For this reason the researcher deliberately obtained subjects from English class whenever possible. This resulted in 351 students (54%) of the sample being obtained from English class. No significant differences were found (English: mean score = 135.9; all other classes: mean score = 135.4, p = 0.7438). The lack of significant differences in this area may be due to the language of instruction in all participating classes being English and the comprehension level therefore being relatively equal in all classes.

Comments on the Career Questionnaire

The Career Questionnaire had been used in two published studies prior to its use here. The instrument was altered by the researcher and the category of "undecided" was added to the Likert scale, to allow for a sufficient range of responses. The decision to include the "undecided" response was based on discussion and feedback from the original developers of the questionnaire. Although this change affected the researcher's ability to make comparisons with the previous studies, it was advantageous since it enhanced the data obtained. The addition of the undecided response allowed the researcher to identify areas where students may be lacking in knowledge and information. Having used the Career Questionnaire the researcher would recommend that this five point scale continue to be used in future studies. However, the validity and reliability of the instrument should be re-established.

An additional limitation of the instrument involved the determination of category placement, as discussed on page 36. Some of the questions on the questionnaire were difficult to classify as belonging exclusively to one of the three sub-categories of the
conceptual framework. A panel of nurse experts determined category placement in the present study, but in future the researcher would recommend that a panel of high school students be used. Categorization would then reflect students' perspectives rather than those of nurses, which may have occurred in this study. If this conceptual framework and questionnaire are used in future studies, category placement of the questions should be reexamined. The element of the conceptual framework being examined should be clearly evident for the given question.

Summary

The overall findings of this research are consistent with those of earlier researchers (Barkley & Kohler, 1992; Grossman et al. (1989). The findings showed that most high school students perceive nursing positively, however, only 8% of students stated they were probably or definitely considering nursing as a career choice. The image of nursing does not appear to be as problematic as the literature previously suggested. Although high school students generally perceive nursing positively, some other factor or factors seem to be responsible for its declining popularity as a career choice. The results suggest that recruitment difficulties in nursing may be more varied and complex than was previously believed.

The next chapter includes a summary of the study, conclusions based on the research, and implications for nursing recruitment and research.
Declining enrolments in schools of nursing have alerted recruiters to what has been identified as a serious problem (Baumgart & Larsen, 1992; Kerr & MacPhail, 1991). There is little in the current literature that explores the issue of nursing recruitment and even less that addresses recruitment of high school students. The small amount of research which exists is primarily American. Little is known about the attitudes or perceptions of Canadian high school students about nursing as a possible career. The research question for this study was: "What are the perceptions of high school students toward nursing as a career choice?"

The conceptual framework was based on Osipow's self-concept theory (1983) and Gottfredson's (1981) theory of career aspiration. In this framework, career decision-making was viewed as a four stage process involving six factors: self-concept, career image, career preference, career accessibility, range of acceptable careers, and career choice. Students progressively narrow their career choices as they pass through each decision-making stage. In the first stage, self-concept and career image are explored, followed by career preference and accessibility in stage two. During stage three the range of acceptable careers are examined. The student then enters the final stage, career choice. The factors directly explored in this study were career image, preference, and accessibility. These particular factors were selected because they are generally believed to be the most influential for high school students prior to making career decisions (Gottfredson, 1981).
Research involving recruitment in nursing is considered to be an emerging field and nursing research related to the recruitment of high school students is scarce. For these reasons the researcher chose a descriptive research design. The study sample of 602 was obtained from senior high school in the school districts of Vancouver and Richmond, British Columbia.

Students' perceptions of nursing as a career choice were obtained through the use of the Career Questionnaire which included Likert scale items and fixed response questions. Results for each question were reported using percentages of the total number responding. Responses for the Likert scale items were coded using a 1 to 5 scale. An overall score was obtained by summing the response values of the 41 items that were coded using the Likert scale. A high total score represented a positive perception of nursing as a career, whereas low scores represented a negative perception. The presence of significant differences between the scores and the demographic variables were assessed.

High school students in this study perceived nursing positively. Students were found to have high mean scores for each of the sub-categories: career image, 63.9; career preference, 49.8; career accessibility, 22; and for the total mean score, 135.6. When bivariate relationships between the dependent variables and the demographic variables were assessed, significant findings were related to gender. Both males and females obtained high mean scores, yet females scored significantly higher for career image (M = 61.8; F = 65.5, p < 0.001) and total score (M =133.1; F = 137.5, p < 0.001).

However, students were frequently undecided in their responses. For 18 of the 41 Likert scale items, the undecided response was equal to or greater than 30% of the total
responses. Findings suggest that high school students may not possess the necessary
knowledge to enable them to agree or disagree with some of the items on the Career
Questionnaire. Questions where undecided was the most frequent response generally involved
money. This study suggests that the economic status of a career may be one of the more
important factors that students consider when career options are being explored. Information
about nursing was found to be primarily derived from observing nurses, followed by
television, knowing someone who was a nurse, printed material, and lastly, through school.

Although students held an overall positive perception of nursing, few (8%) were
considering it as a career choice. The findings of this study are similar to those of Barkley
and Kohler (1992), Kohler and Edwards (1990) and Grossman et al. (1989), all of whose
findings suggest that career image by itself does not account for students' reluctance to select
nursing as a career.

**Implications for Nursing Education**

The results of this study suggest a number of approaches that could be effective in the
recruitment of high school students into schools of nursing. The strategies suggested here
require collaboration among high schools, schools of nursing, health care agencies, and the
professional association. The large number of undecided responses to questions in this study
probably reflected an overall lack of knowledge on the part of high school students. If
students were better informed, they may recognize nursing as a preferred and accessible
career and consider it more seriously. The challenge of educating high school students about
nursing can be approached in many ways:
1. This study found that students were often unsure in their answers to questions involving career accessibility. Schools of nursing and high schools could develop partnership programs where high school students were paired with nursing students during a portion of the nursing students' education. High school students would be exposed to positive role models who were engaged in the study of nursing within the university or college environment. This would help dispel some of the uncertainties high school students had regarding the accessibility of nursing. These role models could also serve as mentors for those high school students that choose to study nursing.

2. High numbers of undecided responses were found in the sub-category, career preference. Students may not have had the necessary knowledge to judge nursing to be either a preferred or an undesirable career. Nurse educators could participate in career days and have displays to show the variety of settings and opportunities available in nursing. A partnership could be fostered between nurse educators and high school guidance counsellors. This would help ensure that both students and counsellors receive accurate and current information regarding nursing and nursing education. A link between high schools and the workplace could be developed. Arrangements could be made between nurse administrators and high schools for students to spend a day with a nurse in the workplace. Work-study programs could be offered between health care agencies and the schools. Credits could be awarded to students for the successful completion of work-study terms in health care agencies. These could be similar to those currently offered in the technical courses such as carpentry, welding, cooking, and the restaurant business.
3. High numbers of undecided responses were found in all the sub-categories possibly indicating a general lack of knowledge about nursing. Partnerships between the schools of nursing and high schools could be developed by having nurse educators involved in teaching science or health classes in the high school curriculum. This would serve to increase the profile of nursing within the high school population and allow students direct exposure to a professional nurse. It would also help bridge the gap between high school and post-secondary education.

4. In spite of the overall positive perceptions of high school students toward nursing as a career, only a very small number of students indicated they were considering it as a career. Nursing recruiters, in conjunction with the professional association, should develop positive and accurate marketing campaigns that emphasize the positive field of work and prestige level involved in nursing. These campaigns would portray nurses in a variety of settings and show them to be the autonomous, caring professionals they are. Because of the shifting trend in health care and the projected need for increased numbers of nurses, nursing promises to be one of the most promising and economically secure careers of the future (Rachlis & Kushner, 1994; Stewart, 1995). This feature should be emphasized so students are aware of the job security that nursing can offer. Accurate information regarding nurses' wages and future employment opportunities could also be included in recruitment campaigns.

Implications for Nursing Research

The results of this study suggest the following areas should be examined in order to broaden our understanding of the perceptions of high school students about nursing as a career choice.
1. The factors contributing to high school students' reluctance to choose nursing as a career have not been examined in detail in this study. Earlier research had indicated that nursing's poor image was the major factor contributing to the declining popularity of nursing. This study's findings indicate that high school students have positive perceptions of the image of nursing, yet they are not considering it as a career choice. The other factors contained in the conceptual framework that were not explored in this study could be examined to determine their impact on high school students' career decision-making. Factors such as intelligence, interests, values, and social class could be examined. Students could be asked to compare nursing with a variety of careers and these other factors could be examined. This would help identify those factors which have the greatest importance for high school students. Studies could be designed that consisted of a questionnaire, an educational component related to nursing as a career, and then re-administration of the questionnaire. Students would be asked about their views of nursing as a career and the likelihood that they were considering nursing as a career. Differences between responses on the first and second administrations of the questionnaire would reflect the effectiveness of the educational component. This method of research would assist with the development of more effective recruitment techniques.

2. This study and several others have shown that gender influences attitudes toward nursing as a career. Further research is needed to identify the reasons for such differences. Studies aimed at comparing and contrasting the perspectives of male and female high school students toward nursing should be undertaken. This information could be obtained through one-to-one interviews asking students to identify their attitudes toward nursing as a career, and allowing further exploration of any pertinent factors. Research involving males that are
currently in the profession would be beneficial. Interviews asking males to identify the reasons why they chose nursing over other professions would help identify factors that appeal to males in general. These factors could then be used to help achieve more of a gender balance in nursing.

3. The career counselling literature states that prestige is a principal factor in career decision-making. In this study, salary was identified as a factor that high school students considered during career decision-making. However, the extent to which it influences students' career decision-making was not explored. Further research to determine how much salary is a major factor for high school students' career decision-making would be useful. This could be done by providing high school students with a list of factors, including salary, that are known to be influential for career decision-making. Students would then be asked to rank these factors in terms of their importance in career decision-making. If salary was ranked as first or second, this would confirm its importance as a factor for high school students' career decision-making.

4. The instrument used in this study was valuable in determining the perspectives of high school students toward nursing as a career choice. However, categorization of the questions according to the elements of the conceptual framework was problematic. Nurse experts may categorize the questions differently from high school students. In future studies, categorization may be more appropriately done by a panel of high school students. This would ensure that categorization reflected high school students' perspectives.

5. This study attempted to detect ethno-cultural differences toward nursing as a career, yet none were found. However, given the diversity of our general population, it is important
to confirm this finding. Research involving the career decision-making of students from a variety of different ethno-cultural backgrounds could be done. Valid and reliable tools designed to measure this factor are needed. Such tools would help identify and increase our understanding of the ethno-cultural influences on career decision-making.
References


Welcome to nursing? (1988). *Nursing Times*, 84(42), 36-37.

Appendix A

Letter of Introduction for School Board Consent

Dear Director,

My name is Maureen Maloney and I am a R. N. and a student in the Master of Science in Nursing program at the University of British Columbia. In addition, I am an instructor in the Registered Nurse Program at Langara College. The study I am conducting is concerned with nursing as a career choice for high school students and is titled "High School Students' Perceptions of Nursing as a Career Choice". I seek your approval to conduct this study in your school district. The application for permission to conduct research in Vancouver schools and a copy of my questionnaire are enclosed.

The participants will be grade 11 and 12 students. Information will be obtained through the use of a self administered questionnaire. I will explain and oversee its administration. Approximately 30 minutes of class time will be required. The introduction and explanation will take about 10 minutes and completion time for the questionnaire will be approximately 20 minutes.

I will be contacting you in about one week to discuss this study. If you have any questions, I can be contacted at (phone number). The chair of my thesis committee is Anne Wyness who can also be contacted at U.B.C. (phone number). Your time and interest are greatly appreciated.

Sincerely,

Maureen Maloney R.N., B.S.N.
Appendix B

Letter of Introduction and Consent

Dear Parent or Guardian,

I am seeking your consent for your child to participate in a study I am conducting that is entitled "High School Students' Perceptions of Nursing as a Career Choice". The students' impressions and attitudes towards nursing as a career will be used to assist with career counselling and the recruitment of students into nursing.

I am a Registered Nurse and a student in the Master of Science in Nursing program at the University of British Columbia. In addition, I am a nursing instructor at Langara College.

The study will be conducted by me during class and will take approximately 30 minutes to complete. Students will answer an anonymous questionnaire and will not identify themselves. Your child's participation is voluntary and he or she can withdraw from the study at any time. Nonparticipation will not influence your child's education or class standing. If your child should not participate in this study other classroom work will be assigned.

This study has been approved by your child's teacher, principal, and the school board. If you have any questions about your child's participation in this study at this time or in the future, I can be contacted at (phone number). The chair of my thesis committee, Anne Wyness, can be reached at (phone number).

If you give consent for your child to participate in this study please sign this form and have your child return it to their teacher within one week (before ___ /95). Your time and interest are greatly appreciated.

Yours Sincerely,

Maureen Maloney, R.N., B.S.N.

I consent / I do not consent to my child's participation in this study. (please circle the correct statement). I acknowledge that I have my own copy of this consent form.

Student Name: _______________ Date: _______________

Parent/Guardian Signature: ____________________________
Appendix C

CAREER QUESTIONNAIRE

Information to Participants

I am conducting a study titled "High School Students' Perceptions of Nursing as a Career Choice". My name is Maureen Maloney and I am a Registered Nurse and a student in the Master of Science in Nursing program at the University of British Columbia. In addition, I am a full-time nursing instructor at Langara College.

Through a questionnaire I am asking about your impressions and attitudes towards nursing as a career. This information will be used to assist with career counselling in high schools and help nursing schools attract students. The questionnaire takes approximately 20 minutes to complete.

At no time will you be asked your name or any other identifying information. Your participation is voluntary. You are free to decide not to participate for any reason now and at any time when you are filling out the questionnaire. If you decide not to participate it will not affect your education or class standing. Completion of this questionnaire assumes your consent has been given to participate.

The study has been approved by your teacher, principal, and the school board. A summary of the results of the study will be made available to you, if you desire, through your teacher. If you have any further questions you can contact me through your teacher.

Directions for completing the questionnaire:

1. All answers must be recorded in pencil on the OP-SCAN sheets.

2. You may omit any question you choose.

Researcher: Maureen Maloney (phone number)

Thesis Committee Chairperson: Anne Wyness (phone number)
CAREER QUESTIONNAIRE

1. Your present grade level is
   A. 11th grade
   B. 12th grade

2. You are
   A. Male
   B. Female

3. Your present age is
   A. 15 yrs.
   B. 16 yrs.
   C. 17 yrs.
   D. 18 yrs.
   E. 19 yrs.

4. What language do you speak most often at home?
   A. English
   B. Chinese
   C. Punjabi
   D. Vietnamese
   E. Other

Note: Nurse in this questionnaire refers to a Registered Nurse.
Directions: For questions numbered 5 through 46, choose ONE response using the following scale.

   SCALE:  
   A. Strongly Disagree  
   B. Disagree  
   C. Undecided  
   D. Agree  
   E. Strongly Agree

5. It costs a lot of money to go to nursing school.

6. It takes too long to learn to be a nurse.

7. Nurses have to take hard courses in school.

8. All nurses must have a university degree to practice nursing.

9. Nursing is a technical occupation.

10. Nursing is a profession.

11. Nurses have to know a lot about different things.

12. It doesn't take very long to learn to be a nurse.

13. Anyone can afford to go to nursing school.
CAREER QUESTIONNAIRE

SCALE:
A. Strongly Disagree
B. Disagree
C. Undecided
D. Agree
E. Strongly Agree

14. Nursing is stimulating and challenging work.
15. Nurses have to do unpleasant things.
16. Nurses can choose the days and hours they want to work.
17. Nurses only do what doctors tell them to.
18. Nurses don’t get paid well.
19. Nurses have to take responsibility for the people they take care of.
20. Nurses have to work too hard.
21. Nursing is a low-level skill occupation.
22. Nurses work under a lot of stress.
23. Nurses normally have to work at night and on weekends.
24. Nurses tell other people what to do.
25. Nurses make high salaries.
26. Nurses have a lot of people to take care of.
27. Nurses make many important decisions.
28. Lawyers have a higher social standing than do nurses.
29. Nurses make more money than teachers.
30. Plumbers make more money than nurses.
31. Nurses have the same social standing as secretaries.
CAREER QUESTIONNAIRE

SCALE:

A. Strongly Disagree
B. Disagree
C. Undecided
D. Agree
E. Strongly Agree

32. Nurses spend most of their time socializing with doctors.
33. Nursing requires a high degree of skill.
34. Only women should be nurses.
35. Nursing is a low status occupation.
36. Nurses can always find jobs.
37. Nursing is a well-respected occupation.
38. Nursing is a "dead-end job."
39. Most nurses are mean and don't care.
40. Nursing is a female occupation.
41. Nurses have a good public image.
42. Nurses have high standards of behaviour.
43. Nurses have many opportunities for advancement.
44. Nurses are kind and compassionate people.
45. Nurses are equal to physicians.
CAREER QUESTIONNAIRE

Please answer the following by choosing only ONE response.

46. How much money do you think a staff nurse gets paid per hour?

   A. $10.00 to $15.00/hrs.
   B. $15.00 to $20.00/hrs.
   C. $20.00 to $25.00/hrs.
   D. $25.00 to $30.00/hrs.
   E. $30.00 to $35.00/hrs.

47. Are you considering nursing as your career choice?

   A. Definitely yes
   B. Probably yes
   C. Maybe
   D. Probably not
   E. Definitely not.

48. Your views about nursing mainly come from:

   A. Watching television
   B. Reading books, magazines or newspapers
   C. Learning about nurses in school
   D. Knowing someone who is a nurse
   E. Observing nurses when they are at work.

This questionnaire has been adapted and is being used with permission from:

| 5, 6, 7, 34 | 11, 12, 13 | Accessibility Career Choice |
| 15, 17, 20, 21, 22, 23 | 8, 14, 16, 19, 24, 25 | Career Preference |
| 38, 39, 40, 45 | 9, 18, 26, 30, 31, 32, 33 | Career Image |

**Negative Perception of Nursing**

**Positive Perception of Nursing**

**Factors Influencing**

**Distribution of Questions**

**Distribution of Questions Representing a Positive or Negative Perception of Nursing**

Appendix D
<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Undecided</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>9) Nursing is a technical occupation.</td>
<td>11%</td>
<td>45%</td>
<td>36%</td>
<td>3%</td>
<td>1%</td>
<td>4%</td>
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<tr>
<td>44) Nurses are kind and compassionate people.</td>
<td>Strongly Agree</td>
<td>7%</td>
<td>37%</td>
<td>25%</td>
<td>26%</td>
<td>1%</td>
</tr>
<tr>
<td>41) Nurses have a good public image.</td>
<td>Strongly Agree</td>
<td>8%</td>
<td>28%</td>
<td>58%</td>
<td>6%</td>
<td>2%</td>
</tr>
<tr>
<td>37) Nursing is a well-respected occupation.</td>
<td>Strongly Agree</td>
<td>9%</td>
<td>18%</td>
<td>39%</td>
<td>35%</td>
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</tr>
<tr>
<td>Positive Perceptions</td>
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</tr>
<tr>
<td>29) Nurses make more money than teachers.</td>
<td>Strongly Agree</td>
<td>11%</td>
<td>22%</td>
<td>45%</td>
<td>22%</td>
<td>2%</td>
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<tr>
<td>27) Nurses make important decisions.</td>
<td>Strongly Agree</td>
<td>11%</td>
<td>22%</td>
<td>45%</td>
<td>22%</td>
<td>2%</td>
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<td>10) Nursing is a profession.</td>
<td>Strongly Agree</td>
<td>4%</td>
<td>47%</td>
<td>47%</td>
<td>6%</td>
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Results of Questions Relating to Career Image

Appendix E
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<th>Undecided</th>
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<tbody>
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<td>Most nurses are mean and don't care.</td>
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<td>6%</td>
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<tr>
<td>Nursing is a dead-end job.</td>
<td>21%</td>
<td>1%</td>
<td>78%</td>
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<tr>
<td>Nursing is a low status occupation.</td>
<td>25%</td>
<td>4%</td>
<td>71%</td>
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<tr>
<td>Nurses spend most of their time socializing with doctors.</td>
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<td>7%</td>
<td>71%</td>
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<tr>
<td>Nurses have the same social standing as senators.</td>
<td>9%</td>
<td>4%</td>
<td>87%</td>
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<tr>
<td>Plumbers make more money than nurses.</td>
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<td>Lawyers have a higher social standing than doctors.</td>
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<td>84%</td>
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<tr>
<td>Nurses have a lot of people to take care of.</td>
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<td>12%</td>
<td>81%</td>
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<tr>
<td>Nurses don't get paid well.</td>
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<td>4%</td>
<td>86%</td>
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Appendix E. Continued
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45) Nurses are equal to physicians.
46) Nursing is a female occupation.

Appendix E continued.
<table>
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</table>

36) Nurses can always find jobs.
33) Nursing requires a high degree of skill.
25) Nurses make high salaries.
24) Nurses tell other people what to do.
19) Nurses have to take responsibility for the people they take care of.
16) Nurses have the days and hours they want to work.
14) Nursing is stimulating and challenging work.
8) All nurses must have a university degree to practice nursing.

Positive Perceptions

Results of Questions Relating to Career Preference

Appendix
<table>
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<th>Percentage</th>
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</table>

23) Nurses have to work at night and on weekends.
22) Nurses work under a lot of stress.
21) Nursing is a low-level skill occupation.
20) Nurses have to work to hand.
17) Nurses only do what doctors tell them to.
15) Nurses have to do unpleasant things.

Appendix F continued
<table>
<thead>
<tr>
<th>Percentage</th>
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</table>

**Negative Perceptions**

(4) Only women should be nurses.

(7) Nurses have to take hard courses in school.

(6) It takes too long to learn to be a nurse.

(5) It costs a lot of money to go to nursing school.

**Positive Perceptions**

(13) Anyone can afford to go to nursing school.

(12) It doesn't take too long to be a nurse.

(11) Nurses have to know a lot about different things.

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Results of Questions Relating to Career Accessibility

Appendix C