

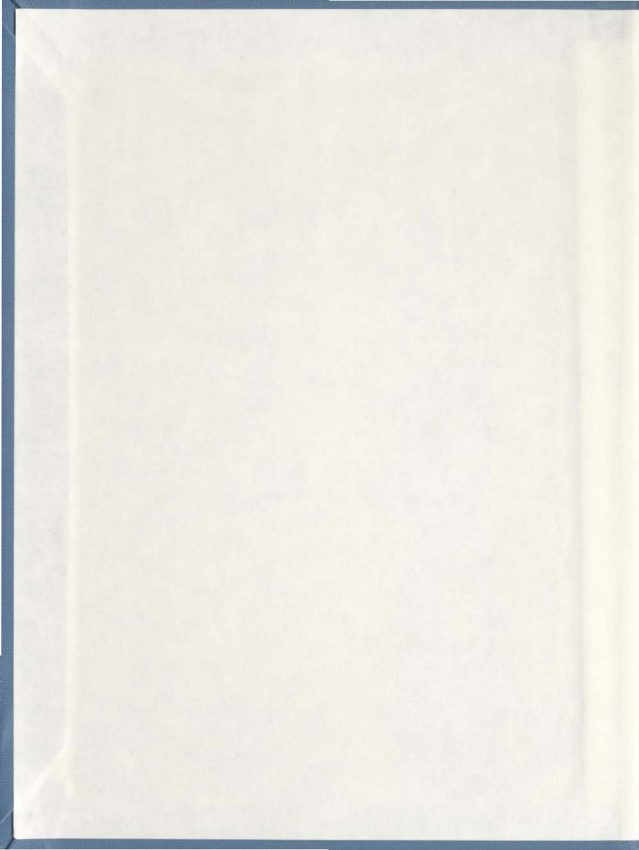
STAFF NURSES' ATTITUDES AND PERCEPTIONS  
TOWARD NURSING RESEARCH

CENTRE FOR NEWFOUNDLAND STUDIES

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Staff Nurses' Attitudes and Perceptions  
Toward Nursing Research

by

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### **Abstract**

The purpose of this study was to explore staff nurses' attitudes toward nursing research through examining their perceptions of selected aspects of research. This study was an approximate replication of Alcock, Carroll, and Goodman's (1990) research. The results will provide an overview of the nursing research milieu in Newfoundland and Labrador.

The Theory of Reasoned Action (Ajzen, 1988) was chosen as the conceptual framework for this study. The Theory of Reasoned Action suggests that a person's attitude toward a behavior will be directly related to a set of beliefs about the behavior. This suggests that the nurse's attitude toward becoming involved in, and using nursing research, is linked to the nurse's beliefs or perceptions concerning nursing research.

A descriptive design was used for this study. The sample consisted of 319 staff nurses chosen by systematic random selection. Data were collected using a questionnaire designed by Alcock et al. (1990). The questionnaire contained six sections which addressed the following: demographic data, perceived value of nursing research, perceived role in nursing research, interest in research, research experience, and perception of research climate in the workplace. Descriptive and inferential statistics were used for data analysis.

The results indicated that staff nurses valued nursing research, and perceived that they had a variety of roles in nursing research, particularly in relation to improving the quality of patient care provided. While staff nurses were clearly interested in nursing research, they had limited research experience. Staff nurses perceived limited support for nursing research in their employing agency, especially administrative support. In addition, most were unaware of the existence of structures to support nursing research in their employing agency.

The following nurses placed a higher value on nursing research: those employed on a part-time basis, 41 years of age and older, employed in community health centers, and educated at the diploma level. Nurses educated at the baccalaureate level demonstrated greater perceived role in, and interest in, nursing research, and indicated more research experience. Nurses educated at the baccalaureate level, and those enrolled in continuing education perceived the employing agency to be less supportive of nursing research than did diploma prepared nurses.

These findings have implications for the utilization of nursing research in nursing practice as they indicate that the goal of providing evidence-based care is clearly not impeded by nurses' attitudes toward nursing research.

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## **Chapter 1**

### **Introduction**

The development of a scientific basis for nursing practice through research, and ultimately, the utilization of nursing research in nursing practice is essential to ensure the provision of safe, efficient patient care (Gennaro, 1994; Weiler, Buckwalter, & Titler, 1994). Despite the fact that members of the nursing profession are making major strides in conducting research, we continue to struggle with the application of these findings in the clinical setting (Bircumshaw, 1990; Funk, Champagne, Wiese, & Tornquist, 1991; Grinspun, MacMillian, Nichol, & Shields-Poe, 1993; Keefe, 1993; Kyei, 1993; Miller, Edwards-Beckett, Mikolaj, Bower, & Pontius, 1994; Rizzuto, Bostrom, Suter, & Chenitz, 1994). Several authors suggest that nurses' attitudes and perceptions toward nursing research influence whether or not research is utilized in nursing practice (Bostrom, Malnight, MacDougall, & Hargis, 1989; Champion & Leach, 1989; Rizzuto et al., 1994). The purpose of this research is to identify staff nurses' attitudes and beliefs about nursing research through examining their perceptions regarding nursing research.

### **Background to Problem**

The origin of nursing research as a basis for practice

dates back to Florence Nightingale whose prime concerns were for the promotion of health, prevention of disease, and care of the sick (Cohen, 1984; Knopf, 1978). Her work, during the Crimean War, influenced health care reform as she recognized the need to observe and measure outcomes of nursing care (Pepler, 1994). Though it focused mainly on nursing education and the delivery of services, research in nursing prevailed throughout the early years of the twentieth century. Eventually clinical nursing research emerged as an important aspect in establishing and maintaining high standards of care (LoBiondo-Wood & Haber, 1990; Pepler, 1994; Weiler et al., 1994). In recent years the utilization of clinical nursing research in the practice setting, commonly referred to as evidence-based practice, has surfaced as a major issue (Champion & Leach, 1989).

### **Rationale**

The benefits of utilizing nursing research in nursing practice focus around four major themes: professionalism, accountability, quality of care, and cost-effectiveness (Bircumshaw, 1990).

Utilization of nursing research in nursing practice has the potential to strengthen nursing as a profession (Bircumshaw, 1990; Gennaro, 1994; Gould, 1990). The nursing discipline has acquired knowledge through many sources



including tradition, experience, trial and error, intuition, and borrowing from other disciplines (Burns & Grove, 1993; Weiler et al., 1994). While each of these have been important to the development of nursing knowledge, the acquisition of knowledge through research is essential to ensure the acceptance of nursing as a scientific discipline (Silva, 1987). Bircumshaw suggested that if nursing is to be recognized as a profession, nursing practice must be based upon a specific and unique body of knowledge. Consequently, strengthening our knowledge base through scientifically sound nursing research, and utilizing these findings as a basis for quality patient care will clearly contribute to the professionalization of nursing (Bircumshaw, 1990; Gennaro, 1994).

Closely linked with the issue of professionalism is accountability. Professionals must be accountable for their actions, and through continual evaluation of research findings, ensure that quality care is provided. A reduction in the practise-research gap will provide evidence of the elements of nursing care that are effective and should be maintained, versus those that are ineffective and thus, should be eliminated. Consequently, accountability for nursing decisions and actions, which is an important aspect of professionalization, is achieved (Bircumshaw, 1990; Gennaro, 1994).

As the utilization of research in practice promotes the professional status of nursing, and ensures accountability for nursing actions, other benefits will be realized. Ultimately, ensuring evidence-based practice will enhance the quality of nursing care provided (Bircumshaw, 1990; Bock, 1990; Brooke, 1994; Gennaro, 1994; Pepler, 1994; Titler et al., 1994), improve patient outcomes (Brooke, 1994; Gennaro, 1994; Titler et al., 1994), and potentially, aid in the containment of escalating health care costs (Bircumshaw, 1990; Pepler, 1994; Titler et al., 1994).

While the potential benefits of ensuring evidence-based practice are numerous, the literature indicated little link between research and practice at the staff nurse level (Alcock, Carroll, & Goodman, 1990; Hicks, 1993; Poster, Betz, & Randell, 1992; Walczak, McGuire, Haisfield, & Beezley, 1994). If we are to improve on the quality of patient care, nursing practice should be based on research findings (Bircumshaw, 1990). Even though studies indicate that nurses feel research improves clinical practice (Alcock et al., 1990; Fugleberg, 1986; Poster et al., 1992), a reluctance to change from the familiar, and implement scientifically sound research findings is seen (Alcock et al., 1990).

Nurses' attitudes and perceptions toward nursing research are felt to influence whether or not research is

utilized and conducted (Alcock et al., 1990; Bostrom et al., 1989; Fugleberg, 1986). Negative attitudes may result in lack of nursing research being conducted, and lack of utilization of research findings. In the absence of research, the profession will continue to provide nursing care based on tradition, and methods of practice that are not scientifically supported (Ritchie, 1992). Consequently, the identification of nurses' attitudes and perceptions toward nursing research appears to be of enormous significance.

Ajzen and Fishbein have identified that a person's attitude toward a behavior will be directly related to a set of beliefs about the behavior (Ajzen, 1988). This suggests that the nurse's attitude toward becoming involved in, and using nursing research, is linked to the nurse's beliefs or perceptions concerning nursing research. Consequently, since positive attitudes toward nursing research are of paramount importance, this study will attempt to identify staff nurses' attitudes and beliefs about this behavior by examining their perceptions regarding nursing research.

### **Purpose**

The purpose of this study is to explore staff nurses' attitudes toward nursing research through examining their perceptions. The results will provide an overview of the

nursing research milieu in Newfoundland and Labrador. It is an approximate replication of Alcock et al. (1990) who studied staff nurses' perceptions of factors influencing their role in research. This study is an approximate replication as it will be completed under similar research conditions as the original study (Burns & Groves, 1993).

### **Research Questions**

The questionnaire utilized in this study was developed by Alcock et al. (1990). The tool was developed specifically to obtain information related to the following questions:

- 1) What is the staff nurse's perception of the value of nursing research?
- 2) What is the staff nurse's perception of his or her role in nursing research?
- 3) What is the staff nurse's interest in nursing research?
- 4) What is the staff nurse's research experience?
- 5) What is the staff nurse's perception of the research climate? (p. 8).

Since this is a replication, these questions will serve as the specific research questions for the purpose of this study.

### Theoretical Framework

The Theory of Reasoned Action was chosen as the conceptual framework for this study (see Figure 1). The theory of reasoned action is used to explain the relationship between attitude and behavior.

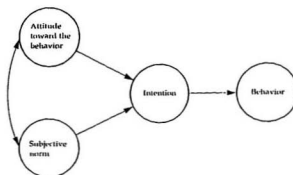


Figure 1. Theory of Reasoned Action. From Attitudes, Personality, and Behavior (p. 118) by I. Ajzen, 1988, Chicago, Illinois: Dorsey Press.

Whether or not a behavior is undertaken is strongly influenced by two factors: attitude toward the behavior, and the subjective norm. The attitude toward the behavior "refers to the degree to which a person has a favorable or unfavorable evaluation of the behavior in question" (Ajzen & Madden, 1986, p. 454). The subjective norm, which is the other predictor of intent to perform a behavior, is considered to be a social factor, in that "it refers to the perceived social pressure to perform or not to perform the behavior" (Ajzen & Madden, 1986, p. 454). Together these predict the intention to perform the behavior.

An individual's attitude toward an object is based on her/his beliefs about that object. As well, an established attitude may influence the development of new beliefs. Further, it is postulated that behavior is a function of the beliefs relevant to the behavior (Fishbein & Ajzen, 1975). Consequently, a person's "... attitude toward performing a given behavior is related to his [sic] beliefs that performing the behavior will lead to certain consequences and his evaluation of those consequences" (Fishbein & Ajzen, 1975, p. 16). This set of beliefs may be acquired through personal experience, education, and the views of significant others. To summarize, individuals will plan to perform a behavior when, based on their beliefs, they evaluate the behavior in a positive manner, and when they believe that

others feel they should perform the behavior.

Based on the 'Theory of Reasoned Action', a relationship between attitudes toward nursing research, subjective norm, and the utilization of nursing research may be postulated. The nurse's decision to become involved in nursing research, or to implement research findings in practice, will depend on the following: the nurse's attitude toward nursing research; the nurse's beliefs or perceptions regarding the value of, and the nurse's role in nursing research; the value the nurse places on the reward for the use of research; the likelihood that the reward will be obtained; the views of others towards the research, and the credibility given to the opinions of others concerning the research.

The variables to be included in this study, as well as the proposed interaction of these variable, as suggested by the literature, are presented in Figure 2.

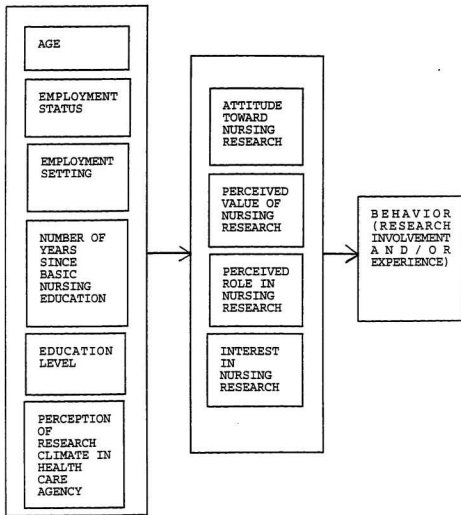


Figure 2. Conceptual Framework of Variables Affecting Attitudes Toward Nursing Research.



### **Definitions**

**Attitude toward nursing research:** This concept refers to the nurse's perceived value of, role in, and interest in nursing research as measured by the research instrument (Alcock et al., 1990).

**Perceived value of nursing research:** This concept refers to the nurse's perception of the value of nursing research to provide knowledge to solve patient care problems, promote accountability for nursing practice, provide information necessary to make clinical practice decisions, and improve nursing practice, as measured by the research instrument (Alcock et al., 1990).

**Perceived role in nursing research:** This concept refers to the nurse's perception of her/his role in the following: identifying and finding ways to improve nursing care problems; collecting data for both nursing and non-nursing studies; being involved in, and conducting research studies, and applying research findings to clinical practice, as measured by the research instrument (Alcock et al., 1990).

**Interest in nursing research:** This concept refers to the nurse's interest in the following: utilizing research to find answers to nursing care problems; reading about

research studies; participating and being aware of the results of research carried out in the workplace; being a member of a nursing research committee; changing nursing practice based on research, and conducting nursing research, as measured by the research instrument (Alcock et al., 1990).

**Research experience:** This concept refers to the nurse's experience in the following: research related education; collecting data for a research project; acting as a principal or co-investigator for a research project; applying for, and/or receiving funds to conduct research; publishing or presenting research results, and changing nursing practice based on research, as measured by the research instrument (Alcock et al., 1990).

**Perception of the research climate:** This concept refers to the nurse's perceptions of support for nursing research from the following: nursing administration; physicians; other disciplines; university professors, and peers, as measured by the research instrument (Alcock et al., 1990).

## **Chapter 2**

### **Literature Review**

Review of the research literature focused on the impact that several factors may have had on influencing attitudes and values toward nursing research and the utilization of nursing research in nursing practice. The literature review examined the impact of nurses' attitudes toward nursing research on nursing research utilization. Other specific influencing factors examined are education level, perceptions of administrative support, and various personal factors. These factors may impact on nurses' attitudes toward nursing research, and consequently the utilization of nursing research in nursing practice.

### **The Impact of Nurses' Attitudes Toward Nursing Research on Research Utilization**

Staff nurses' attitudes toward nursing research is one of the most important factors affecting their utilization of research (Bostrom et al., 1989; Bostrom, Dibble, & Rizzuto, 1991; Champion & Leach, 1989; Hicks, 1993; Marsh & Brown, 1992; Poster et al., 1992; Rizzuto et al., 1994). While the use of nursing research findings in the clinical setting was limited, generally staff nurses were found to have a positive attitude toward nursing research (Alcock et al., 1990; Hicks, 1993; Poster et al., 1992; Rizzuto et al.,

1994; Robichaud-Ekstrand & Sherrard, 1994; Walczak et al., 1994).

Using a correlational design, Champion and Leach (1989) studied variables related to the utilization of nursing research. Four Likert type scales measured the following variables: administrative and colleague support for the utilization of nursing research, availability of pertinent research findings in the institution, attitude toward research utilization, and actual utilization of nursing research in practice. Internal consistency was measured by Cronbach's Alpha which ranged from 0.84 to 0.94. The findings suggested that nurses were moderately committed to utilizing nursing research in practice. In addition, attitude was highly correlated with research use. Of the convenience sample of 59 nurses surveyed, almost 70% of the nurses surveyed were educated at the baccalaureate level or higher.

Alcock et al. (1990) studied staff nurses' perception of factors influencing their role in research using a randomly selected sample of 178 nurses. Their findings indicated that 93% of nurses agreed that applying research to practice situations was the nurse's role. However, while nurses clearly valued nursing research, only 51% reported that they had changed their nursing practice based on research findings. Reliability analyses of the questionnaire

indicated high internal consistency and a panel of experts ensured content validity. In their study, 74% of the nurses surveyed were educated at the diploma level.

While not relating attitudes to research utilization Bostrom et al. (1991) examined nurses' attitudes toward nursing research prior to, and after involvement in data collection for a nursing research study. All nurses involved in data collection were invited to participate in the study. While almost 97% of the nurses completed the initial questionnaire, only 55% responded to the follow-up survey. Approximately 68% of the respondents were educated at the baccalaureate level or higher. The instruments used examined the following: attitudes toward nursing research, perceptions of the research environment, and participation in research related activities. The instruments demonstrated reliability with Cronbach's Alpha greater than 0.88 for each. The findings suggested that while the nurse data collectors indicated positive attitudes prior to the experience, their attitudes toward nursing research were significantly less favorable after the experience.

Using a convenience sample of 71 nurses in various employment positions, Kyei (1993) examined nurses' knowledge and opinions about the nursing research process in The Netherlands. The findings suggested that nurses there had a positive attitude toward nursing research. The nurses

surveyed agreed that nursing research was relevant to nursing practice and that conducting research was the responsibility of all nurses. As well, 72% indicated that they did utilize research findings in patient care. However, the only measurement of the stability of the research instrument was a pilot study which indicated that "no ambiguities were detected" (p. 1642). Since tests of internal consistency were not completed, we cannot be sure of the homogeneity or unidimensional aspects of the research instrument. Statistical findings may be questioned since we are unsure of the consistency to which the research instrument measured the proposed concept. All of the nurses in this study were educated at the diploma level.

Hicks (1993) surveyed midwives' attitudes toward, and involvement in, research. In this study of 397 randomly selected midwives, the findings indicated positive attitudes toward research. A positive relationship existed between participation in research activities and attitudes toward research. However, while positive attitudes existed, the research activity of the respondents was relatively low. Although Hicks focused on midwives' attitudes toward nursing research, 95% of the group were educated as nurses. While both managers and educators were included in the sample, at least 78% of the sample held clinical practice positions. The research instrument, which was derived from a pilot

study of 50 midwives, was modified based on the voiced ambiguities and comments of the pilot sample. The test-retest reliability of the final questionnaire indicated a reliable instrument.

Similarly, Walczak et al. (1994), using a descriptive, cross-sectional survey design, examined research activities and perceived barriers to nursing research utilization. In this study, the nurses demonstrated positive attitudes toward research utilization, and were moderately committed to utilizing research findings in the practice setting. However, even though they had positive attitudes, the respondents indicated low participation in research-related activities. The researchers used a convenience sample of 82 nurses, 86% of which were educated at the baccalaureate level or higher. The four part, self-report questionnaire demonstrated satisfactory reliability as indicated by alpha coefficients greater than 0.76.

In the survey by Miller et al. (1994) on the research-related learning needs of Ohio nurses, 80% of the respondents indicated that they were interested in applying nursing research findings to the clinical setting. A nonrandom sample of 104 nurses with varying educational backgrounds and employment roles was utilized for this survey. The reliability of the questionnaire was not indicated.

Rizzuto et al. (1994) studied predictors of nurses involvement in research activities. Their findings suggested that predictors of nurse's past and current research involvement included the knowledge gained in research courses, their educational level, and positive research attitudes. The nurses in this study were also motivated by their belief that utilizing nursing research findings in nursing practice would improve the quality of nursing care provided. While a large sample ( $n = 1217$ ), 80% of which were staff nurses was recruited, limited information is provided regarding how the sample was selected from the nursing population at the nine agencies involved. The education level of more than 50% of the respondents was at the baccalaureate level. The reliability of the three instruments used was confirmed by alpha coefficients, all of which were greater than 0.86.

Wells and Baggs (1994) examined research attitudes and involvement of nurses working in an academic medical center in the eastern United States. Using a cross-sectional design, 156 staff nurses were selected at random. Sixty percent of these nurses were educated at the baccalaureate level or higher. In addition, 37 nurse managers and 86 advanced practice nurses, were included in the study. The findings indicated positive attitudes about research. In addition, more than 80% of nurses reported past experience



using research findings in practice. Those who placed a higher value on nursing research were five times more likely to utilize research findings in practice. The internal consistency of the three scales used ranged from 0.52 to 0.83.

Using a cross-sectional survey design, Butler (1995) examined nurses' attitudes toward research in practice and their awareness of, and involvement in research-related activities. A convenience sample of 348 nurses, consisting of 310 staff nurses and 38 leadership nurses, was obtained from a Canadian teaching hospital. Seventy two percent of the staff nurses were educated at the diploma level. Butler determined that while staff nurses clearly stated they valued nursing research, only 53% had used research findings in the clinical setting. The instrument used to collect data appeared reliable as Cronbach's alpha ranged between 0.67 and 0.83.

Veeramah (1995) assessed the attitudes and research needs of nurses practicing in mental health settings. This exploratory study had a convenience sample of 118 nurses. The respondents clearly demonstrated positive attitudes toward nursing research. In addition, 70% indicated that, to some extent, research findings were used in their setting to improve patient care. The education level of the respondents and the reliability of the questionnaire were not indicated.

Fawcett and Lainof (1996), using a descriptive survey design, studied perioperative nurses' knowledge and attitudes toward research, and their perception of barriers to conducting research. A convenience sample of 54 nurses was obtained. Thirty nine percent of the sample were educated at the baccalaureate level or higher. In this study, less than 60% of the respondents indicated that they were interested in nursing research. In addition, only 53% of the nurses indicated that nursing research was used in their clinical practice setting. The reliability of the questionnaire developed by Fawcett and Lainof was not reported.

In summary, the studies reviewed in this section indicate conflicting findings. While some studies have linked positive attitudes toward nursing research with participation in research activity, others have found that although positive attitudes existed, research activity remained at a low level.

The results of these studies must be interpreted with caution. Of the studies reviewed, only three (Alcock et al., 1990; Hicks, 1993; Wells & Baggs, 1994) indicated random sampling. The remaining studies either did not indicate the method of sample selection, or obtained their sample non-randomly. In addition, in six of these studies the percentage of nurses educated at the baccalaureate level or

higher was significantly greater than that in the general population. However, the instruments used in all but four of the studies indicated satisfactory reliability. These results provide confidence that most studies did indeed measure nurses' attitudes toward nursing research. Due to inconsistencies regarding sample collection techniques and sample characteristics, the generalizability of these findings to staff nurses is not possible.

#### **Factors Which Impact on Nurse's Attitudes Toward Nursing Research**

Several factors are suggested to influence nurses' attitudes toward nursing research, and the utilization of nursing research in nursing practice. These factors include: the nurse's level of education; the nurse's perception of support for nursing research in the nurse's employing agency; and various personal factors such as age and the area of employment. Each of these will be discussed in the following pages.

#### **Education Level**

The nurse's level of education may affect attitudes toward research (Alcock et al., 1990; Bostrom et al., 1989; Eckerling, Bergman, & Bar-Tal, 1988; Ehrenfeld & Eckerling, 1991; Fugleberg, 1986; Hicks, 1993; Marsh & Brown, 1992;

O'Brien & Heyman, 1989; Poster et al., 1992; Robichaud-Ekstrand, 1995; Robichaud-Ekstrand & Sherrard, 1994).

Fugleberg (1986), using a descriptive correlational design, investigated the attitudes of nurse administrators and staff nurses toward nursing research. The findings indicated that level of education was positively related to both involvement in research activity and positive attitudes toward nursing research. Of the convenience sample of 118, 65% were medical-surgical staff nurses. The reliability of the Killen tool, which was used by Fugleberg to collect data, was not indicated.

Eckerling et al. (1988) studied the perceptions and attitudes of university nursing students toward research. Eckerling et al. identified a positive correlation between positive attitudes toward research and level of university education. However, a limitation of this study is that it was based on attitudes of a convenience sample of 250 post basic baccalaureate, masters and doctorate students. The perceptions of nurses enrolled in educational programs may be biased toward research as being important, and may not reflect the opinions of nurses in general.

Using the same instrument, a second study to identify perceptions and attitudes of registered nurses to research was completed (Ehrenfeld & Eckerling, 1991). Ehrenfeld and Eckerling determined that nurses perceived that research is

an integral part of the nurse's role. This finding was significantly higher for those nurses who were working toward, or had a Masters degree. Of the convenience sample of 166 registered nurses, oncological and geriatric nurses demonstrated more positive attitudes toward research activities. In Ehrenfeld and Eckerling's study, the education level of the respondents was significantly higher than that of nurses in the general population, as more than 41% were educated at the baccalaureate level or higher. The instrument used in these studies demonstrated satisfactory reliability with Cronbach's alpha for each area greater than 0.81 in the first study and 0.76 in three of four parameters in the second. The items measuring the fourth parameter 'attitudes' demonstrated a Cronbach's alpha of 0.62.

Champion and Leach (1989) noted that nurses who had completed a research course as part of their basic education reported more positive attitudes toward nursing research than those who had not. However, the completion of a research course at the undergraduate level was not related to research utilization.

O'Brien and Heyman (1989) conducted an exploratory study to determine nurses' attitudes and knowledge of nursing research, and their perception of research priorities. They determined that nurses who were involved in courses in higher education were more knowledgeable

regarding nursing research and demonstrated more positive attitudes toward nursing research. Generalizability of this study may be limited as information concerning how the sample of 175 was selected, and the reliability of the research instruments used to collect data was not indicated.

Using a descriptive survey design, Bostrom et al. (1989) studied staff nurses' attitudes toward nursing research. All registered nurses in a teaching hospital were surveyed, and a response rate of 78% ( $n = 720$ ) was obtained. In Bostrom et al.'s study baccalaureate prepared nurses felt that the conduct of research was a desirable part of the nurses role; they felt better prepared to conduct research; and they saw it as a reasonable part of their job expectations. While diploma prepared nurses felt that nursing research was important to patient care, in contrast to the baccalaureate prepared nurses, those who were diploma prepared were unwilling to place nursing research above patient care. The Boothe Attitudes on Nursing Research Scale, which was used by Bostrom et al. to collect responses, appeared reliable as coefficient alpha ranged between 0.64 to 0.87. These results provide some degree of confidence that the study did indeed measure nurses' attitudes toward nursing research.

Similar findings were reported by Alcock et al. (1990). Alcock et al.'s study, done in Canada, found that nurses

educated at the baccalaureate level indicated a higher perceived value of nursing research, a greater perceived role in research, and more research experience than did those educated at the diploma level.

Using Alcock et al.'s (1990) questionnaire, Robichaud-Ekstrand and Sherrard (1994) examined the perceptions of nursing research among cardiac nurses in a Canadian teaching hospital. While all 313 nurses employed in this setting were invited to participate in the study, only 145 completed the questionnaire. The nurses in this study demonstrated a positive attitude toward nursing research as evidenced by the following results: 87% of nurses believed that research findings provided the base for clinical decision making; 91% agreed that their main role in research was to apply research findings to nursing practice, and 78% indicated that they were interested in participating in research projects in their workplace.

Robichaud-Ekstrand and Sherrard (1994) determined that while baccalaureate nurses had more research experience than did diploma nurses, diploma nurses demonstrated a more positive attitude toward nursing research. This is a significant finding as further analysis identified that most of the nursing care coordinators and managers, who may be in a position to influence nursing research activity, were prepared at the baccalaureate level. Robichaud-Ekstrand

(1995), using a French-translated version of Alcock et al.'s (1990) questionnaire with 4,579 nurses revealed similar findings in that diploma prepared nurses indicated a more positive attitude toward nursing research. While positive attitudes toward nursing research were indicated in both studies (Robichaud-Ekstrand, 1995; Robichaud-Ekstrand & Sherrard, 1994), only 48% reported that they had changed their nursing practice based on research. In all three studies (Alcock et al., 1990; Robichaud-Ekstrand, 1995; Robichaud-Ekstrand & Sherrard, 1994), the questionnaire demonstrated satisfactory reliability.

Marsh and Brown (1992) assessed nurses' attitudes toward nursing research using a convenience sample of 144 staff nurses. Their findings identified that the higher the educational degree, the more positive were the nurses' attitudes toward nursing research. In addition, nurses with research experience demonstrated more positive attitudes toward nursing research than did those without experience. Sixty one percent of the nurses in this sample were prepared at the baccalaureate level or higher, which may have had an impact on the results. However, the reliability analyses of the scales used to collect data demonstrated high internal consistency.

Similar findings were presented by Poster et al. (1992). Poster et al. examined psychiatric nurses' attitudes



toward and involvement in nursing research. Their study revealed that a positive relationship existed between the nurses' level of education and both their involvement in, and attitude toward nursing research. Poster et al. used a convenience sample of 92 nurses of which 63% were educated at the baccalaureate level or higher. Similarly, Wells and Baggs (1994) noted that advanced practice nurses, all of whom were educated at a Master level or higher, indicated significantly greater value for and use of research findings than did staff nurses.

Butler (1995) identified a significant relationship between education level and research utilization. Nurses educated at the baccalaureate level were twice as likely to use research findings in clinical practice than were nurses educated at the diploma level.

The nurses decision to become involved in, or to use nursing research will also be dependent on whether or not the nurse feels competent to do so. Several studies have identified this factor (Bostrom et al., 1989; Butler, 1995; Clifford, 1993; Hicks, 1993; Poster et al., 1992; Walczak et al., 1994). Perceived obstacles to participation in research activities include: lack of knowledge or skill (Bostrom et al., 1989; Butler, 1995; Clifford, 1993; Hicks, 1993; Poster et al., 1992; Walczak et al., 1994), and lack of confidence (Bostrom et al., 1989; Butler, 1995; Hicks, 1993). Ehrenfeld

and Eckerling (1991) found a positive correlation between perceived ability to perform research and nurse's attitudes toward nursing research.

The purpose of Clifford's (1993) exploratory study was to examine the difficulties encountered by nurse teachers in supporting students in research studies. According to Clifford, while most of the respondents indicated a positive attitude toward nursing research, more than 50% of nurse educators studied indicated that they did not feel adequately prepared to undertake research work. These nurse educators were employed in a college setting rather than a university. The findings of this study must be interpreted with caution as this small scale exploratory study was completed in a country other than Canada, and the level of education of the convenience sample of 40 nurse educators was not included. In addition, the reliability of the instrument used to collect data was not indicated. It would be inappropriate to generalize these findings to all nurse educators.

In Walczak et al.'s (1994) study, while 86% of the respondents were educated at the baccalaureate level or higher, more than 80% indicated that they had insufficient knowledge and skills to evaluate nursing research.

The purpose of Pearcey's (1995) study was to identify the self-perceived research skill needs of trained nurses.

In this study, less than ten percent of nurses indicated that they were satisfied with their research skills. Nurses employed as educators were more satisfied with their skills than were those employed in clinical areas. While the settings involved in this study were randomly selected, the 398 respondents were selected on the basis of convenience. Reliability analyses were not indicated, however, the test-retest correlation for the pilot study was 0.92. Similarly, in Veeramah's (1995) study, more than 80% of those surveyed indicated that they required assistance to understand and use research findings in nursing practice.

A relationship between nurses' attitudes toward nursing research and their education level is evidenced in the research literature. While most studies suggested a positive correlation between educational level and attitude toward nursing research (Alcock et al., 1990; Bostrom et al., 1989; Butler, 1995; Eckerling et al., 1988; Ehrenfeld & Eckerling, 1991; Marsh & Brown, 1992; Poster et al., 1992; Rizzuto et al., 1994; Wells & Baggs, 1994), two recent Canadian studies (Robichaud-Ekstrand & Sherrard, 1994; Robichaud-Ekstrand, 1995) did not support this finding. As well, the nurses' knowledge base and perceived level of competency regarding nursing research will influence nursing research participation.

Most of the instruments used to collect data in these

studies indicated satisfactory reliability. However, generalizability of these findings is limited due to the following: nonrandom sampling; a higher than average percentage of nurses educated at the baccalaureate level; and nurses in varying employment positions.

### **Administrative Support**

The gap between nursing research and nursing practice may reflect the belief by nurses that their work environment is not supportive of conducting nursing research or questioning present practice. Nurses have identified lack of support from nursing administration and the employing agency as a block to nursing research productivity (Alcock et al., 1990; Champion & Leach, 1989; Funk et al., 1991; Poster et al., 1992).

Components of administrative support identified in the literature include the following: time off and funding to attend research conferences; clinical release time to participate in research activities; availability of pertinent nursing research journals; recognition for participation in research activities; and, the presence of nursing leaders who support the utilization of nursing research in nursing practice (Champion & Leach, 1989; Titler et al., 1994).

Champion and Leach (1989) suggested that administrative

support was significantly correlated with research use. Champion and Leach demonstrated that nurses who felt that administrative support was present, were more likely to use nursing research findings in nursing practice.

In Alcock et al.'s (1990) study, less than 50% of the nurses surveyed perceived that they were encouraged and supported by nursing administration to question nursing practice, to develop more effective and efficient methods of practice, or to conduct nursing research. Alcock et al.'s findings were supported by Robichaud-Ekstrand (1995). However, in Alcock et al.'s study, in comparison to diploma educated nurses, baccalaureate nurses had a greater perception of a supportive research climate in the health care agency. As well, in both studies, greater than 70% per cent of nurses indicated that they would be interested in participating in research activity if it was part of the work assignment.

Bostrom et al. (1991) examined nurses' attitudes toward nursing research prior to, and after involvement in data collection for a nursing research study. Following the data collection experience, they described their work environment as more hostile toward nursing research than they did prior to the experience.

Funk et al. (1991) studied nurses' perceptions of barriers to using research findings in practice. Of the top

ten barriers identified, eight related to the practice setting. Greater than 75% of the respondents felt that they did not have the authority to change patient care procedures, and that time did not allow the implementation of new ideas. As well, 70% perceived that administration would not permit them to implement changes in nursing practice. While the instrument used to collect data demonstrated satisfactory reliability, two limitations which may have an impact upon the generalizability of these findings were evident. While this stratified random sample consisted of 924 direct care givers, 20% also had some administrative duties. As well, 50% of the respondents were educated at the baccalaureate level or higher. These findings were supported by Poster et al. (1992). The nurses in Poster et al.'s study viewed lack of administrative support as a constraint to being involved in nursing research.

Forty-four percent of the nurses in Veeramah's (1995) study indicated that they received little administrative support to facilitate research-based practice. Similarly, 44% of the perioperative nurses in Fawcett and Lainof's (1996) survey believed that administrative recognition for nursing research was not present in their setting.

According to Marsh and Brown (1992), nurses found their clinical setting to be neither conducive or inhibitory

toward involvement in nursing research. However, they did indicate that their future environment should be more conducive to participation in research activity. The desire for a more conducive future environment was positively correlated with positive attitudes toward nursing research, and previous research experience.

A study by Bostrom et al. (1989) identified findings contrary to those presented above. In this study, nurses perceived that administrative support for nursing research activity and the implementation of research findings in the clinical setting was present. However, they also indicated that lack of time precluded significant participation in research-related activities. Of the 720 nurses surveyed, 73% held positions at the staff nurse level.

Similar findings were presented by Kyei (1993). The nurses in Kyei's study also felt that administrative support was present. However, Kyei utilized a convenience sample of 71 nurses which consisted of 17 head nurses, and 25 student nurses in the final year of their nursing program. The potential impact that the inclusion of nurses with possible administrative functions, and students not yet exposed to the work environment as fully qualified nurses may have had on the studies findings was not addressed. In addition, none of the nurses in this study were educated at the baccalaureate level.

In a recent study in a Canadian teaching hospital, 60% of those surveyed felt that administration encouraged questioning of nursing practice, while 71% indicated administrative support for those who conduct research (Robichaud-Ekstrand & Sherrard, 1994). While administrative support was indicated, only 48% reported that they had changed their nursing practice based on research.

Similarly, the nurses in Butler's (1995) study indicated that support for nursing research activity was present. However, only 53% of the staff nurses indicated that they had previously used research findings in the clinical setting.

Associated with administrative support and widely identified by nurses as a significant block to using research findings and conducting nursing research is lack of time (Alcock et al., 1990; Bostrom et al., 1989; Butler, 1995; Champion & Leach, 1989; Clifford, 1993; Fawcett & Lainof, 1996; Funk et al., 1991; Hicks, 1993; Marsh & Brown, 1992; Poster et al., 1992; Rizzuto et al., 1994; Walczak et al., 1994). Clifford (1993) studied nurse educators involvement in nursing research activities. While positive attitudes toward nursing research were evident, lack of time was viewed as the most significant deterrent affecting participation in nursing research.

In a study by Poster et al. (1992), nurses identified



lack of time as a major constraint to being involved in nursing research activities, however, 50% also indicated that less than 10% of their employment time should be allocated to research activities. The authors concluded that nursing administrators can increase research activities by providing time, resources, and encouragement to those involved in nursing research.

As suggested in the literature, nurses are not always informed regarding the resources to support nursing research in their agencies (Alcock et al., 1990; Rizzuto et al., 1994; Robichaud-Ekstrand & Sherrard, 1994). In Alcock et al.'s study, 45% of those surveyed were not aware of the research resources available at their agency. Robichaud-Ekstrand and Sherrard determined that greater than 60% of nurses were not informed.

In Rizzuto et al.'s (1994) study similar findings were identified. In this study, awareness of research supports in the work place was identified as a predictor of past and current participation in research activities. Even though eight of the nine agencies surveyed included nursing research activities in the job description for nurses, had nursing research committees, and provided release time for conducting nursing research, the findings suggested that nurses were only moderately aware of the existence of such supports.

Conflicting findings regarding the perception of administrative support for nursing research activity are evident in the research literature. While several studies indicated a lack of administrative support (Alcock et al., 1990; Champion & Leach, 1989; Fawcett & Lainof, 1996; Funk et al., 1991; Poster et al., 1992; Robichaud-Ekstrand, 1995; Veeramah, 1995), others suggested that administrative support was present in their agencies (Bostrom et al., 1989; Kyei, 1993; Robichaud-Ekstrand & Sherrard, 1994). The literature clearly indicates that nurses lack the time necessary to participate in nursing research. As well, many nurses are not informed regarding the support for nursing research in their employing agencies.

### **Personal Factors**

From the professional nursing literature and research it seems that nurses' attitudes toward nursing research and their subsequent involvement in the research process may be related to several personal factors. These personal factors included: age; number of years since basic nursing education; employment position, and employment setting (Alcock et al., 1990; Fugleberg, 1986; Funk et al., 1991; Kyei, 1993; Robichaud-Ekstrand & Sherrard, 1994).

Fugleberg (1986) indicated that younger nurses scored higher than older nurses on three scales which measured

involvement in, perceived competence in, and attitudes toward nursing research. Hicks (1993) determined that midwives who were 21-30 years old were more likely to have participated in research as part of their academic requirements, while those 41 years of age and older tended to have participated in research activities for professional reasons. In Robichaud-Ekstrand and Sherrard's (1994) study, nurses in the age group 41 to 50 perceived the research climate to be less supportive.

Robichaud-Ekstrand (1995) indicated that nurses with six or more years of experience since graduation scored significantly higher in the categories of perceived value, role, and interest in nursing research than did those with less clinical experience. Similarly, Pearcey (1995) indicated that younger nurses were significantly more likely to agree that research could improve patient care, than were nurses who received their education more than 20 years ago.

In contrast, several studies determined that age was not significantly correlated with attitude toward nursing research or research utilization (Champion & Leach, 1989; Marsh & Brown, 1992; Poster et al., 1992). In addition, attitudes toward nursing research were not related to employment status (full-time, part-time, or casual) (Butler, 1995; Marsh & Brown, 1992; Poster et al., 1992).

However, Pearcey (1995) noted that night shift nurses

viewed research as less important to patient care than did day shift nurses. In addition, nurses who typically worked the night shift were less satisfied with their research abilities.

Hicks (1993) noted that midwives in administrative positions and educators demonstrated more positive attitudes toward research, and were more likely to have initiated research than those working in clinical areas. As well, Fugleberg (1986) suggested that while no significant difference in attitudes toward nursing research existed, nurses in administrative positions reported greater involvement in research activities than did nurses working at the staff nurse level. According to Butler (1995), nursing leaders were five times more likely to utilize research in the clinical practice setting than were staff nurses.

According to Alcock et al. (1990) public health nurses perceived nursing research as more valuable than did hospital nurses. This may have reflected the increased independence and autonomy seen in community practice. With much of health care presently moving into the community, it would be beneficial to identify community nurses' attitudes toward the value of nursing research.

While the literature pertaining to personal factors is limited, it appears that there may be a link between age,

the number of years since basic nursing education, employment position, employment setting, and the utilization of nursing research in nursing practice.

### **Summary of Literature Review**

There is a significant volume of literature pertaining to nurses' attitudes toward, and involvement in nursing research. It should be noted however, that all of the findings presented above represent self-reported attitudes and behaviors. The potential for bias inherent in self-reporting must be acknowledged.

There is a relationship between nurses' attitudes toward nursing research, their utilization of nursing research in nursing practice, and their education level. As well, a significant theme identified was the impact that the nurse administrator's attitude toward research may have on the research environment, and hence, on staff nurse's research attitudes. In addition, varied personal factors may have an impact upon the staff nurse's attitude toward nursing research.

The importance of providing research-based patient care, commonly referred to as evidence-based care, has been well documented. The utilization and conduction of nursing research is necessary to provide quality, cost efficient patient care. Since nurses' attitudes toward nursing

research have been linked to use of research findings resulting in the provision of evidence-based care, the identification of nurses' attitudes toward nursing research is of paramount importance. While studies which identify nurses' attitudes toward nursing research exist elsewhere, an analysis of this sort has not been done in Newfoundland and Labrador.

### **Chapter 3**

#### **Methodology**

##### **Research Design**

A descriptive design was used to study staff nurses' attitudes and perceptions toward nursing research. Data were collected using a questionnaire designed by Alcock et al. (1990) (see Appendix A). Permission to use the questionnaire was obtained. This study is an approximate replication of Alcock et al.'s study. In the present research, the section of the questionnaire pertaining to demographic data was modified, and using the data obtained from this revision, additional statistical analysis was completed.

##### **Sampling Plan**

The population of interest included all staff nurses/direct caregivers in Newfoundland and Labrador. The Association of Registered Nurses of Newfoundland (ARNN) 1995-1996 statistics indicated that 4181 staff nurses, commonly referred to as direct care givers, were registered with the Association. Of the total, 3388 staff nurses had given permission to have their names and addresses released for the purposes of nursing research (Heather Hawkins, personal communication, August 8, 1995). The research proposal was reviewed by the ARNN and consequently, the names of the 3388 staff nurses were provided.

The goal of this study was to obtain a random sample of 352 nurses. The sample size was determined using Cochran's equation - formula 4.1. The equation was completed using the following measurements: the population size, a conservative estimate of the population proportion 0.50, and a 95% confidence interval (Cochran, 1977, p. 75).

The particular sampling procedure used was systematic random sampling (Agresti & Finlay, 1986). A name was chosen at random from the list provided by the ARNN and every 5th name listed after that initial name was selected until the desired sample number was obtained. The list of names provided by the ARNN was constructed according to registration numbers which are sequentially assigned as nurses establish registration in the province.

This sampling procedure was appropriate in that no cyclic bias was inherent in the list of names. It provides as good a representation of the sample yet is easier, and therefore, may be more accurate than the use of a random numbers table (Agresti & Finlay, 1986).

Since mail out surveys produce a low response rate, several steps were taken to obtain the required sample size. Jackson (1988) indicated that a response rate of 50% in a mail out questionnaire is considered average. In addition, given that Alcock et al. (1990) obtained a 45% response rate to her survey, coupled with indications from the literature



that the proposed topic was of interest to nurses, a response rate of 50% in this survey was anticipated. Given the expected response rate of 50%, the population was oversampled by 100% and 704 questionnaires were distributed. The use of both a questionnaire that was relatively short and easy to complete, and a stamped return envelope were also suggested to increase the response rate (Jackson, 1988). Consequently, it was anticipated that the required sample size of 352 would be obtained.

#### **Procedure**

On November 7, 1995, the questionnaire was mailed to 704 staff nurses selected by systematic random sampling from the list provided by the ARNN. Included with the questionnaire were an explanatory letter (see Appendix B), and a stamped self addressed return envelope. The nurses were requested to complete the questionnaire and return it to the researcher. The cover letter indicated that completion and return of the questionnaire would be considered as voluntary informed consent.

Two months following the mail out of the questionnaire, 321 completed questionnaires were returned. Five questionnaires were returned due to lack of a forwarding address. Two questionnaires were omitted from data analysis due to an excessive number of unanswered questions.

Consequently, a final sample size of 319 was obtained. This number represents 45% of the questionnaires distributed, and 90% of the ideal sample size as determined by Cochran's equation.

### **The Questionnaire**

The questionnaire, designed by Alcock et al. (1990), consists of 59 questions, comprising six sections which address the following: demographic data, perceived value of nursing research, perceived role in nursing research, interest in research, experience in research, and perception of research climate in the workplace. In addition, a section is provided at the end of the questionnaire for additional comments.

For the purposes of this study two questions were added to the questionnaire. A question pertaining to the respondent's employment setting was added to the demographic section. The literature suggested that nurses' attitudes and perceptions toward nursing research may be influenced by employment setting. Consequently, to obtain information related to the variable of employment setting, this change in the demographic section from Alcock et al.'s questionnaire was necessary.

The second question was added in the section pertaining to research experience. Following review of the

questionnaire by the researcher's thesis committee, it was suggested that a question pertaining to the presentation of research results be included. Consequently, the question "I have presented research results" was added. With the addition of the two questions, the questionnaire used in this study consisted of 61 questions.

#### **Demographic Data**

Section I contains 7 questions pertaining to characteristics of the sample. The following demographic data was requested: employment status, age, setting of current employment, number of years in current position, number of years since basic nursing education completed, highest level of education in nursing, and present enrollment in education programs.

#### **Perceived Value of, and Role in, Nursing Research**

Sections 2 and 3 measure perceived value of nursing research (5 items) and perceived role in nursing research (10 items). Each of these sections consists of a four point Likert scale allowing the following responses: strongly agree; agree; disagree, and strongly disagree.

#### **Interest in Nursing Research**

Section 4 consists of 8 items measuring interest in

nursing research. This section is also composed of a four point Likert scale. The responses include: very interested; interested; slightly interested, and not interested.

#### **Research Experience**

Section 5 is composed of 13 questions related to research experience. A "yes" or "no" response is requested.

#### **Perception of Research Climate**

Section 6 contains 16 questions pertaining to the perception of the research climate in the employing agency. This section is composed of two parts: perceived support for nursing research, and awareness of support for nursing research.

**Perceived support for nursing research.** The first part measures perceived support for nursing research (9 items). It includes the same four point Likert scale as in sections 2 and 3.

**Awareness of support for nursing research.** The second part is composed of 7 items measuring awareness of available supports for nursing research in the employing agency. The responses are rated as "yes", "no", or "don't know".

### **Reliability and Validity**

To ensure content validity, Alcock et al. (1990) pretested the questionnaire using 19 randomly selected nurses in a pediatric hospital. In addition, the questionnaire was reviewed by a committee with expertise in survey design. Reliability analyses, following the initial study of 178 randomly selected nurses, indicated high internal consistency. Cronbach's alpha for the five sections ranged from 0.781 to 0.868.

Alcock et al.'s (1990) questionnaire was also utilized by Robichaud-Ekstrand and Sherrard (1994). In this study, high internal consistency was also indicated with Cronbach's alpha for the five sections ranging between 0.721 to 0.879.

Robichaud-Ekstrand (1995) had a version of Alcock et al.'s (1990) questionnaire translated into French. The Cronbach reliability coefficient was greater than 0.65 in all areas indicating satisfactory internal consistency.

In the present study, Cronbach's alpha was greater than 0.696 in four of the five sections of the questionnaire. However, in the section measuring perceived value of nursing research, Cronbach's alpha was 0.416. There were only five questions in the section pertaining to perceived value of nursing research. Two of the five questions were reversed, that is, worded negatively, and accounted for a significant portion of missing data in this study.

### **Data Analysis**

The computer program, Statistical Package for Social Sciences (SPSS) was used to analyze the data to determine staff nurses' attitudes and perceptions toward nursing research. Answers to the questionnaire were coded and entered in an SPSS file. Both descriptive and inferential statistics were used for data analysis.

### **Characteristics of the Sample**

Descriptive statistics were used to describe the characteristics of the sample. Means and standard deviations were calculated. The characteristics of the sample were also combined for data analysis. Status of current employment was combined into three groups as follows: full-time; part-time; and, those employed on a casual basis. Age was combined into three categories as follows: 30 years and less; 31-40 years, and 41 years and older.

For the variable of current employment, seven categories were utilized. The seven categories were as follows: teaching hospital; non-teaching hospital; nursing home; community health center; public health setting; and continuing care setting, and all others. A total of ten respondents were included in the 'other' category. These respondents were either employed in settings that could not be placed within the above categories (3 respondents) or

were retired, unemployed, or employed in a field other than nursing (7 respondents).

The variable indicating the number of years since completion of basic education was combined as follows: 1-4 years; 5-10 years; 11-20 years, and 21 years or more. The highest level of nursing education was combined into two groups as follows: all diploma nurses including those who had obtained a speciality certificate (group 1), and all those educated at the baccalaureate level and higher (group 2). Group 2 includes generic baccalaureate, post basic baccalaureate, baccalaureate and speciality certificate or diploma, and master's prepared nurses. As further analysis was required, this variable was recategorized into three groups as follows: diploma only (group 1); diploma with a speciality certificate (group 2), and those educated at the baccalaureate level or higher (group 3).

The variable of enrollment in nursing education was categorized as follows: those not enrolled in a nursing education program (group 1) and those presently enrolled in a program (group 2). Group 2 included those enrolled in the following: a post diploma-baccalaureate program; a nursing certificate program such as gerontology, and those enrolled in health related courses such as epidemiology.

The variable of enrollment in a non-nursing education program was coded as follows: those who have not completed

and are not enrolled in a non-nursing education program (group 1) and those who have completed or are currently enrolled in a non-nursing education program (group 2). Group 2 included individuals enrolled in the following programs: computer courses; general university level courses for possible future entry into a nursing program, and various non-nursing baccalaureate programs.

The variable indicating years employed in the present position were collapsed into three categories as follows: those employed five years or less (group 1); those employed between 5 and 10 years (group 2), and those employed greater than 10 years (group 3). A redundancy was noted in the questionnaire following data collection. Those employed for five years may have chosen group 1 or group 2.

### **Statistical Analyses**

Frequency distributions were calculated for responses for each survey item. The responses in each individual section (value, role, interest, and perceived support) were summed to obtain composite scores for data analysis for t-tests and analysis of variance. As in the scoring for the original questionnaire, responses to negatively worded items were reverse scored. A lower score is indicative of greater perceived value for nursing research, more favorable perception of role in nursing research, greater interest in



nursing research, and a more positive perception of support for nursing research in the employing agency (Alcock et al., 1990).

One-way analyses of variance (ANOVA) were calculated on each of the four composite scores (value, role, interest, and perceived support), as a function of employment status, age group, type of employing health care agency, number of years since basic nursing education, highest level of education, and number of years employed in present position.

T-tests were used to compare educational levels (diploma versus baccalaureate), enrollment in a nursing education program (enrolled versus not enrolled), enrollment in a non-nursing education program (enrolled or completed a non-nursing education program versus those who are not enrolled and have not completed a non-nursing education program) on the four composite scores. Since nominal level data were obtained in the categories of research experience and awareness of research supports in the workplace, Chi-square was calculated.

#### **Missing Data**

Anderson, Basilevsky, and Hum (1983) suggest that it is not uncommon to encounter missing data in survey research. In this study, missing data were obtained in section 1 - perceived value of nursing research (2.9%), and section 5,

part 1 - perceived support for nursing research (13.8%). The missing data did not appear to be related to random omission, but was specific to two sections of the questionnaire.

In section 1, the two questions which accounted for most of the missing data (68%) were reversed. The reversed format of the questions may have resulted in lack of clarity to the respondents, and consequently, these responses were omitted by the participants. In section 5, questions 48, 50, 51, 52, 53, and 54 accounted for 97% of the missing data. Many nurses indicated that they were unaware of nursing research occurring in their agency, and consequently, it was difficult to formulate an opinion regarding these questions. Due to the high percentage of missing data in a nonrandom pattern, these observations were not estimated.

The missing data were of two forms. While some respondents omitted an answer without comment, others indicated that they did not know the answer to the question. Cross tabulation was completed to determine and compare the characteristics of the respondents who omitted an answer without comment and those who indicated that they did not know the answer.

### **Limitations**

Self-reports are an effective way to obtain information

associated with people's attitudes (Polit & Hungler, 1991). Considering the research questions for this study, a questionnaire was an appropriate method of data collection. However, there are limitations associated with this method of data collection.

Self reports are only as accurate as the information which respondents provide. Respondents may want to present themselves in a positive manner, and this may conflict with the truth and bias the results. The importance of using nursing research in nursing practice to provide quality patient care is a topic that has gained a great deal of attention in recent years. Consequently, respondents may feel that positive attitudes toward nursing research are socially desirable and should be demonstrated. Polit and Hungler (1991) identify this threat to external validity as the Hawthorne effect.

A second limitation associated with a self report questionnaire is that the researcher is unavailable to clarify ambiguous questions, or simplify complex ones. There is limited assurance that the respondents understood the questions. In this situation, responses may be omitted leading to missing data.

The generalizability of the findings to the study population also requires caution. To assure anonymity, no identifying code was used on the questionnaires.

Consequently, it is not possible to determine if the characteristics of the nonrespondents are similar to those that did respond. However, to determine if the sample was indeed representative of the study population, the demographic data collected was compared to that available from the ARNN.

### **Ethical Considerations**

Several steps were taken to ensure protection of the participants in this study. The proposed research was reviewed and received ethical approval from a Human Investigations Committee. The proposed research was also reviewed by the ARNN. To protect the ARNN membership, approval of the research was required prior to providing the names and addresses of the population of interest. The names and addresses provided by the ARNN included only those nurses who had given consent on the 1995-1996 registration form for their names to be released for the purpose of research. Secondly, complete anonymity was offered. The questionnaires did not contain an identifying code and consequently, the researcher was unable to link responses to participants. As well, nurses were cautioned not to include any identifying data on the questionnaire. Following the selection of names, the list provided by the ARNN was destroyed.

To ensure informed consent, information surrounding the findings, and consent was explained in the attached letter (see Appendix B). Participants were informed that completion and return of the questionnaire would be considered as voluntary informed consent. Participants were also informed that the findings of the study would be presented at conferences and published in nursing journals.

## **Chapter 4**

### **Results**

The findings of this study are presented in five sections. The first section describes the characteristics of the sample. Section two provides a descriptive summary of each of the following: perceived value of nursing research; perceived role in nursing research; interest in nursing research; experience in nursing research; perceived support for nursing research, and awareness of support for nursing research in the employing agency. The third section deals with the relationship between characteristics of the sample and perceptions of nursing research. The fourth section deals with the characteristics of the sample in relation to missing data. Section five includes an overview of the additional comments provided by the respondents.

#### **Characteristics of the Sample**

The majority of the registered nurses who responded to this survey were employed on a full-time basis (62.7%) in teaching hospitals (53.6%), and had been employed in their current position for 10 years or less (68.3%). Almost 73% of the sample were 40 years of age or less. Most respondents were educated at the diploma level (87.8%), and nearly 62% had completed their basic nursing education more than 10 years ago. Less than 14% of the nurses were currently

enrolled in a nursing education program (see Table 1). When the demographic variables of the sample are compared with those compiled by the ARNN (Heather Hawkins, personal communication, August 13, 1996), the sample appears to be representative (see Table 2).

Table 1: Characteristics of the Sample

	n (n=319)	%
<b>Employment status:</b>		
Working full-time	200	62.7
Working part-time	59	18.5
Working on casual basis	53	16.6
Unemployed	5	1.6
Retired	1	0.3
Employed in another field	1	0.3
<b>Age:</b>		
30 years or less	99	31.0
31-40 years	133	41.7
41-50 years	68	21.3
> 50 years	19	6.0
<b>Highest level of nursing education:</b>		
Diploma	202	63.3
Diploma and speciality certificate	78	24.5
Baccalaureate	37	11.6
Master	2	0.6
<b>Length of time working in<sup>1</sup> current position (years):</b>		
< 1 year	27	8.5
1-5 years	99	31.0
5-10 years	92	28.8
> 10 years	94	29.5
<b>Time when basic nursing education completed (number of years ago):</b>		
< 5 years	62	19.4
5-10 years	61	19.1
11-20 years	126	39.5
> 20 years	70	22.0
<b>Current enrollment in a nursing education program:</b>		
Post-diploma baccalaureate	26	8.1
Nursing certificate	12	3.8
Other health related	4	1.3
Not currently enrolled	277	86.8



**Area of current employment:**

Teaching hospital	171	53.6
Non-teaching hospital	43	13.5
Nursing home	39	12.2
Community health center	18	5.6
Public health setting	20	6.4
Continuing care setting	18	5.6
Other*	3	0.9
Not applicable**	7	2.2

\*indicates blood collection agency or rehabilitation center

\*\* indicates unemployed, retired, or employed in a field other than nursing

<sup>1</sup> seven responses missing as these individuals are not currently employed in nursing

**Table 2: Select Characteristics of Nurses in Newfoundland as Compiled by the ARNN (1995-1996).**

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	%
<hr/>	
<b>Employment status:</b>	
Working full-time	62.7
Working part-time	17.5
Working on a casual basis	19.8
<b>Age:</b>	
30 years and less	27.0
31-40 years	36.0
41-50 years	25.5
> 50 years	11.5
<b>Highest level of education:</b>	
Diploma	82.9
Nursing baccalaureate	13.9
Non-nursing baccalaureate	1.2
Nursing master	.8
Non-nursing master	1.0
Doctorate	.1

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### **Descriptive Summaries**

#### **Perceived Value of Nursing Research**

While almost 96% of nurses agreed that research-based knowledge was useful in solving patient care problems, only 72% believed that research promoted accountability for nursing practice. The majority of respondents (87%) indicated that research findings provide the information necessary to make clinical practice decisions. In addition, almost 95% perceived that research improves nursing practice. Fewer nurses (75%) believed nursing research to be cost-effective. These results indicate that nursing research is highly valued, and that nurses support the concept of using nursing research in nursing practice to provide quality patient care.

#### **Perceived Role in Nursing Research**

All nurses agreed that it is the staff nurses' role to identify nursing care problems and suggest ways to improve patient care. Most nurses agreed that it is the staff nurses role to find ways to solve nursing care problems (97%), be aware of research being conducted in their workplace (92%) and apply research findings to nursing practice (96%). More than 96% of the respondents perceived that it is the staff nurses' role to be involved in research if it addresses ways to improve the quality of nursing care.

Eighty six percent of the respondents agreed that nurses should be involved in collecting data for nursing research studies. In addition, 53% believed that they should be involved in collecting data for nursing research studies even if it could not be incorporated into the daily nursing routine. However, only 44% believed that they should be involved in collecting data for non-nursing studies. Fifty eight percent perceived that it is the staff nurses role to conduct nursing research studies.

#### **Interest in Nursing Research**

While most nurses were interested in finding answers to specific nursing problems (97%) and changing their nursing practice based on research findings (88%), only 74% were interested in reading about research studies. In addition, the majority of nurses were interested in participating in research projects in their workplace (86%), knowing the results of research projects in the workplace (97%), and conducting research as part of their work assignment (79%). However, nurses indicated less interest in conducting research if it is not part of their work assignment (45%), and being a member of a nursing research committee (56%).

#### **Research Experience**

The research experience of most of the respondents was

limited. Less than 20% had taken a course in research methodology or statistics. Only 14% had attended nursing research conferences. While 77% had completed questionnaires for a research project, a smaller percentage had conducted interviews (16%), or collected specimens (22%) for a research project. In addition, only 11% had identified a problem which led to a research study.

Participation in the conduct of nursing research was also limited as evidenced by the following: 5% had been a principal investigator of a research project; 10% had been a co-investigator of a research project; 4% had assisted with the writing of a grant proposal; less than 1% had written a grant proposal or received funds to conduct research; 7% had presented research results; and less than 2% had published based on research. A greater percentage (47%) indicated that they had changed their nursing practice based on research.

#### **Perceived Support for Nursing Research**

Most of the respondents perceived limited support for nursing research within their health care agency. While 61% of respondents perceived that nursing administration supports nurses who conduct research, fewer nurses indicated that they are encouraged by administration to question their nursing practice (46%) or to develop more effective and efficient methods of practice through research studies

(49%).

Sixty eight percent of nurses perceived that nurse colleagues are supportive of nurses who conduct research, while only 36% felt that physicians are supportive of nurses conducting research. Seventy percent believed that other disciplines, such as dietetics, psychology, or social work, are interested in collaborating on research projects.

The respondents indicated limited availability of university nursing professors to act as research advisors (46%) or to conduct research in collaboration with nursing staff (32%). In addition, only 44% believed that nurses who participate in the design or data collection of a study receive recognition for doing so.

#### **Awareness of Available Support for Research**

The majority of nurses were unaware of support services for nursing research in their agency. Forty four percent of the respondents did not know if a Research and Ethics Review Committee existed in their agency. In addition, 51% were unaware if nursing was represented on the committee. Nurses were unaware if their agency provided the following: experienced researchers to assist nurses with the conduct of nursing research (47%); secretarial services for nurses submitting research proposals (61%); computer facilities for data processing (40%), or someone to assist with the

analysis of research data (56%). However, a greater percentage of nurses were aware of the availability of library search services in their agency (78%).

### **Characteristics of the Sample and Perceptions of Nursing Research**

#### **Employment Status and Perceived Value, Role, Interest, and Support**

A significant difference ( $p < .05$ ) was found when one-way ANOVA was used to compare employment status (full-time, part-time, casual) and perceived value of nursing research. The post-hoc Duncan multiple range test revealed that nurses employed on a part-time basis indicated a significantly higher perceived value for nursing research than did those employed on a full-time basis. However, there were no significant differences, at alpha .05, between employment status, and perceived role in, interest in, and support for nursing research (see Table 3).

#### **Age and Perceived Value, Role, Interest, and Support**

Results of the one-way ANOVA indicated a significant difference ( $p < .05$ ) between age and perceived value of nursing research. The post-hoc Duncan multiple range test revealed that nurses 41 years of age and older indicated a higher perceived value for nursing research than did younger

nurses. However, at alpha .05, there were no significant differences between age and perceived role in, interest in, and support for nursing research (see Table 4).

**Number of Years Since Completion of Basic Nursing Education and Perceived Value, Role, Interest, and Support**

The one-way ANOVA indicated that the number of years since completion of basic nursing education produced no significant difference in perceived value of, role in, interest in, and support for, nursing research (see Table 5).

**Table 3: ANOVA Comparing Employment Status and Perceived Value, Role, Interest, and Support**

	Full-time (n=200)		Part-time (n=59)		Casual (n=53)			
	Mean	SD	Mean	SD	Mean	SD	F	p
Value	10.99	1.63	10.32	2.41	10.66	1.96	3.089	0.047
Role	18.13	3.47	17.85	3.77	18.66	3.29	0.788	0.456
Interest	15.66	4.33	16.34	4.28	15.89	4.26	0.581	0.559
Support	19.00	5.38	20.36	4.76	20.11	4.11	2.180	0.115

**Table 4: ANOVA Comparing Age and Perceived Value, Role, Interest, and Support**

	30 or < (n=99)		31-40 (n=133)		41 and > (n=87)			
	Mean	SD	Mean	SD	Mean	SD	F	p
Value	11.15	1.42	10.71	1.93	10.37	2.43	3.808	0.023
Role	17.83	3.37	18.35	3.48	18.18	3.64	0.632	0.532
Interest	15.55	4.06	15.77	4.44	15.91	4.52	0.168	0.845
Support	19.46	5.34	19.76	4.79	18.89	5.15	0.767	0.465



Table 5: ANOVA Comparing Number of Years Since Basic Nursing Education and Perceived Value, Role, Interest, and Support

	1-4 (n=62)		5-10 (n=61)		11-20 (n=126)		21 and > (n=70)		F	P
	Mean	SD	Mean	SD	Mean	SD	Mean	SD		
Value	10.89	1.68	11.19	1.05	10.71	2.19	10.33	2.29	2.27	.080
Role	18.21	3.41	17.66	3.57	18.09	3.45	18.59	3.56	0.79	.502
Interest	15.24	3.99	15.56	4.36	15.78	4.37	16.27	4.58	0.66	.577
Support	20.06	4.88	19.67	4.84	19.39	4.98	18.74	5.54	0.80	.493

**Level of Education and Perceived Value, Role, Interest, and Support**

A significant difference ( $p < .05$ ) was found when an independent t-test was used to compare level of education and perceived value of, and support for, nursing research. Diploma prepared nurses indicated higher perceived value of nursing research than did nurses prepared at the baccalaureate level or above. In addition, those educated at the baccalaureate level or above perceived the research climate to be less supportive than did nurses prepared at the diploma level. There were no significant differences, at alpha .05, between level of education and perceived role and interest in nursing research (see Table 6).

As the above findings were not anticipated by the researcher, further analysis was completed. Significant differences ( $p < .05$ ) were obtained when the one-way ANOVA was used to compare three groups (diploma, diploma with a speciality certificate, baccalaureate). The post hoc Duncan multiple range test revealed the following: baccalaureate prepared nurses indicated a greater perceived role in nursing research than did nurses prepared at the diploma level and diploma prepared nurses holding speciality certificates and, baccalaureate prepared nurses indicated greater interest in nursing research than did nurses prepared at the diploma level. There was no significant

difference in interest in nursing research between nurses prepared at the baccalaureate level and diploma prepared nurses holding speciality certificates (see Table 7).

**Table 6: T-test Comparing Diploma and Baccalaureate Education and Perceived Value, Role, Interest, and Support**

	Diploma (n=280)		Baccalaureate/Master (n=39)				
	Mean	SD	Mean	SD	df	t	p
Value	10.70	2.04	11.15	1.18	74.47	-2.02	0.031
Role	18.32	3.48	16.28	3.24	51.11	2.69	0.694
Interest	15.98	4.32	14.00	4.07	50.66	2.82	0.952
Support	19.14	5.17	21.48	3.52	63.51	-3.64	0.015

**Table 7: ANOVA Comparing Diploma, Diploma and Speciality Certificate, and Baccalaureate Education and Perceived Value, Role, Interest, and Support**

	Diploma (n=202)		Diploma & certificate (n=78)		Baccalaureate & above (n=39)			
	Mean	SD	Mean	SD	Mean	SD	F	p
Value	10.74	2.08	10.59	1.95	11.15	1.18	1.086	0.339
Role	18.36	3.59	18.23	3.24	16.82	3.24	3.270	0.039
Interest	16.19	4.34	15.45	4.27	14.00	4.07	4.489	0.012
Support	19.17	5.22	19.09	5.09	21.49	3.52	3.734	0.025

**Area of Employment and Perceived Value, Role, Interest, and Support**

The one-way ANOVA indicated a significant difference ( $p < .05$ ) between area of employment and perceived value of nursing research. The post hoc Bonferroni test indicated that nurses employed in community health centers indicated higher perceived value of nursing research than did nurses employed in teaching hospitals (see Table 8). However, there were no significant differences, at alpha .05, between type of employing agency and perceived role in, interest in, and support for nursing research.

**Table 8: ANOVA Comparing Type of Employing Agency and Perceived Value, Role, Interest, and Support**

	Teaching Hospital (n=171)		Non-Teaching Hospital (n=43)		Nursing Home (n=39)		Community Health Center (n=18)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Value	11.05	1.67	10.40	2.52	10.44	1.48	9.94	3.04
Interest	18.23	3.56	18.26	3.53	17.85	3.01	18.22	4.05
Role	16.37	4.53	15.09	3.82	14.72	3.65	15.06	3.57
Support	19.10	5.21	19.70	5.39	19.44	4.08	19.39	5.30

	Public Health Setting (n=20)		Continuing Care Setting (n=18)		F	p
	Mean	SD	Mean	SD		
Value	11.15	1.18	10.39	1.54	2.417	0.036
Interest	18.00	4.13	17.83	2.96	0.123	0.978
Role	15.80	5.04	15.28	4.42	1.473	0.199
Support	21.35	5.35	19.44	4.98	0.731	0.601

**Current Enrollment in a Nursing Education Program and  
Perceived Value, Role, Interest, and Support**

An independent t-test indicated that current enrollment in a nursing education program produced a significant difference ( $p < .05$ ) in the area of perceived support for nursing research. Nurses who were not enrolled in a nursing education program perceived the research environment to be more supportive than did those currently enrolled in a nursing education program. However, there were no significant differences, at alpha .05, between current enrollment in a nursing education program and perceived value of, role and interest in, nursing research (see Table 9).

**Number of Years in Current Position and Perceived Value,  
Role, Interest, and Support**

Results of the one-way ANOVA produced no significant differences ( $p < .05$ ) when number of years in current position was compared to the four composite scores (see Table 10).

**Table 9: T-test Comparing Current Enrollment in a Nursing Education Program and Perceived Value, Role, Interest, and Support**

	Enrolled (n=42)		Not enrolled (n=277)		df	t	p
	Mean	SD	Mean	SD			
Value	10.90	1.24	10.73	2.05	79.61	-0.75	0.133
Role	18.26	3.48	18.12	3.49	54.26	-0.24	0.636
Interest	14.71	4.25	15.89	4.33	54.76	1.67	0.871
Support	20.42	3.58	19.28	5.23	70.74	-1.80	0.004

**Table 10: ANOVA Comparing Number of Years in Current Position and Perceived Value, Role, Interest, and Support.**

	5 & < (n=126)		5-10 (n=92)		> 10 (n=94)		F	p
	Mean	SD	Mean	SD	Mean	SD		
Value	10.76	1.95	10.75	2.03	10.91	1.61	0.260	0.814
Role	18.02	3.40	17.76	3.28	18.75	3.76	2.058	0.129
Interest	15.34	4.22	15.71	4.05	16.56	4.58	2.240	0.108
Support	19.65	5.34	19.39	4.34	19.27	5.42	0.164	0.849



### **Experience in Nursing Research and Education Level**

Using Chi square, a significant difference ( $p < .05$ ) was identified between experience in nursing research and level of education. Nurses who were educated at the baccalaureate level or higher were more likely to have taken a course in research methodology and/or statistics, identified a problem which led to a research study, completed questionnaires and conducted interviews for a research project, assisted with the writing of a grant proposal, and changed nursing practice based on research findings.

### **Missing Data**

Two types of missing data were evident in this study. While some respondents omitted an answer without comment, others indicated that they did not know the answer to the question. Chi square was used to determine if there was a difference between the two categories of missing data and select characteristics of the sample. The results indicated that there were no significant differences, at alpha .05, between the two categories of missing data and the characteristics of employment status, number of years in present position, and education level. These results indicate there was no significant difference in respondents who omitted an answer without comment and those who indicated that they did not know the answer to a question.

**Additional Comments by Respondents**

Additional comments were included on twenty one percent of the questionnaires. The comments focused on the following three themes: lack of nursing research occurring in the employing agency; lack of time for involvement in nursing research; and lack of administrative support for both participation in nursing research and continuing education. While most nurses stressed the importance of utilizing nursing research to improve the quality of patient care, they identified that heavy workloads related to direct patient care, and lack of administrative support impeded participation in research-related activities.

## **Chapter 5**

### **Discussion**

The purpose of this study was to identify staff nurses' attitudes and beliefs about nursing research through examining their perceptions regarding nursing research. A questionnaire, developed by Alcock et al. (1990), was used to obtain information related to the following: the staff nurse's perception of the value of nursing research; the staff nurse's perception of his or her role in nursing research; the staff nurse's interest in nursing research; the staff nurse's research experience, and the staff nurse's perception of the research climate. The findings from this study will be discussed in relation to the research questions.

#### **Perceived Value of Nursing Research**

The results indicated that nurses place a high value on nursing research. These findings support previous research in which nurses identified research as valuable to their practice (Alcock et al., 1990; Butler, 1995; Robichaud-Ekstrand, 1995; Robichaud-Ekstrand & Sherrard, 1994; Walczak et al., 1994; Wells & Baggs, 1994). However, in the present study, fewer nurses believed that research promoted accountability for practice. Given that professional nurses are accountable for the quality of care they provide

(Bircumshaw, 1990; Gennaro, 1994), and since 95% of nurses in this study believe that nursing research improves nursing practice, there is an obvious ambiguity in this finding. Although most nurses indicated that research improved nursing practice, it appears that they did not equate this with accountability for nursing practice. It may be that nurses in this study have not made the relationship between accountability for nursing practice and nursing research.

In addition, fewer nurses believed research to be cost-effective. Nurses are presently employed in environments where cost cutting and budgetary restraint are occurring. Given this, it is not surprising that nurses who are struggling to provide quality care under difficult economic circumstances would question the cost-effectiveness of nursing research, a topic that is often intangible to most.

Another possible explanation for the above findings may be that the questions pertaining to accountability and cost-effectiveness were reversed, that is, they were worded negatively. It is possible that the reversed nature of the questions resulted in lack of clarity to the respondents. As the questionnaire demonstrated low reliability in the section pertaining to perceived value of nursing research in this population, these results must be interpreted with caution.

### **Perceived Role in Nursing Research**

The results indicated that staff nurses perceived that they have a variety of roles in nursing research. Many of these roles are associated with improving the quality of patient care provided. This finding is consistent with that of previous research (Alcock et al., 1990; Robichaud-Ekstrand, 1995; Robichaud-Ekstrand & Sherrard, 1994). It is noteworthy that 53% of the respondents believed that they should be involved in collecting data for nursing research studies even if it could not be incorporated into the daily nursing routine. The remaining 47% may not feel strongly enough about the importance of research to be involved outside of their daily required shift. On the other hand, this group may feel so strongly about the importance of nursing research that they feel it should be a part of the daily routine, and are unwilling to accept less. Consequently, the unwillingness of nurses to participate in research-related activities outside of their day to day practice may be a reflection of the importance they place on nursing research.

Another factor that may impact on the nurses' willingness to participate in research-related activities outside of their daily routine may be due to perceived lack of recognition for doing so. In the present study, only 44% of respondents believe that nurses who participate in the

design or data collection of a study receive recognition for their contribution. Nurses may be unwilling to contribute personal time and effort when they believe that they will receive limited recognition for participation.

Another surprising finding was that 58% believe that it is the staff nurses role to conduct research studies. Considering that education related to the actual conduct of nursing research occurs at the masters level and above (Robichaud-Ekstrand & Sherrard, 1994), and that less than 1% of the sample were educated at that level, there is no obvious explanation for this finding. However, the perception that staff nurses should conduct research may indicate a lack of knowledge by nurses of the complexity of the research process and the specialized knowledge required to conduct research studies. Alternatively, this finding may reflect a belief by staff nurses that they should be involved in the conduct of nursing research. There are many roles that are appropriate for staff nurses within the complex realm of research. These roles may include collecting data, identifying potential participants, or acting as an advocate for the protection of clients. The perception that staff nurses should conduct research may indicate that staff nurses believe that they ought to be involved in nursing research, and have an important role in various aspects of research.

### **Interest in Nursing Research**

As demonstrated in prior research, the nurses in this study were clearly interested in nursing research (Alcock et al., 1990; Robichaud-Ekstrand, 1995; Robichaud-Ekstrand & Sherrard, 1994). Consistent with previous findings, fewer nurses were interested in reading about research studies (Alcock et al., 1990; Kyei, 1993; Marsh & Brown, 1992; Poster et al., 1992; Robichaud-Ekstrand & Sherrard, 1994; Walczak et al., 1994). A possible explanation for this finding is that nurses may find research articles difficult to read (Bock, 1990; Jennings & Rogers, 1988; Kyei, 1993). Bock suggested that language disparity exists between nursing researchers and nurse clinicians. Nurse clinicians tend to find research difficult to understand and comprehend. This disparity may result in limited reading of research, and may seriously impede the dissemination of research findings which is necessary if nursing care is to be evidence-based. Another plausible explanation may be that nurses have not obtained adequate library experience, and consequently do not have the skills necessary to access pertinent research.

Only 56% of nurses were interested in being a member of a nursing research committee. The comments section of the questionnaire stressed lack of time for research-related activities. Nurses may feel that they do not have the time

available to participate in a research committee. Previous research studies have identified lack of time as a constraint to being involved in research-related activities (Alcock et al., 1990; Bostrom et al., 1989; Butler, 1995; Champion & Leach, 1989; Clifford, 1993; Fawcett & Lainof, 1996; Funk et al., 1991; Hicks, 1993; Marsh & Brown, 1992; Poster et al., 1992; Rizzuto et al., 1994; Walczak et al., 1994). Another possible explanation is that many nurses indicated that their research education and experience was limited. Given this, nurses may not be confident of their research-related skills, and consequently, be reluctant to become involved in a committee where they perceive that these skills are necessary.

### **Research Experience**

The results indicated that the research experience and education of nurses was limited. Given that 86% of the nurses surveyed were educated at the diploma level, this is not a surprising finding. In addition, nurses who were educated at the baccalaureate level or above indicated significantly greater research experience than did those prepared at the diploma level. A research component is incorporated in the baccalaureate nursing education program in Newfoundland, however, less than 12% of the nurses in this study were prepared at that level. While all nursing



education diploma programs in Newfoundland currently include nursing research in their curriculum, this has only occurred in recent years. In this study, almost 62% of the respondents had received their basic nursing education more than 10 years ago.

Forty seven percent of nurses in this study indicated that they had changed their nursing practice based on research. This finding is consistent with previous research that suggested the utilization of nursing research in nursing practice to be limited (Alcock et al., 1990; Butler, 1995; Fawcett & Lainof, 1996; Robichaud-Ekstrand, 1995; Robichaud-Ekstrand & Sherrard, 1994). Given that 86% of the nurses in this sample were educated at the diploma level, the fact that 47% indicated that they had changed nursing practice based on research is an encouraging finding. However, since the research education of nurses was limited, an obvious question is the skill and competency of these nurses to critique and evaluate research to change practice.

The question pertaining to utilization of nursing research in nursing practice was of a broad nature. It did not probe into detail concerning how nurses had changed their practice based on research, and consequently, the question may have been interpreted in various ways. One respondent commented, "I may have changed my practice based on nursing research, if hospital policies reflecting nursing

research, were implemented".

### **Perceived Support for Nursing Research**

Perceived support for nursing research in the employing agency refers to the staff nurses' perception of support for nursing research from the following: hospital and nursing administration, physicians, other disciplines such as social work, university nursing professors, and nursing colleagues. In this study, most nurses perceived limited support for nursing research in their employing agency. Less than 50% of the nurses surveyed indicated that they were encouraged by nursing administration to change nursing practice or to develop more effective and efficient methods of practice through research studies. This finding is consistent with previous research (Alcock et al., 1990; Fawcett & Lainof, 1996; Funk et al., 1991; Poster et al., 1992). As support from nursing administration has been linked with utilization of nursing research in nursing practice (Champion & Leach, 1989; Poster et al., 1992), this finding is of concern. There is no obvious explanation for this finding. It may be that nursing and hospital administration are supportive of nursing research but have not adequately demonstrated or communicated this to staff nurses.

An alternative explanation may relate to the nurses' work environment. Given the traditional hierarchical

environment in which nurses are employed, it is not surprising that they would perceive that administration has provided them with limited authority to question nursing practice or to change practice based on research. Funk et al. (1991) suggests that decentralized administration and shared governance structures may provide nurses with the authority to question their practice and implement practice changes based on nursing research. As the nursing practice environment is modified to reflect the emerging trends in hospital governance, it will be imperative that administration clearly demonstrate and communicate the value of nursing research in providing quality client care.

Another plausible explanation for nurses' perception of lack of support for nursing research may be that support for nursing research does not exist. Nursing administrators may not value evidence-based practice. Alternatively, nurse administrators may not have the necessary education or research experience necessary to firmly support staff nurses in their endeavours to provide evidence-based practice.

The role of nursing administration in facilitating evidence-based nursing practice has been clearly documented (Bock, 1990; Bostrom et al., 1989; Funk et al., 1991; Gennaro, 1994; Rizzuto et al., 1994; Walczak et al., 1994; Wells & Baggs, 1994). The present study attests to the importance of communication and collaboration between

nursing administration and nurse clinicians to determine strategies to facilitate research-related activities. Without the perception of administrative support, it is unlikely that nursing research will be widely utilized in the practice setting.

Nurses perceived limited support for nursing research from physicians. This finding could be related to the fact that physicians do not support nursing research as a effective method to provide and ensure the provision of quality patient care. If physician support for nursing research does exist, it clearly has not been communicated to staff nurses.

Nurses work in collaboration with physicians toward a common goal - to provide quality patient care. To this end, collegial relationships which recognize and support the complementary roles of each discipline are required (Larsen & Baumgart, 1992). The interdependent nature of patient care requires an interdisciplinary supportive approach to research thus ensuring quality through evidence-based practice. It is the responsibility of the nursing profession to clearly communicate and demonstrate to other professions, the value and contribution of nursing research toward the provision of quality evidence-based patient care.

Only 68% of nurses believed that their colleagues are supportive of nurses who conduct nursing research. While

this question focused solely on the conduct of nursing research, it may reflect a perceived lack of support from nurse colleagues for nursing research activities in general. If this is the case, this would certainly stifle research activities and discussions in the workplace.

Nurses also perceived limited availability of university nursing professors to support research-related activities. Given that 86% of nurses are educated at the diploma level, they probably have had limited experience with university nursing professors. It is possible that staff nurses are unaware of the role of university professors regarding nursing research. Another plausible explanation may relate to the fact that a formal relationship structure to provide a link between Memorial University School of Nursing and Newfoundland hospitals does not exist. Newfoundland does not have a university hospital and consequently, joint appointments of university nursing professors have not been established. Additionally, university nursing professors are located in only one area of the province. Nurses employed outside the geographic location of Memorial University's St. John's campus may lack direct contact with university nursing professors who are available to support research-related activities. Alternatively, university nursing professors may not be available to support nursing research activities, or they

may have inadequately communicated their availability to staff nurses. However, the Newfoundland and Labrador Nursing Research Interest Group provides a link between university nursing professors and nurses interested in nursing research across the province. It is also possible that staff nurses have never sought the support of university nursing professors, and therefore, are not aware of their availability. The findings related to the availability of university nursing professors must be interpreted with caution as the questions pertaining to their availability accounted for a significant portion of the missing data. A significant number of respondents commented that they were unaware if university nursing professors were available or not. Regardless of the reason for the above findings, the disparity evident between the nurse educators, who are researchers, and clinical nurses does little to reduce the nursing practice-research gap. Collaborative efforts to bridge the gap between clinical nurses who are best positioned to identify clinical problems and nurses with research expertise to investigate these problems are necessary. As the gap between the academic arena and the practice environment is reduced, a decrease in the practice-research gap may also be realized.

### **Awareness of Available Support for Research**

Structures to support nursing research may include the following: nursing representation on the agency's Research and Ethics Review Committee, availability of experienced researchers to assist nurses with the conduct of nursing research, secretarial services to assist nurses submitting research proposals, computer facilities for data processing and analysis, and a library to provide easy access to pertinent research journals. The nurses in this study indicated limited awareness of available support for nursing research in the employing agency. This finding is consistent with previous research (Alcock et al., 1990; Robichaud-Ekstrand & Sherrard, 1994). There are several plausible explanations for this finding. Nursing administration may not have adequately communicated the existence of the structures to support nursing research at their agency. Additionally, staff nurses may not have made significant efforts to determine if supportive structures for nursing research exist. Alternatively, it is possible that structures to support nursing research have not be instituted in nurses work environments.

## **Characteristics of the Sample and Perceptions of Nursing Research**

### **Employment Status and Perceived Value of Nursing Research**

Nurses who were employed on a part-time basis placed a significantly higher value on nursing research than did those employed on a full-time basis. Prior research examining the relationship between employment status and perceived value of nursing research was not located. A potential explanation for the finding in the present study may relate to the nurse's work environment. Heavy workloads and lack of time have been identified as barriers to the utilization of nursing research in nursing practice (Funk et al., 1991; Poster et al., 1992). Nurses may be frustrated by heavy workloads which have the potential to have a negative impact on the provision of quality patient care. Compared to part-time nurses, this frustration with the work environment may be greater for nurses who work on a full-time basis and thus spend more time in the clinical setting. Day to day frustration may result in nurses placing lesser value on aspects of nursing, such as nursing research, that are sometimes not seen as having a direct impact upon quality patient care on a daily basis. There were no significant differences in the following characteristics of full-time and part-time nurses: age, number of years employed in nursing, type of employing agency, level of education, or



number of years in current position.

### **Age and Perceived Value of Nursing Research**

Nurses 41 years of age and older indicated a significantly greater value for nursing research than did younger nurses. This is in contrast to two previous research studies which did not identify any relationship between age and perceived value of nursing research (Alcock et al., 1990; Robichaud-Ekstrand & Sherrard, 1994). Other studies which did not look at value directly, but examined attitudes toward nursing research, did not identify a relationship between attitudes and age (Champion & Leach, 1989; Poster et al., 1992). In contrast, Fugleberg (1986) identified that younger nurses demonstrated a more positive attitude toward nursing research. However, Robichaud-Ekstrand (1995) identified that nurses 31-40 placed a higher value on nursing research. A plausible explanation for the result of this present study might be that older nurses have been in the workforce longer and thus have a greater career orientation and commitment to nursing. Through their personal professional growth and insight related to years of experience, they see the potential for improved quality of patient care when nursing care is evidence-based. These nurses may appreciate the value of knowledge based on sound research. There was no significant relationship between age

and the highest level of nursing education obtained. Older nurses had not obtained significantly more education than younger nurses.

#### **Type of Employing Agency and Perception of the Value of Nursing Research**

Nurses who were employed in community health centers indicated significantly higher value for nursing research than did nurses employed in teaching hospitals. Due to self selection of type of employing agency, it is difficult to determine the structures inherent in the agencies that were selected as community health centers. However, nurses employed in community health centers in Newfoundland do not function in the traditional role of the community health nurse. There is no obvious explanation for this finding. Compared to the traditional administrative structure in teaching hospitals, the governance structure in community health centers may be less hierarchial and consequently, nurses may perceive greater autonomy and authority for nursing practice. While some nurses may have worked in hospitals where shared governance was said to exist, these hospitals were at the beginning stages of implementation of shared governance. The accountability that is associated with increased autonomy and authority may lead nurses employed in community health centers to value the importance

of providing evidence-based practice.

One previous research study examined value toward nursing research and employment setting (Alcock et al., 1990). Alcock et al. identified that public health nurses placed a greater value on nursing research than did nurses in teaching and non-teaching hospitals. While the finding was not significant, nurses employed in public health settings in the present study had the highest mean score for perceived value of nursing research. This indicates that public health nurses who responded to the survey placed a lower value on nursing research, although not significantly so, than did the other groups. There is no obvious explanation for this finding. However, the structure of community health in Newfoundland was undergoing reorganization. The reorganization, occurring at the same time as the survey, may have threatened internal validity.

#### **Education Level and Perceived Value, Role, Interest, and Support**

Nurses prepared at the diploma level placed a significantly higher value on nursing research than did nurses prepared at the baccalaureate level and higher. These findings are consistent with two previous research studies (Robichaud-Ekstrand, 1995; Robichaud-Ekstrand & Sherrard, 1994). However, numerous other studies identified a positive

relationship between nurses attitudes toward nursing research and education level (Alcock et al., 1990; Bostrom et al., 1989; Eckerling et al., 1988; Ehrenfeld & Eckerling, 1991; Marsh & Brown, 1992; Poster et al., 1992; Rizzuto et al., 1994). Given the numerous research studies that identified a positive relationship between attitudes toward research and level of education, this finding was not anticipated. As indicated in the previous chapter, to allow for further analysis, the categories related to education were subdivided into the following three groups: diploma prepared nurses who had not obtained further education in nursing, diploma prepared nurses who had obtained a speciality certificate, and baccalaureate prepared nurses. Based on the additional analysis, baccalaureate prepared nurses indicated greater perceived role in, and interest in, nursing research than did diploma prepared nurses. This finding is consistent with the literature cited above in which a positive correlation between education level and attitudes toward nursing research was found.

Baccalaureate prepared nurses perceived the employing agency as less supportive of nursing research than did diploma prepared nurses. This finding is consistent with two previous Canadian studies (Robichaud-Ekstrand, 1995; Robichaud-Ekstrand & Sherrard, 1994). However, it is in contrast to Alcock et al.'s (1990) research in which

baccalaureate prepared nurses indicated a greater perception of a supportive climate for nursing research.

Previous research has identified that compared to baccalaureate prepared nurses, those diploma prepared often feel less competent with their research skills. It may be that nurses who lack confidence have not seriously considered participation in research-related activities, and consequently have not sought or considered the existence of support for such an activity. However, concern must be raised when baccalaureate prepared nurses who have greater knowledge of the research process and are better prepared to participate in research-related activities perceive their work environment to be unsupportive of nursing research activities.

The present study also identified that nurses currently enrolled in a nursing education program perceive less support for nursing research than did those who were not enrolled. One plausible explanation for the perception of lack of support by nurses currently enrolled in an education program may relate to difficulty obtaining support for continuing education in general. Nurses obtaining continuing education often require flexible scheduling and time off. It may be that these nurses encountered lack of support from administration and their colleagues in their continuing education endeavours, and consequently, they generalized

this experience to lack of support for research-related activities. In addition, nurses prepared at the baccalaureate level and those who are obtaining further education in nursing may be more knowledgeable regarding the agency supports necessary for participation in both nursing research activities and continuing education. Consequently, they are better positioned to identify that the necessary supports do not exist.

### **Theoretical Framework**

Based on the Theory of Reasoned Action (Ajzen, 1988), whether or not a behavior is undertaken is related to two factors: attitude toward the behavior, and subjective norm. In the present study, the nurse's perceived value of, role in, and interest in, nursing research, were conceptualized as components of attitude toward nursing research. The nurses demonstrated positive attitudes toward nursing research as evidenced by the following: they placed a high value on nursing research, saw research as a part of their nursing role, and indicated interest in being involved in research-related activities. The nurses perception of the research climate in their employment settings was viewed as a component of subjective norm. Despite positive attitudes toward nursing research, nurses perceived limited support for nursing research, and demonstrated limited utilization

of nursing research in nursing practice. Clearly, positive attitudes alone were not enough to ensure utilization. The component of subjective norm, which reflects support from nursing administration, nursing colleagues, university professors and other disciplines, may play a larger role in ensuring utilization of nursing research in nursing practice.

## **Chapter 6**

### **Conclusion, Limitations, and Implications**

#### **Conclusion**

This research identified that staff nurses generally have positive attitudes toward nursing research. The nurses in this study placed a high value on nursing research, were interested in nursing research, and saw research-related activities as part of their nursing role. However, staff nurses indicated limited education and experience in relation to nursing research. The utilization of nursing research in nursing practice was also limited. Staff nurses perceived limited support for nursing research in their employing agencies, and demonstrated limited awareness of available support for nursing research.

#### **Limitations**

In examining the findings of this study, consideration should be given to the following limitations:

1. The sample was randomly selected from a list provided by the ARNN. However, of the 4181 staff nurses registered with the ARNN, 793 had not given permission to have their names and addresses released for the purposes of research, and therefore, were not included in this study. Given that the sample was selected from only 3388 of the 4181 registered staff nurses, the results may not be generalizable to all



staff nurses in Newfoundland and Labrador. To allow complete anonymity, no identifying code was used on the questionnaires. Consequently, it was not possible to identify the demographic data on the individuals who did not respond.

2. In the questionnaire, the categories provided to respondents to identify the number of years in current position (question 8) were not mutually exclusive. Consequently, a respondent employed for either 2 years or 5 years could have selected either of two categories.

3. Section B of the questionnaire, which measured perceived value of nursing research, demonstrated low reliability. Two of the five questions in this section were reversed, and this may have contributed to the low reliability. The reversal of questions may have resulted in lack of clarity to the respondent.

4. A significant amount of missing data occurred in the following two sections: perceived value of nursing research (section B), and perceived support for nursing research (section F, part 1). However, the distribution of the data in these sections was not skewed due to the missing data. While the reliability of the section pertaining to value was low, satisfactory reliability was obtained in the section pertaining to support for nursing research.

5. Lack of clarity was noted in section F, part 2 of the

questionnaire, which measured awareness of services to support research within the employing agency. A respondent who answered "no" to question number 55, need not have responded to question number 56. This was not indicated to the respondents and may have created confusion.

### **Implications for Nursing Practice**

The current study indicated that the goal of providing evidence-based nursing care is not impeded by nurses attitudes toward nursing research. This provides a strong foundation for the development of strategies to encourage the utilization of nursing research in nursing practice. Nurses have positive attitudes toward nursing research, and with appropriate research education and support would probably embrace the opportunity to utilize research findings in practice. In addition, nurses clearly place a high value on research to provide quality patient care, and would likely accept, and be committed to research-based policy changes for nursing practice that would improve patient care and patient outcomes, and promote accountability for nursing practice.

The professional nursing association is also accountable for the promotion of high standards of nursing care. The ARNN has a significant role in supporting the utilization of nursing research. The Association's

commitment to evidence-based practice is evident through the development of both a supportive position statement on nursing research and a nursing research special interest group. In addition, the ARNN supports nursing research by publishing research-based articles, providing research focused conferences, and acting as both an advocate and a resource to support evidence-based nursing practice. An additional strategy for the ARNN may be the coordination and development of a strategic plan for nursing research in the province. To facilitate the development of this plan, representation from nursing practice, nursing research, nursing education, and nursing administration would be necessary.

### **Implications for Nursing Administration**

Nursing leaders have a mandate to provide the best possible patient care, namely evidence-based care. However, the utilization of nursing research in nursing practice is unlikely without strong administrative support. The results of this research study provides nursing administrators with information concerning staff nurse's perception of lack of support for nursing research, a factor that may have a direct impact on the provision of evidence-based nursing care. While the present study did not attempt to determine if administrative support for nursing research was present,

it does provide valuable information to administrators regarding the staff nurses' perception of lack of support. Given that staff nurses clearly perceive lack of support for nursing research from nursing administration, it is critical that nursing leaders institute strategies aimed at providing a supportive nursing research environment.

As administrators strive to provide nursing care in a time of increasing financial restraint, they ought to acknowledge and consider the potential impact of nursing research to enhance the quality of patient care provided, improve patient outcomes, and consequently, aid in the containment of escalating health care costs. While some of the strategies that nursing administrators could consider implementing to provide a supportive environment will involve financial implications, others do not.

To promote evidence-based nursing practice, the following may be considered by nursing administration:

1. As nursing leaders, administrators need to take an active role in promoting research mindedness among staff members. Nursing administrators should clearly convey to staff nurses both the importance of utilization of nursing research in nursing practice, and their professional commitment to research based interventions.
2. In collaboration with staff members, nursing administrators should attempt to identify, and modify or

remove the barriers, such as lack of time, which hinder the utilization of nursing research in nursing practice. The inclusion of staff nurses early in the process is imperative if strategies to counteract barriers are to be effective in promoting research utilization.

3. As nurse administrators are role models, it is imperative that they have the necessary research education and experience to support staff nurses to utilize research in practice. Additionally, as role models, the utilization of nursing research should be evident in their daily practice and decision making.

4. The adoption or development of a model for research utilization, and the development of policies to facilitate the implementation of changes in practice based on nursing research. Additionally, nursing administrators may provide incentives to encourage staff nurses to become involved in research-related activities and practice evidence-based care. Involvement in research-related activities may be included in the annual performance appraisal for nurses.

5. The provision of a supportive environment so that nurses may participate in research-related activities and obtain continuing education. This environment should provide flexible scheduling, and scheduled time to review research, participate in research journal clubs, and to evaluate the usefulness of research for practice. When staff nurses are

expected to participate in research-related activities on their own time alone, it may be perceived that nursing research is not a high priority for nursing administration. Nurse administrators should also provide, and communicate to staff, the existence of tangible supports to facilitate research utilization. This support may include a library with current research journals and flexible hours of operation, secretarial services, and access to computerized literature searches or funds to support such a search at another facility.

6. The development and ongoing support of a research utilization committee. The mandate of such a committee should include the following: identify current problems encountered by nursing staff and following a review of the literature, institute evidence-based strategies to address the problem; and secondly, to consider aspects of nursing practice that appear effective but may not be evidence-based. Nurses may be providing care that appears appropriate and effective, however, if this care is not evidence-based, the best care possible may not be provided. It is imperative that a research utilization committee extend its focus to incorporate more than problem driving activities. If nursing practice is to be truly evidence-based, all nurses must develop research awareness which involves the continual questioning of all aspects of nursing practice (Logan,

1992).

7. Consider the development of a unit level research utilization committee which would bring questioning of current practice closer to the nursing practice environment (Funk et al., 1991). As many patient care strategies have a multidisciplinary aspect, other disciplines may be invited to participate on this committee as necessary. This collaboration will provide an avenue for increased understanding and appreciation of the unique research contributions of various disciplines.

8. Consider employing a nurse researcher, or clinical nurse specialist with a research background. The potential roles of a nurse researcher are numerous and may include the following: serve as a role model for less experienced staff; work with staff nurses to identify and address their research education needs; facilitate the work of the research utilization committee; conduct research in collaboration with staff nurses; summarize and address relevant research findings; and, ensure that staff nurses are recognized for their contributions toward research and evidence-based practice.

#### **Implications for Nursing Research**

The results from this study have implications for future research. These implications include the following:

1. A similar study should be conducted to determine attitudes and perceptions toward nursing research among nursing administrators. Based on the Theory of Reasoned Action, support from nursing administration, representing subjective norm, may be a factor resulting in the lack of utilization of nursing research in nursing practice. Given that these individuals are in unique positions to encourage the utilization of nursing research in nursing practice, determining their attitudes toward nursing research is of paramount importance.
2. This study clearly identified that staff nurses have positive attitudes toward nursing research, however, utilization of nursing research in nursing practice remains low. Given this, further research is required to determine specific barriers that may impact upon utilization. Strategies to modify or remove these barriers could then be instituted.
3. The nurses in this study indicated limited education and experience related to nursing research, therefore, further research to identify the learning needs of nurses would be beneficial. Research in this area must be presented in a positive manner. Pearcey (1995) suggested that the lack of research skills among nurses be accepted without assigning blame. Nurses must be able to identify deficiencies in research skills in a non-intimidating manner. The results of



this research will allow the development of specific strategies to target the research needs.

4. Only one question in the current research study related to the current utilization of nursing research in nursing practice. Consequently, it is impossible to determine the specific nature or extent of research utilization. Research focusing specifically on how nurses currently utilize nursing research in nursing practice would be beneficial.

5. The limitations related to the questionnaire, identified in the present study, must be addressed prior to replication. In addition, Robichaud-Ekstrand (1995), following an analysis of inter-item and item-total correlations, suggested reformulation of 5 items, and deletion of questions pertaining to non-nursing research. As well, since the present research and that completed by Robichaud-Ekstrand (1995) encounter missing data in the area of perceived support for nursing research (section F, part 1), some consideration must be given to reformulation of this section. Following revision of the questionnaire, replication with other nursing populations would be beneficial.

### **Implications for Nursing Education**

Strategies related to nursing research education should focus on both nurses currently in practice, and those

graduating in the future. By the year 2000, all graduating nurses in the Province of Newfoundland and Labrador will be educated at the baccalaureate level. Future graduates should have the skills necessary to critically evaluate the usefulness of research findings to nursing practice. It is imperative however, that nurse educators consider the inclusion of a strong focus on strategies directed toward the utilization of nursing research in nursing practice.

Nurses in this study, currently in practice, indicated limited research education and experience. Following a thorough needs assessment, continuing education programs could be developed to address these needs.

Not all nurses will be interested in, or have the necessary expertise to participate in all aspects of nursing research. Continuing education should include information on the many roles for nurses in research. All nurses can contribute to the establishment of evidence-based practice though participating in the following: questioning nursing practice, reading research literature, participation in research interest groups or research utilization committees, or collaborating with researchers to apply research findings in nursing practice in their clinical areas (Ritchie, 1992).

Nurses must be able to clearly articulate the value of nursing research to each other, to other disciplines, to administrators, and to politicians. Nursing education which

includes education related to public speaking, political action, and lobbying activities would be beneficial.

The process of change often creates uncertainty and ambivalence. Educational strategies should provide information concerning the change process, and the impact that change may have on individuals. Nurses must be aware that the uncertainty associated with questioning and changing current practice is expected and common to all individuals who face change.

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**Survey Questionnaire: Staff Nurses and Research Activities**

The following information will be used only for the purpose of this study. Please do not put your name on the form. Thank you for your participation.

**SECTION A - DEMOGRAPHIC DATA**

1. I am currently employed as a nurse:  
full time \_\_\_\_ part time \_\_\_\_ casual \_\_\_\_ unemployed \_\_\_\_
2. My age is: \_\_\_\_
3. I am currently employed in:  
teaching\* hospital \_\_\_\_ non-teaching hospital \_\_\_\_  
nursing home \_\_\_\_ community health center \_\_\_\_  
public health setting \_\_\_\_ continuing care setting \_\_\_\_  
other (specify) \_\_\_\_\_
4. I completed my basic nursing education:  
\_\_\_\_ years ago.
5. My highest level of education in nursing is:  
diploma \_\_\_\_  
diploma and speciality certificate/diploma \_\_\_\_  
generic baccalaureate \_\_\_\_  
post basic baccalaureate \_\_\_\_  
baccalaureate and speciality certificate/diploma \_\_\_\_  
master's degree \_\_\_\_\_

\* students from Schools of Nursing and Medical students from Memorial University come to your institution for clinical experience.

6. I am currently enrolled in the following nursing education program: 118

7. Please identify the highest level of education obtained in a non-nursing field:

Certificate/diploma\_\_\_\_\_

Bachelor's Degree\_\_\_\_\_

Master's Degree\_\_\_\_\_

Other\_\_\_\_\_

Currently enrolled in the following non-nursing education program:

8. I have been in my current position for:

less than 1 year\_\_\_\_\_ 1-2 years\_\_\_\_\_

2-5 years\_\_\_\_\_ 5-10 years\_\_\_\_\_ Over 10 years\_\_\_\_\_

*In the questionnaire, staff nurse refers to the direct care giver or practicing nurse in all settings (public health/community health and institutional settings)*

**SECTION B - PERCEIVED VALUE OF NURSING RESEARCH**

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On a scale of 1 to 4, please circle the number which best reflects your agreement with the following statements:

	Strongly Agree	Agree	Disagree	Strongly Disagree
9. Research based knowledge assists nurses to solve patient care problems	1	2	3	4
10. Research does not promote accountability for practice	1	2	3	4
11. Research findings provide "the facts" needed to make clinical practice decisions	1	2	3	4
12. Research helps improve nursing practice	1	2	3	4
13. Research is not cost-effective	1	2	3	4

**SECTION C - PERCEIVED ROLE IN NURSING RESEARCH**

On a scale of 1 to 4, please circle the number which best reflects your agreement with the following statements:

It is the staff nurse's role to:

	Strongly agree	Agree	Disagree	Strongly disagree
14. identify nursing care problems	1	2	3	4
15. find ways to solve nursing care problems	1	2	3	4

16. suggest ways to improve patient care	1	2	3	4	120
17. be involved in research if it addresses ways to improve the quality of nursing care	1	2	3	4	
18. be involved in collecting data for nursing research studies	1	2	3	4	
19. be involved in collecting data for non-nursing studies	1	2	3	4	
20. be involved in collecting data only if it can be incorporated into the daily nursing routine	1	2	3	4	
21. conduct research studies	1	2	3	4	
22. be aware of all research being conducted in the workplace (eg. unit)	1	2	3	4	
23. apply research findings to nursing practice	1	2	3	4	

#### SECTION D - INTEREST IN RESEARCH

On a scale of 1 to 4, please circle the number which best reflects your interest in:

	Very		Slightly	Not
	Interested	Interested	Interested	Interested
24. finding answers to specific nursing problems	1	2	3	4

25. reading about research studies	1	2	3	4	121
26. participating in research projects if they are carried out in your workplace (eg.: on your unit)	1	2	3	4	
27. knowing the results of research projects which have been conducted in your workplace (eg.: on your unit)	1	2	3	4	
28. being a member of a nursing research committee	1	2	3	4	
29. Changing your nursing practice based on research findings	1	2	3	4	
30. Conducting research if it is part of the work assignment	1	2	3	4	
31. conducting research even if it is not part of the work assignment	1	2	3	4	

**SECTION E - RESEARCH EXPERIENCE**

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Please circle the appropriate answer.

- |   |     |    |
|---|-----|----|
| 32. I have taken a course in research methodology and/or statistics | Yes | No |
| 33. I have identified a problem which led to a research study       | Yes | No |
| 34. I have completed questionnaires for a research project          | Yes | No |
| 35. I have conducted interviews for a research project              | Yes | No |
| 36. I have collected specimens for a research project               | Yes | No |
| 37. I have been a principal investigator of a research project      | Yes | No |
| 38. I have been a co-investigator of a research project             | Yes | No |
| 39. I have assisted with the writing of a grant proposal            | Yes | No |
| 40. I have written a grant proposal                                 | Yes | No |
| 41. I have received funds to conduct research                       | Yes | No |
| 42. I have attended research conferences                            | Yes | No |
| 43. I have published research results                               | Yes | No |
| 44. I have presented research results                               | Yes | No |
| 45. I have changed my nursing practice based on research findings   | Yes | No |



**SECTION F - PERCEPTION OF THE RESEARCH CLIMATE IN YOUR HEALTH CARE AGENCY** 123

Please circle the number which best reflects your agreement with the following statements as they pertain to your setting:

	Strongly Agree	Agree	Disagree	Strongly Disagree
46. Nurses are not encouraged by Administration to question their nursing practice	1	2	3	4
47. Nurses are encouraged to develop more effective and efficient methods of practice through research studies	1	2	3	4
48. Nursing Administration is supportive of nurses who conduct research	1	2	3	4
49. Nurses are not supportive of colleagues who are involved in research projects	1	2	3	4
50. Physicians are supportive of nursing research	1	2	3	4
51. Other disciplines (dietetics, psychology, social work, etc.) are interested in collaborating on research projects	1	2	3	4
52. University nursing professors are not available to act as research advisors	1	2	3	4

- |  |   |   |   |   |     |
|--|---|---|---|---|-----|
| 53. University nursing professors conduct research studies in collaboration with our nursing staff   | 1 | 2 | 3 | 4 | 124 |
| 54. Nurses who participate in the design or data collection of a study do not receive recognition for participation (eg; authorship or publications) | 1 | 2 | 3 | 4 |     |

**Please circle the appropriate answer.**

- |  |     |    |            |
|--|-----|----|------------|
| 55. There is a Research and Ethics Review Committee in our agency  | Yes | No | Don't Know |
| 56. There is nursing representation on our agency's Research and Ethics Review Committee                         | Yes | No | Don't Know |
| 57. There are experienced researchers in our agency who will help nurses design and/or conduct research projects | Yes | No | Don't Know |
| 58. Secretarial services are available to nurses submitting research or grant proposals                          | Yes | No | Don't Know |
| 59. Library search services are accessible to nurses in our agency   | Yes | No | Don't Know |
| 60. Computer facilities for data processing are available in our agency  | Yes | No | Don't Know |
| 61. Someone to assist with the analysis of the data is available to nursing staff in our agency                  | Yes | No | Don't Know |

Additional comments regarding nursing research may be 125  
written in the space below.

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Thank you for your participation.

## **Appendix B**

### **Explanatory Letter**

My name is Wanda Wadman. I am a Registered Nurse and a student in the Masters of Nursing program at Memorial University of Newfoundland. One of the requirements of my degree is to conduct a research study. My proposed study is on nurses' attitudes and perceptions toward nursing research.

Since your opinions and attitudes are very important to the study results, completion of the attached questionnaire would be greatly appreciated. It should take approximately 20 minutes to complete. To ensure confidentiality of responses, personal identifying data is not requested. A stamped envelope is provided for return of the questionnaire. Completion and return of the questionnaire will be considered as voluntary informed consent.

My supervisor is Shirley Solberg, Associate Professor of Nursing at Memorial University. The study has been submitted and received approval from the Human Investigation Committee at Memorial University of Newfoundland.

Results of this study are available upon request. As well, a copy of the final report will be available at the Health Science Library, and The Association of Registered Nurses of Newfoundland Library. The findings of the study will be presented at conferences and published in nursing

journals. If you have any questions, you may call me collect at 709-364-5883. Thank you very much for your cooperation and assistance.





