

AN EXAMINATION OF BELIEFS OF NURSING STUDENTS REGARDING
SUBSTANCE DEPENDENCE AND ABUSE

BY

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A Thesis submitted to
the Faculty of Graduate Studies
In Partial Fulfillment of the Requirements for the Degree of

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**An Examination of Beliefs of Nursing Students Regarding
Substance Dependence and Abuse**

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Running Head: STUDENT BELIEFS

AN EXAMINATION OF BELIEFS OF NURSING AND
EDUCATION STUDENTS REGARDING SUBSTANCE DEPENDENCE AND
ABUSE

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Dedication

for my angel, always and forever



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Abstract

Nurses are positioned to make substantial contributions to awareness, identification, and treatment of individuals with substance use problems, but may be prevented from doing so due to a negative belief system. The role of formal professional education in shaping beliefs is not clearly understood. However, evidence suggests professional education can influence the development of constructive attitudes and beliefs reflective of current knowledge about substance use problems. The purpose of this study was to identify the beliefs of nursing students, beginning and completing a baccalaureate program, towards substance dependence and abuse.

This exploratory descriptive study used a cross-sectional design to examine the beliefs of nursing students and included students beginning and completing an undergraduate degree in education as a comparison group. The conceptual framework used was Brickman's Four Models of Helping and Coping which examine behaviours individuals display when seeking help or when seeking to help another individual. Seven hypotheses, predicting relationships between groups, were established. A total of 290 subjects completed the Addictions Belief Inventory (ABI), which measures common beliefs about substance dependence and abuse in eight sub-scales, and a demographic questionnaire. Frequencies were calculated for the demographic questions. Independent *t*-tests were computed for each hypothesis. Statistically significant differences between first and final year nursing students were found in two of the sub-scales. Final year nursing students believed there is less need for expert help in the recovery process than

did first year nursing students, and final year nursing students expressed less judgmental beliefs related to substance abuse than first year nursing students.

Implications for education, research, and practice are discussed in light of the findings.

CHAPTER 1

Statement of the Problem

Overall, substance abuse in 1992 cost Canadians \$18.45 billion dollars (Canadian Centre on Substance Abuse, CCSA). It has been identified that 30% (Ducote, 1992) to 50% (Markey and Stone, 1997) of all hospital admissions are related to alcohol abuse. With the ever spiraling costs related to the provision of health care in Canada, health care professionals, including nurses, should have an unquestioned role in the prevention, early intervention, promotion of treatment and education regarding substance dependence and abuse and should acquire these skills as part of their responsibility in providing care to others. Substance abuse is seen by nurses working in emergency rooms, intensive care units, community health settings including midwives & prison as well as by those working directly with alcohol and substance abusing populations (Australian Nursing Federation, 1999). Sheehan (1992) points out that nurses work with a wide population base including groups such as prisoners, prostitutes, children, pregnant women and the homeless and that a heightened awareness of substance abuse is needed to protect these vulnerable populations.

Nurses have stated they feel unprepared to give care to a substance abuser and have identified feelings such as frustration and burnout or being used and/or manipulated by substance abusing clients (Ogborne, Rush, Ekdahl & Fondacaro, 1986; Allen, 1993; Graham, Christy, Emmitt-Myers & Zyzanski, 1997). In addition, the literature identifies that nurses generally mirror the same negative attitudes as the general population does towards substance abuse (Murphy, 1989; Gerace,

Sullivan, Murphy and Cotter, 1992). Detrimental beliefs and negative attitudes lead to the potential for sub-optimal nursing care or may cause the substance-abusing client to terminate the therapeutic relationship resulting in no care at all. Nursing education programs have been criticized for offering little aid in preparing graduates to deal with substance abuse issues (Murphy, 1989; Howard, Walker, Walker & Suchinsky, 1997; Arthur, 2001). Nursing students are the professional nurses of the future and comprise a population of great interest to the nursing profession.

Addictive behaviours are complex, variable and diverse in nature. Over the past decade, addiction researchers have been advancing and testing a model known as the biopsychosocial theory of addiction. The theory identifies that substance dependence is the product of multifaceted interactions amongst a “combination of biological, psychological, social, and spiritual determinants” (Government of British Columbia/ Ministry of Health Services, 2001, ¶ 1). The combination of interactions and the effect of particular factors in each individual affected by the disease will be different (Addictions Foundation of Manitoba {AFM}, 2000a).

The American Medical Association (2001b) has declared both “alcoholism” and drug dependency as primary disease processes. The association maintains doctors and other health care professionals need to be informed about “alcoholism” and drug dependencies, and to create policies and activities that recognize that drug dependencies are, in fact, diseases within the context of the biopsychosocial model.

Purpose of the Study

The purpose of the study was to determine if there were any differences between the beliefs of two groups of nursing students towards substance dependence and abuse. The first group consisted of students beginning a baccalaureate program of nursing education and the second group was completing their final clinical practicum at the conclusion of the baccalaureate education program. Beliefs will be based on current knowledge in the areas of treatment of drug and alcohol dependence and abuse.

Research Questions

The research questions posed for this study include:

1. What are the beliefs of baccalaureate nursing students beginning a nursing education program and completing a nursing education program?
2. What differences in beliefs exist between the baccalaureate students beginning a nursing education program and completing a nursing education program?
3. What differences in beliefs exist between the baccalaureate students completing a nursing education program and the baccalaureate students completing a baccalaureate education program?

Hypotheses

The following hypotheses were tested during this study:

1. There will be no significant difference in beliefs towards substance dependence and abuse between the first year nursing students and the first year education students.

2. Nursing students in their final year of the program will demonstrate a stronger belief in medical management of substance dependence and abuse compared to those students beginning a nursing education program.
3. Nursing students in their final year of the program will demonstrate a stronger belief in client participation in the management of substance dependence and abuse compared to those students beginning a nursing education program.
4. Nursing students in their final year of the program will demonstrate less judgmental beliefs about substance dependence and abuse compared to those students beginning a nursing education program.
5. Nursing students in their final year of the program will demonstrate a stronger belief in medical management of substance dependence and abuse compared to education students in their final year of an education program.
6. Nursing students in their final year of the program will demonstrate a stronger belief in client participation in the management of substance dependence and abuse compared to education students in their final year of an education program.
7. Nursing students in their final year of the program will demonstrate less judgmental beliefs about substance dependence and abuse compared to those students ending a baccalaureate education program.

The hypotheses aid in answering the research questions. Hypothesis one provides baseline data that will aid in addressing the first, second and third research questions. Hypotheses two, four and six address the second research question: What differences in beliefs exist between the baccalaureate students beginning a nursing education program and completing a nursing education program? Hypotheses three, five and seven address the third research question: What differences in beliefs exist between the baccalaureate students completing a nursing education program and the baccalaureate students completing a baccalaureate education program?

Significance of the Study

Limitations in the education of health care professionals in relation to substance abuse can result in a lack of identification of those with substance use problems. Negative beliefs coupled with a lack of awareness that alcohol or drug use is a possible cause for a client's illness may result in a lack of identification of the disorder along with a lack of or no treatment for an individual. This may also contribute to the difficulty substance dependent clients or substance abusers encounter during recovery from the illness and prevent re-incorporation of these individuals into society as a whole. It has been suggested that substance abusers were the recipients of care that was accompanied by judgment, hostility and antipathy. Little respect was being demonstrated on either the side of care givers and receivers with obvious dissonance being the end result (McLaughlin, McKenna, & Leslie, 2000).

As nursing students acquire experiences throughout their education, new beliefs can develop or old ones can change. Beliefs shared by nursing educators during the process of clinical and classroom education act as the basis for assisting students in helping clients, families and communities to develop desirable health patterns. The beliefs a nurse holds about substance abuse and dependence may influence the quality and effectiveness of care given.

The literature review suggests a significant number of nurses' beliefs and attitudes about substance dependence and abuse are negative. A comprehensive understanding of what nursing students believe in relation to substance dependence and abuse is vital. If detrimental beliefs can be identified while the nursing student is still in the process of being educated, steps can be taken to ensure the creation of beneficial beliefs and positive attitudes when the student enters the workplace as a graduate nurse. Burkhalter (1975) noted that a significant number of nurses educated from 1941 to 1971 received little or no instruction in issues surrounding "alcoholism, drug abuse and addiction" (p. 30). It can be extrapolated that some of these nurses have become nursing educators. Their initial lack of educational preparation could potentially exacerbate the present situation due to a lack of awareness of the problem compounded by a lack of knowledge. The majority of the available literature regarding nursing beliefs and attitudes about substance abuse is American in nature with very little data appearing on the Canadian perspective (Tipliski, 1990).

Conceptual Framework

The framework chosen as the conceptual underpinning for the study is based on the work of Brickman et al. (1982) (see Appendix A) who defined four models of helping and coping to determine which behaviour an individual will display when seeking help or when seeking to help another individual. The four models are informed by attribution theory which is a cognitive approach in understanding individual and social behaviour (Heider, 1958; Kelley, 1973). Attribution theory asserts that behaviour is based on an individual's belief or an element in the individual's environment. The four models were developed by Brickman et al. based on their analysis of the helping literature in social psychology and clinical psychology. Important elements in an individual's helping behaviour are their attributions of responsibility for problems and solutions.

Beliefs are defined as propositions, either conscious or unconscious, that are inferred from what a person says or does that causes an individual to "describe the object of belief as true or false, correct or incorrect; evaluate it as good or bad; or advocate a certain course of action or a certain state of existence as desirable or undesirable" (Rokeach, 1968, p. 113). Beliefs arise from numerous sources including upbringing, modelling of significant others, replication of experiences and conclusions garnered from a past trauma. Beliefs are built from generalizations of personal past experiences in life and experiences of other individuals. Beliefs act as a predisposition to act and result in attitudes which are sets of interrelated predispositions to act in a certain manner towards an object or situation (Rokeach, 1968).

Brickman's four models draw a distinction between attribution of responsibility for a problem (i.e., who is to blame for a past event) and attribution of responsibility for a solution (i.e., who will control future events). In Brickman's compensatory model, an individual is not held responsible for the development of an illness but is responsible for the solution. This model is most effective trying to understand addictive behaviours. The substance dependent client or substance abuser is not held responsible for his/her problem and is recognized as having an illness. The client needs to take an active and responsible role in changing behaviour that leads to symptomology of the disorder. This is consistent with the Biopsychosocial Model that recognizes the effect of various biological, psychological, social, and spiritual determinants on the development of substance dependence and abuse.

In Brickman's moral model, individuals are assessed as being responsible for both the problems and the solutions to a situation and need only the proper motivation to act. The moral model is not considered practical in the contemporary treatment of substance dependence and abuse. It was popular in the past when substance dependence and abuse was considered a weakness of moral fibre that could be controlled by willpower.

Brickman's medical model sees individuals as responsible for neither the problems nor the solutions and are in need of biological treatment. The disease model is a predominant model used in the treatment of substance dependence and abuse, but is not always considered appropriate. Because the individual is not

assessed for blame in either cause or solutions, this is a prime opportunity to continue with unacceptable detrimental health and social behaviours.

Brickman's enlightenment model sees individuals as responsible for their problems but as unwilling or unable to independently provide a solution. The person is believed to need help and /or discipline to change his/her behaviour. Alcoholics Anonymous (1976) operates on this premise by believing that a "higher power" will aid in controlling unacceptable behaviour.

Brickman et al. go on to state "that each set of assumptions for the four models has consequences for the competence, status and well being of actors, and that the wrong choice of model in a situation will undermine effective helping and coping."

A portion of the literature review for this study supports the use of Brickman's models. Substance abuse's chronic nature has resulted in cynicism related to treatment and a belief that drug dependent clients fail to benefit from therapy because of repeated presentations to the clinical setting (Hardie, 2002). This can occur because of a failure to recognize that relapse is a part of the illness. Nurses have identified feelings such as frustration and burnout or being used and/or manipulated by substance dependent or substance abusing clients. These negative attitudes influence care and result in the possibility of inadequate nursing care and can result in the substance dependent client or substance abuser terminating the therapeutic relationship resulting in no care given to an individual in need (Ogborne, Rush and Ekdahl, 1986; Allen, 1993; Graham, Christy, Emmitt-Myers & Zyzanski, 1997). For example, when applying the compensatory model,

Brickman et al. state that care givers continually confronting problems not of their own creation are inclined to experience profound pressure in their lives with a paranoid view of society resulting (1982). The burnout syndrome experienced by nurses provides an illustration of this consequence (Thelan, Davie & Urden, 1990).

Brickman's models have been utilized frequently in the literature that examines understanding of the etiology of behaviours related to substance dependence and abuse. Literature that examines the perspective of the substance dependent client or substance abuser includes Marlatt and Baer (1988) who examined the etiology and treatment of addictive behaviours, Marlatt and Fromme (1987) who examined the use of metaphors to describe the addiction process, Hill (1985) who reviewed the disease concept of alcoholism, Marsh (1982) who examined the use of drugs among women and Mitchell (1997) who reviewed the relationship between self-esteem and attribution of responsibility for a problem. Literature that examined the models from the perspective of the health care professionals include Memmot (1993) who looked at variables that shape assumptions and helping in various health professionals and Cronenwett (1982) who compared the four models against theoretical models employed in nursing. A portion of the literature looks at perspectives of the substance dependent client or substance abuser as well as the health care provider. Brickman, along with some of the co-authors of the original models, expanded on the models by further examining attributions of responsibility of both helpers and recipients of help (Karuza, Zevon, Rabinowitz & Brickman, 1982). Brickman's models of helping

and coping are useful in studying nursing students because beliefs held by nursing students inform their behaviour towards the individuals they help.

Definition of Terms and Concepts

Health care professionals must exercise caution to avoid stereotyping a person's behaviour based on the diagnostic label given to that person (Mohr, 2003). The client is said to be "an individual with an alcohol dependency" or "an individual with a drug dependency." Older terms such as "alcoholic" and "drug addict" are avoided; as they are value-laden terms labeling the individual instead of identifying the disease process.

It has been noted that clinicians and researchers submitting manuscripts for publication to professional journals use the term alcohol or substance abuse in diverse ways and to characterize quite dissimilar phenomena. The term "abuse" has been used to describe symptoms that meet the specific criteria for a diagnosis in the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV). Other researchers have referred to abuse as an alternate term for use of an illegal substance or to describe a condition that does not meet the criteria set out in the DSM-IV (Journal of Studies on Alcohol, 2002, ¶ 1). The terms defined in this document will conform to the definitions of substance dependence and substance abuse as characterized in the DSM-IV.

Substance Dependence

The terms substance, drug or chemical are interchangeable.

Substance dependence: This is defined as a cluster of cognitive, behavioural & physiological symptoms indicating that the individual continues to use the

substance, drug or chemical despite significant substance-related problems. Drug dependence is said to be present when three or more of the following are evident within the same 12-month period (American Psychiatric Association, 1994):

1. Tolerance
2. Withdrawal
3. The chemical is consumed in larger amounts over a longer time frame than what was originally intended
4. There is a persistent or recurrent desire and unsuccessful attempts to curtail the substance usage
5. A significant portion of the individual's time is spent in procuring the chemical
6. Social, occupational and recreational activities are reduced or eliminated as a result of chemical use
7. Use of the chemical continues despite knowledge that persistent and recurrent usage of the chemical has resulted in exacerbated physiological or psychological problems

Substance Abuse

Substance abuse is defined as a maladaptive pattern of chemical use characterized by continual and considerable harmful consequences related to the repetitive use of the chemical. Substance abuse is said to occur when the following are present within the same 12-month time frame (American Psychiatric Association, 1994):

1. Recurring use of the chemical results in the failure to perform obligatory role functions
2. Use of the chemical results in the client or others being placed at risk for physical harm
3. Legal issues have arisen as a result of use of the chemical
4. There is continued usage of the chemical despite persistent or recurrent social and interpersonal problems caused by or exacerbated by use of the chemical

Nursing Student

This term is defined as an individual enrolled in nursing courses in an undergraduate program at a Manitoba post-secondary educational institution. Following completion of a four-year program of study, the nursing student will be eligible to write the Canadian Nurses Association Testing (CNAT) exam, which leads to the right to use the title "registered nurse".

Nurse

A nurse is defined as any individual who has completed a course of study that has allowed them to successfully write and pass the CNAT exam and hold the title of registered nurse in the province of Manitoba. This may include those prepared at the diploma level, the baccalaureate level, those holding advanced certification in a specialty area such as critical care or Emergency and those educated in a foreign country whose educational preparation is recognized in Manitoba (e.g., England, USA).

Program of nursing education

The program will be defined as the four-year course of undergraduate study offered at the University of Manitoba and University of Manitoba /Red River College Joint Baccalaureate (U of M/RRC JBN) program resulting in the ability of the student to meet the criteria for competencies as a registered nurse. The two independent variables in the study are 1. the educational program (i.e., nursing or education) 2. the year of study (i.e., first year or final year).

Beliefs

Beliefs are defined as propositions, either conscious or unconscious, that are inferred from what a person says or does that causes an individual to “describe the object of belief as true or false; correct or incorrect; evaluate it as good or bad; or advocate a certain course of action or a certain state of existence as desirable or undesirable” (Rokeach, 1968, p. 113).

Attitudes

Attitudes are a group of beliefs that are focused on an object or situation and predispose an individual to engage in a particular behaviour (Rokeach, 1973).

CHAPTER 2

Literature Review

The purpose of the literature review is to summarize the professional research literature that is pertinent to the issue of substance misuse, substance dependence and substance abuse in nursing education. The literature review is focused on nursing research; however, other literature related to relevant helping professions (e.g., medical physicians, psychiatrists, social workers) is included. The review is divided into sections including an examination of the beliefs, attitudes and knowledge levels of nursing faculty, a survey of current content in nursing school curricula, a survey of content in Manitoba undergraduate nursing programs, an examination of the knowledge levels of graduate nurses, an exploration of nursing student beliefs and attitudes, an examination of graduate nurse beliefs and attitudes and limitations that were identified.

Alcohol dependence is the most common chronic illness between the ages of 18 and 44 and drug abuse other than alcohol is second (Church, 1995). Forty percent of admissions to psychiatric facilities are related to the psychological or psychiatric ramifications of alcohol abuse (Markey and Stone, 1997). Early intervention with clients is vital in circumventing many of the physical, social and financial costs associated with alcohol and drug abuse (Naegle, 1994a); however, it has been identified that health care professionals have expressed a reluctance to interact with this client group (Rassool, 1996).

Nursing Faculty Beliefs, Attitudes and Knowledge Levels

In order to ensure the development of beneficial and positive attitudes towards substance abuse, it is recommended that faculty act as positive role models in demonstrating positive, acceptable and favourable views towards substance abuse (Eliason and Gerken, 1999). Faculty development programs have the potential to meet the educational needs of nursing students in the prevention of and interventions related to substance abuse (Murphy, Scott and Mandel, 1995). A program of faculty development was found to have resulted in significant improvement in the number of hours devoted to substance abuse in nursing school curricula, increased acquisition of teaching materials, increased numbers of hours related to continuing education and increased numbers of clinical hours for the students (Hayes, 2002).

In relation to curriculum content in nursing education programs, nurse educators believe any new content should focus on development of critical thinking skills and ethical issues as opposed to an increase in theory content or additional clinical components (Murphy, 1989). A belief has been expressed that substance abuse education in nursing should be integrated into the curriculum as a whole (Church and Babor, 1995). As nursing education has moved away from the medical model and towards the taxonomy related to nursing diagnosis, content related to substance abuse has been reduced or eliminated (Murphy, 1989).

Examination of Current Content in Nursing School Curricula

Before nursing can develop a sound theoretical knowledge base that can be used in the treatment of those with drug and alcohol problems, nurses need to examine their values, beliefs and attitudes in relation to drinking and drug use. The best way to accomplish this is to include this information in the basic curriculum of all formal nursing education programs (Hughes, 1989). Schools of nursing provide minimal exposure to important concepts related to addictions; courses specific to substance use disorders are few and far between and clinical education appears to be a particularly neglected area (Howard, Walker, Walker & Suchinsky, 1997). It has been observed that the substance misuse component of various nursing education curricula lags behind current recognition of substance misuse as a major national health issue (Rassool & Oyefeso, 1993). While some improvements in nursing education have been noted, knowledge and skills needed for primary care remain lacking (Murphy, Scott & Mandel, 1995; Deehan, McCambridge, Ball & Strang, 2002).

It has been suggested that employing use of the model "health for all" and organizing the large amount of complex data related to substance abuse into the four major categories of biological, sociological medical/ technological/ organizational and environmental determinants to provide a framework for presenting this data in a more comprehensive and comprehensible manner (Talashek, Gerace & Starr, 1994). Alcohol - related content is included as part of medical-surgical complications such as hepatic disease, the withdrawal process or fetal alcohol syndrome or as a separate section in mental health nursing that deals

with "alcoholism" as a disease process. Much of the mental health content focuses on the care of the client in the tertiary care setting. For those specializing in drug and alcohol nursing, most of the education process appears to be gained through "on the job training" as opposed to a formal course leading to certification (Arthur, 1998). Other content relates to the incidence and etiology of chemical dependency, concept as a disease along with assessment data and treatment modalities (Carr, Jones and Williams, 1992). It is suggested in the literature that little uniformity exists in the type of alcohol and drug abuse content taught and, while many programs have access to various educational resources, many of these appear to be out of date (Parrott, 1995). Substance abuse education can be addressed in a variety of settings by having students observe evaluations conducted by professional addictions counselors, assessments by nursing staff already competent in this area, group sessions in addictions treatment facilities, attendance at self-help groups (i.e., AA or NA), penitentiaries and adolescent treatment centres (Espeland, 1996).

When clients enter an acute care setting with other primary illnesses, any accompanying addictive disorder that may be present in the client is undiscovered, not reported or is eclipsed by the signs and symptoms of the admitting illness (Marcus, Rickman and Sobhan, 1999; Proctor, 2003). Research notes that few nurses comprehend the pharmacodynamics of common drug use and the process that occurs as the central nervous system adapts to the presence of a drug and how this may impact on an individual who is experiencing alcohol withdrawal with

a concomitant disease process such as a CVA, diabetes or cardiovascular disease (de Crespigny, 1996).

The original focus in education programs in the 1970's and 80's appeared to be based on abstinence as a goal of treatment opposed to moderation of harmful behaviours (Scheslinger, 1986). There has been a move in university nursing education programs towards adopting independent discipline models of care which are independent of the medical model, but this move is still in its infancy (Arthur, 1998). It is interesting to note that current theories related to drug and alcohol use stress the theory of harm reduction as opposed to abstinence. Research has recognized that individuals in existing addiction treatment programs rarely achieve total abstinence. Harm reduction methodology asserts that, as time progresses, controlled use of drugs is a feasible objective even for those people who have become chemically dependent (O'Hare, Newcombe, Matthews, Buning & Drucker, (1992). Nursing education has not kept pace with current theory, practice and research in the area of substance abuse.

Nursing students have identified that courses on substance abuse should be included in the curriculum; that such courses would assist them in their ability to understand addictive processes and may help to deter substance abuse in a nursing peer (Spencer-Strachan, 1990). For the undergraduate student, recognition of substance abuse is most important while intervention skills are considered to be of greater importance to graduate students (Murphy, Scott and Mandel, 1995). A positive correlation has been noted between level of education and knowledge about substance abuse and it is speculated that this correlation

may have occurred as a result of increased knowledge and awareness gained by nurses as they proceed through their undergraduate education and into graduate programs (Ewan and Whaite, 1982; Caracci, 1992).

Research suggests that education programs for nurses related to substance abuse need to include both theoretical content and clinical practice components if the student is expected to develop an adequate knowledge base and positive attitudes towards affected clients (Davidhizar and Golightly, 1983; Church and Babor, 1995). Information related to prevention of the problem such as lifestyle factors, primary prevention and health education are not identified as being addressed in the process of nursing education (Arthur, 1998). Suggested content includes an examination of how drugs and alcohol affect the physiological functioning of the human body, identification of nursing assessment criteria, formulation of appropriate nursing diagnoses and effective care interventions. Expanded content that examines the impact of drug and alcohol abuse on family members and the community is suggested. Prevention, intervention techniques, methods of referral for treatment, identification of support groups along with recognition of the spiritual, moral and legal aspects of substance abuse would be additional components (Markey and Stone, 1997).

There appears to be a relationship between the knowledge and skills of a nursing practitioner and their subsequent choice of employment. If a practitioner feels a sense of inadequacy in a certain area of their education, it appears less likely that one would seek employment in that area (Hoffman and Heinemann, 1987). It has been identified that nurses express a reluctance to work with clients

with substance abuse issues (Rassool, 1996). If this is coupled with a lack of education in the areas related to substance abuse, this could act to exacerbate a reluctance to work with this population.

Insufficient time appears to be devoted to substance abuse education in either the theory or clinical components of nursing education programs and does not appear to be commensurate with the prevalence of the disorder (Burkhalter, 1975; Scheslinger, 1986; Hoffman and Heinemann, 1987; Long, Gelfand and McGill, 1991; Carr, Jones and Williams, 1992; Gerace, Sullivan, Murphy and Cotter, 1992; Hagemaster, Handley, Plumlee, Sullivan and Stanley, 1993; Flanders, Pfeiffer and Ryan, 1994; Naegle, 1994a, Church, 1995; de Crespigny, 1996; Arthur, 1998; Eliason and Gerken, 1999; Arthur, 2001). While it is recommended that graduate nurses should possess the ability to detect and intervene with the alcohol-misusing client; research suggests that nurses do not possess an adequate knowledge base to accomplish this task (Owens, Gilmore and Piromohamed, 2000). Lack of knowledge related to the nursing care of a substance abuser may result in frustration, burnout and increased stigmatization of clients presenting with this problem (Graham, Christy, Emmitt-Myers & Zyzanski, 1997).

Much of the literature in the area of addictions research is quite dated. Curriculum content has not kept pace with the amount of new knowledge available in relation to substance abuse. New research and clinical advances in the last decade, including the neurobiology of addiction and the roles of neurotransmitters, means that more is known about the treatment, care and recovery of people with

mental illnesses and addictions. The benefits of these new developments are not being realized because mental illness and addictions continue to be viewed separately from physical health issues and have not been adequately included in health care reform initiatives and education (Centre for Addiction and Mental Health, 2003). As a result, mental health care, including addictions, has been referred to as the "orphan" child of Medicare (Romanow, 2002). Other factors that appear to contribute to the lack of substance abuse content in nursing curricula include limited interest among nurse scholars; a lack of a conceptual model that captures the complexity of substance dependence and abuse and curriculum overload whereby current content overwhelms students (Murphy, 1989; Arthur, 1998).

Current Content in Manitoba Undergraduate Baccalaureate Nursing Programs

The amount of content offered in relation to substance abuse education differs among courses. Elizabeth Polakoff, instructor for Human Growth and Development in the first year of the U of M/RRC JBN program identifies that the teratogenic effects of alcohol on the fetus, substance abuse as a health issue in early adulthood and as a risk factor in family dysfunction are discussed. A total of 30 minutes of time in this three-credit hour course is devoted to the subject (personal communication, October 10, 2002).

Joanne Wirtanen, instructor for Health Promotion in Families (three credit hours) at U of M/RRC JBN program, notes that a total of five hours is devoted to substance dependence. Content includes the effects of substance dependence on the family, co-dependency issues and a generic discussion on all addictions that

focuses primarily on alcohol. Ms. Wirtanen is also responsible for the delivery of Nursing Care in Mental Health and Illness in the two year Diploma Nursing Accelerated (DNA) program. The content is identified as being congruent with the content taught in mental health at the Baccalaureate level at the University of Manitoba. There are approximately five hours of content related to substance dependence in this three-credit hour course with an emphasis on the effect of substance dependence on the individual, the family and the community (personal communication, October 15, 2002). The syllabus from the undergraduate nursing program at the University of Manitoba identifies that substance abuse is included as a portion of one three-hour class along with "Trauma and Mental Health" as part of a three-credit hour course (University of Manitoba, 2002).

Elaine Beyer, course leader at U of M/RRC JBN program for Health Maintenance in Nursing, which examines chronic illnesses, states that a three-hour class of the six-credit theory course is devoted to hepatic illnesses and a 30-minute segment is devoted to a case study addressing cirrhosis related to alcohol dependence. The nursing care of the client in acute alcohol withdrawal is also included in this class (personal communication, October 10, 2002). In the three-credit hour clinical course, clinical practice time is 12 hours weekly over 12 weeks. One or two of these twelve weeks may involve being assigned care of a client with substance dependence issues but availability of this type of client varies from unit to unit.

From this review, it can be concluded that Manitoba Baccalaureate nursing education programs offer approximately eleven theory hours of substance

dependence content and that this content focuses on multiple issues including physiological effects on the body, psychological and sociological effects on the client and effect of substance dependence on the family. Clinical experiences related to substance dependence vary dependent upon the type of unit where the student is completing clinical practice. When compared with the literature reviewed for this project, Manitoba's levels appear to be similar to many other nursing programs in terms of content offered i.e., no major deficiencies were identified and the content offered was not substantially greater than that offered elsewhere.

Graduate Nurse Knowledge Levels

Drug and alcohol education is said to be vital at both the basic and post-basic level if clients are to receive even a minimum standard of care related to assessment of the problem, information regarding potential community resources and appropriate interventions. Nursing is noted to be in a prime position to prevent or intervene in the area of addictive diseases because of their presence in numerous settings including hospitals, clinics, educational facilities, workplaces and the home environment (Murphy, 1988; de Crespigny, 1996).

It has been found that graduate nurses display a knowledge deficit regarding the physiological and psychosocial components of alcohol and its' pharmacological effects (Long and Gelfand, 1992). They also found that graduate nurses demonstrated a lack of assessment skills and an inability to identify the potential substance abuser. While education sessions result in a gain in substance related knowledge, significant improvement in nurses' attitudes have been observed less frequently (Howard & Chung, 2000; Happell & Taylor, 2001).

Nurses appear to believe that alcohol and other drugs are an acceptable outlet for coping with stress. There is little to no emphasis noted in nursing education that dispels these ideas (Caracci, 1992). Nurses may engage in what is called "pharmacological optimism." This occurs as a result of the profound faith that is instilled in nurses regarding the effectiveness of drugs given to clients (Selbach, 1990).

In the clinical area, a lack of knowledge about the health implications of prescription drugs may lead nurses to over or under rely on them for clients with life threatening illnesses. For example, unreasonable fears of having the client become addicted to narcotics may lead nurses to under - medicate terminally ill cancer clients. A lack of knowledge regarding neurobiological effects of long-term opiate use may result in insufficient levels of analgesia in the recovering opiate abuser who is in an acute care situation. Comprehensive drug education is suggested for nurses including the neurophysiology of addiction, patterns of physiological and psychological dependence & identification of client behaviours related to drug seeking and malingering (Naegle, 1994b).

Many nurses appear unable to discuss rudimentary knowledge related to safe levels of alcohol consumption, the impact of alcohol on the nervous system (i.e., impact on motor and cognitive skills) and the pharmacological effects of commonly used pharmaceuticals and alcohol. In addition, research has noted that many nurses display little knowledge of community resources related to drugs and alcohol and few nurses possess adequate assessment skills that would help them to identify, recognize and manage the individual with an alcohol or drug problem

(de Crespigny, 1996). In one survey that identified four domains of nursing practice (basic nursing skills, interactive skills, counseling skills and collaborative skills), recent graduate nurses identified a lack of interactive skills in dealing with the substance abusing client in a confident manner as a primary issue that affected their ability to provide good care (Leino-Kilpi, Solante & Katajisto, 2001). Nurses working with Canada's First Nations populations identified a need for more specific programs of continuing education related to substance abuse (Silverman, Goodine, Ladouceur & Quinn, 2001). It has been noted that nurses and midwives working with pregnant women displayed a poor knowledge base related to substance abuse (Raeside, 2003).

Examination of Nursing Student Beliefs and Attitudes

Nurses' beliefs and attitudes related to drug use have been acquired and held for a long period of time before the process of nursing education even begins and furthermore, these beliefs and attitudes exert a continuing influence as the nurse is being educated and goes on to work as a graduate (McCaffery & Ferrell, 1996). In a study by Norman (2001a), a group of third year nursing students expressed negative responses related to a substance abuser's personality and behaviour when shown an illustration of an intravenous drug abuser in the process of self-medicating. Counterproductive attitudes, lack of knowledge and poor clinical skills related to substance abuse recognition have been identified as impediments in nurses' abilities to effectively intervene with potential substance misusers (Gerace, Hughes and Spunt, 1996). Negative attitudes appear to develop due to the professional socialization of students that occurs during the process of nursing

education (Meiderhoff, Ray and Talarchek, 1986). Professional nursing education and training at both undergraduate and graduate levels has acted to reinforce the idea that problems related to the use of drugs and alcohol "are somebody else's business" (Rassool, 1993). Attitudes may impact on those seeking treatment by either affecting the quality of care provided to the substance dependent individual or by the conveyance of negative attitudes toward the dependent person resulting in termination of treatment or reluctance on the part of the dependent person to seek any treatment at all (Moodley-Kunnie, 1988). According to Feigenbaum (1995), nurses may view substance abusers "in stigmatized, pessimistic, helpless, infantile, moralistic, and ambivalent manners" (p. 90). Nursing students appear to be invested with similar negative social values, biases and denial related to substance abuse as the general population (Eliason and Gerken, 1999).

Even if nursing students express acceptance of "alcoholism" as a disease process, convey a positive attitude towards alcohol or drugs themselves and have had exposure to education about alcohol, this does not appear to translate into a positive attitude towards those with alcohol problems (Wechsler and Rohman, 1982; Moodley-Kunnie, 1988). The attitudes towards substance abuse displayed by nursing students do not necessarily result from personal experiences with such as contact with an alcohol abusing family member nor do personal alcohol consumption habits appear to impact on attitudes towards "alcoholics" (Tamlyn, 1989).

Despite a high rate of exposure to some type of alcohol education along with an expressed interest in learning more about the disease, individuals are

noted to express pessimistic attitudes characterized by the ideas that "alcoholism" is an insurmountable problem or that an alcohol-abusing client has little chance of remaining abstinent. Despite recognition of the disease concept of alcoholism, many students feel that medical therapy or any type of therapy, including group, individual or family, would not be effective in helping the alcohol - dependent individual (Wechsler and Rohman, 1982). As nursing students move forward in their education process and acquire more knowledge, some research suggests that attitudes become more negative (Engs, 1982). However, a program of education specifically related to substance abuse appears to result in the development of positive beliefs and attitudes in relation to substance abuse (Harlow & Goby, 1980; Jack, 1989; Hagemaster, Handley, Plumlee, Sullivan and Stanley, 1993; Feigenbaum, 1995; Rassool, 1994; Marcus, Gerace and Spunt, 1996; Freed and Nattkemper, 1998; Arthur, 2001, Martinez and Murphy-Parker, 2003). It should be noted that while some of this literature is dated, more recent work continues to support the older studies.

Examination of Graduate Nurse Beliefs and Attitudes

Graduate nurses may view the substance abuser in a negative manner (Potomianos, Winter, Gorman & Peters, 1985; Moodley-Kunnie, 1988; Gerace, Hughes and Spunt, 1996; Eliason and Gerken, 1999; Arthur, 2001). Nurses appear to mirror the prevailing opinion of society that accepts the use of alcohol but views with distaste the individual whose drinking is out of control (Murphy, 1989; Gerace, Sullivan, Murphy and Cotter, 1992). Many health professionals hold negative, stereotypical perceptions of illicit drugs users with these negative

perceptions creating prejudice and preventing the health care professional from carrying out effective and humane care to this group of patients (McLaughlin & Long, 1996). Nurses and midwives have been found to display negative attitudes and act in a judgmental manner towards substance dependent pregnant women (Raeside, 2003; Selleck & Redding, 2003). Those who had more experience had even more negative attitudes than those who were newer to the area of care (Raeside, 2003).

Nurses' beliefs regarding the origins of substance abuse impact on their beliefs in the treatment of pain resulting in underutilization of narcotic analgesics (Vourakis, 1998) out of an unreasonable fear that the client will become drug dependent (McCaffrey & Pasero, 2001). Addiction is a complex, often fatal disease that requires expert care and that health care providers who are inexperienced in the diagnosis and treatment of addiction or who don't feel comfortable treating this type of client's pain are obligated to refer the client to someone who can (McCaffrey & Pasero, 2001).

These perceptions, beliefs and attitudes may impact on nursing care, as, in order to provide good care, the professional nurse needs to maintain constructive beliefs and positive attitudes toward the substance abuser. It is suggested that clinicians unwittingly impose their beliefs and prejudices on the population they are trying to assist (Curtis & Harrison, 2001). Negativistic attitudes and/or a rejection of "alcoholism" as a possible cause for a client's illness could result in a lack of identification of the disorder (Allen, 1993). The attitudes observed in graduate nurses may occur due to the frustration and difficulty that appear to be frequently

encountered in working with alcohol abusing clients (Ogborne, Rush and Ekdahl, 1986). Those working in community settings or in settings where active treatment of "alcoholic" clients occurs appear to hold more positive attitudes than those employed in large urban settings or those working in institutions where no type of treatment is offered (Allen, 1993). Health education presented face-to-face along with radio and television advertising was believed by some nurses to be effective in creating positive attitudes and beliefs in relation to alcohol-related knowledge among nurses (Poikolainen, 1988).

As with nursing students, a specific program of education related to substance abuse appears to result in the creation of beneficial beliefs, positive attitudes and behaviours in the graduate nurse (Hagemaster, Handley, Plumlee, Sullivan and Stanley, 1993; Marcus, Gerace and Sullivan, 1996; Erickson, Wilcox, Littlefield & Hendricson, 1998; Aalto, Pekurri & Seppa, 2001).

Differences in beliefs and attitudes have been reported between those nurses educated at the diploma, baccalaureate, masters and doctorate levels; between male and female nurses; and those working in community versus urban health care settings (Sullivan and Hale, 1987; Allen, 1993). Allen's 1993 study found positive attitudes among registered nurses working in community hospitals. The nurses studied believed that emotional or psychological issues were considered an issue in the development of substance abuse, loss of control is a primary symptom of substance abuse, an individual does not have to indulge in continuous drinking to be considered "alcoholic", and that alcohol is an addictive substance. Nurses educated at the diploma level and those with master's degrees

had more positive beliefs than those educated at the baccalaureate or doctoral level (Sullivan and Hale, 1987). These researchers also found that female nurses and those working in rural centres tended to exhibit more positive attitudes than male nurses and than those working in urban centres. They further concluded that age, length of time in the nursing profession, clinical specialty and type of nursing position were unrelated to beliefs expressed about substance abuse.

Limitations to the Literature

Nursing research related to substance abuse education appears to be limited by poor response rates leading to a lack of generalizability to the population as a whole; a lack of well-developed and replicated instruments; difficulties in establishing the reliability and validity of the instruments; and an evident lack of theoretical grounding with many studies relying on the medical model (Murphy, 1988; Arthur, 1998). In addition, a significant portion of the literature is from the United States. The population demographics and the system of health care could result in beliefs, behaviours and attitudes that may not necessarily translate to a Canadian population.

Summary

The significance of substance abuse as a health and social problem is not reflected in nursing school curricula. A portion of the literature reviewed for this project suggests that, based on the number of clients cared for in the clinical areas who present with substance dependence and substance abuse issues, theory or clinical components devoted to substance abuse education is lacking in nursing education programs (Burkhalter, 1975; Scheslinger, 1986; Hoffman and

Heinemann, 1987; Long, Gelfand and McGill, 1991; Carr, Jones and Williams, 1992; Gerace, Sullivan, Murphy and Cotter, 1992; Hagemaster, Handley, Plumlee, Sullivan and Stanley, 1993; Flanders, Pfeiffer and Ryan, 1994; Naegle, 1994a, Church, 1995; de Crespigny, 1996; Arthur, 1998; Eliason and Gerken, 1999; Arthur, 2001). The literature appears to suggest that beliefs and attitudes of graduate nurses in relation to substance dependence are generally negative. These beliefs and attitudes appear to be transmitted to nursing students by the process of professional socialization that occurs during nursing education (Meiderhoff, Ray and Talarchek, 1986). An intensive program of education related to substance dependence and abuse is noted to result in an improvement of beliefs and attitudes towards substance dependence and abuse.

CHAPTER 3

Methodology

Research Design

This exploratory descriptive study employed a cross sectional design. The beliefs towards substance abuse and dependence of four groups of university students were compared. Two groups of Baccalaureate degree nursing students and two groups of Baccalaureate degree education students were selected at different stages in their education (i.e., first year and final year). The final year nursing students had progressed through the nursing education process that the first year students were beginning. The students in their final year of education studies had progressed through the same program that the first year education students were beginning.

No significant difference in beliefs between the first year students in nursing and education was expected. It was hypothesized that the beliefs of the nursing students in first year would be different from the students in their final year of nursing studies. It was also hypothesized that the beliefs of the nursing students in their final year would be different from the students in their final year of education studies.

All four groups of students were asked to complete a demographic questionnaire that identified their age, sex, what ethnic background they most identified with, previous levels of education and whether the participant had had any previous personal problems with chemical dependency or with a chemically impaired relative, friend or colleague. Following the completion of the

demographic form, the students were asked to complete the Addictions Belief Inventory.

Dependent Variable

Beliefs are principles that guide, motivate and shape behaviour. They are engendered from numerous sources including one's background, emulation of significant others, repeat experiences and realizations derived from a previous trauma. Luke, Ribisl, Walton & Davidson (2002) refer to beliefs regarding addiction, substance dependence and substance abuse as those based on experiential and lay sources of knowledge which an individual develops through experiences with alcohol and drugs. Beliefs regarding substance dependence and abuse are varied and could act to influence the efficacy of different treatment methodologies dependent upon how one views attribution for the behaviour.

Sample

A convenience sample of undergraduate nursing students was selected from the University of Manitoba Fort Garry campus and the University of Manitoba/Red River College Joint Baccalaureate program. In addition, a convenience sample of undergraduate education students was selected from the University of Manitoba Fort Garry campus. Undergraduate students from the Faculty of Education were chosen as a comparison group because of the similarity in demographics to nursing (i.e., younger age and predominantly female population). Inclusion of a comparison groups aids in controlling for some extraneous variables.

Procedure

Data was collected in the fall term of 2002 and towards the end of the winter term of 2003. At the beginning of term one, all three groups of first year students (i.e., first year Faculty of Education, first year U of M/RRC JBN program & first year University of Manitoba Faculty of Nursing) were invited to participate in the research study. The individuals surveyed in the final year of nursing had completed the coursework required for the nursing program and were beginning preparations to complete their final clinical practicum at the time of data collection. Completed course work included the mental health component where the majority of the information about substance dependence and substance abuse is currently taught. The students surveyed in the final year of the Faculty of Education program were nearing completion of the course work required to obtain a Baccalaureate degree in education and were preparing to embark on individual student teaching experiences at the time of data collection.

Because no contact had occurred with the first year nursing students from either the U of M/RRC JBN program or the University of Manitoba site or with the first and final year students from the Faculty of Education, I collected the data from these students. Because previous contact had occurred with a number of students in the final year of the Baccalaureate nursing program, a research assistant was recruited to provide information on the study and to collect the data for these students.

It was emphasized to the students that the choice to participate was purely voluntary and no academic penalty would be incurred for not participating. The

students were informed that the study might not benefit them personally. The students were asked to sign a consent form (see Appendix C). A copy of the consent was returned to the student. An information sheet was provided that described the project (see Appendix D).

Following a verbal description of the project, I (or designate in the case of the final year University of Manitoba nursing students) distributed the consents and survey questionnaires to the students. Those wishing to participate were allowed approximately 20 minutes to complete the survey. The majority of students completed the consent, demographic form (see Appendix G) and Addictions Belief Inventory (see Appendix E) within approximately ten minutes. Due to the sensitive nature of some of the questions, every effort was made to ensure that a private environment was provided during the completion of the questionnaires (the students were seated a couple of desks apart, students went to the corners of the room or sat out in the hallways and no one student sat directly behind or in front of another student). Those choosing not to participate were advised that they could leave the room at any time during the explanation of the study, signing of the consent form and/or the completion of the survey questionnaires. Students from each of the groups did choose not to participate and left the room prior to the beginning of the explanation process. The students were told that it was not necessary to provide any personal identifying information on the survey questionnaire. Students were given an opportunity to ask questions related to the study following the presentation of information session or during the completion of the questionnaires. If a student had further questions, they were informed of

how to contact me with any comments, questions or concerns. A phone number, mailing address and e-mail address were included in the information letter given to the students.

The students were informed that if they wished to receive a copy of the survey results, they were asked to place their name and mailing address on the bottom of the consent form which was returned to myself or designate. Those individuals who indicated interest will be mailed a copy of the results at the time of completion of the project. All students in the room were asked to place the consents, addictions questionnaires and demographic data questions into a separate box for each item after they had completed the data sheets to their satisfaction.

The students were advised that they could take the forms home with them for further perusal if they wished and return them to me by a later date which was marked on the information sheet as well as being communicated verbally to the students. In this manner, if a student chose not to participate and did not complete the consent form, questionnaire or the optional demographic data sheet, no identification of that student would have occurred.

For the periods of data collection for the Faculty of Education, I was granted permission by the faculty to keep a secure and closed box in the Education general office for collection of the consents and surveys. The box was constructed in such a manner so that each form (the consent, the demographic survey and the addictions survey) would be completely separate. No students from the Faculty of

Education chose this option and all data was collected and returned at the time of my visit.

During the period of data collection for the U of M/RRC JBN program nursing students, the same box was left at the reception desk on the sixth floor of Building C at Red River College where the Nursing Offices are located. No students from U of M/RRC JBN program nursing chose this option and all data was collected and returned at the time of my visit to the classroom.

The University of Manitoba nursing students were given the option of returning the consent, demographic questionnaire and addictions belief survey in a self-addressed stamped envelope. No students from the Faculty of Nursing first year students chose this option and all data was collected and returned at the time of my visit. Four students from the final year did choose this option and returned the consent, demographic form and addiction survey in the stamped self-addressed envelope provided by the research assistant.

Data Collection Instrument

The research instrument selected for use in the study was the Addiction Belief Inventory developed by Luke, Ribisl, Walton & Davidson (2002) (see Appendix E). Dr. Douglas Luke was contacted via e-mail at the St. Louis University School of Public Health in Missouri for permission to use the instrument which was granted (see Appendix H).

The instrument was developed and assessed using two clinical samples: an alcohol user treatment group and a dual diagnosis treatment group. From the original clinical work, a series of seven stable sub-scales were developed:

- inability to control - addicted persons cannot regulate their alcohol/drug use. Social use of substances is not possible.
- chronic illness - addiction is a chronic disease that does not get better. The only chance for management is abstinence.
- reliance on experts - recovery is only possible with help from others, especially experts & professionals
- responsibility for actions - addicted persons are responsible for their actions and drug use
- responsibility for recovery - addicted persons are personally responsible for their own recovery
- genetic basis - addiction has genetic causes
- coping - alcohol/drugs are used to cope with stressful life situations

Confirmatory factor analysis provided strong support for a seven subscale solution for 25 items of the ABI. An eighth sub-scale, moral weakness which is composed of five items, was originally devised but was not included in the structural model because of only modest support for its internal consistency. A definition of this scale states that using alcohol/drugs is a sign of moral weakness and is a willful action. Based on the recommendation of one of my thesis committee members, Dr. David Patton, I did choose to include this sub-scale in the final questionnaire of thirty questions administered to all groups of study subjects. (Table 1 provides a list of the sub-scales, definitions of same and the internal consistencies reported by the original researchers).

The ABI consists of 30 statements to which subjects respond by indicating their agreement or disagreement on a 5 point Likert-type scale from 1 (strongly agree) to 5 (strongly disagree). For example, one item on the chronic disease subscale is: "Alcoholism/drug abuse is a disease." Lower scores on this and related items would indicate an agreement (or belief) that abuse is a chronic illness.

The items on two sub-scales were stated in a manner that required reversed scoring. For example, one item on the inability to control sub-scale is: "An addicted person can control their use." If a respondent chose "5" indicating strongly disagree, a "1" was entered into the data base. Therefore lower scores indicate that the respondent agrees (or believes) that an abuser "has" the inability to control substance use. The two sub-scales affected by reverse scoring are the inability to control and responsibility for actions (see Appendix F).

This is a new instrument. The framework for tool development is based on the commonly used models of addictions. The authors identified eight different addiction beliefs; different combinations of which are represented in the various models of addiction including the disease model (i.e., Jellinek's {1960} model) and 12-step models such as those employed by Alcoholics Anonymous (AA) or Narcotics Anonymous (NA). Items were developed from clients, treatment providers and the relevant literature. Examining internal consistency and test-retest reliability assessed reliability of the tool. The internal consistencies (i.e., Cronbach's alpha) are documented in Table 1.

Table 1 Addictions Belief Inventory (ABI) subscale descriptions

#	Name	Definition	# of items/ score range	Internal consistency (α) of scale	
				Dual diagnosis sample	Alcohol treatment sample
1	Inability to control *	Addicted persons cannot regulate their alcohol/drug use. Social use of substances is not possible.	4/ 4-20 (median: 12)	.71	.61
2	Chronic disease	Addiction is a chronic disease that does not get better. The only chance for management is abstinence.	4/ 4-20 (median: 12)	.65	.71
3	Reliance on experts	Recovery is only possible with help from others, especially experts & professionals.	3/ 3- 15 (median: 9)	.71	.64
4	Responsibility for actions *	Addicted persons are responsible for their actions and drug use.	3/ 3- 15 (median: 9)	.64	.62
5	Responsibility for recovery	Addicted persons are personally responsible for their own recovery	3/ 3 – 15 (median: 9)	.63	.73
6	Genetic basis	Addiction has genetic causes.	3/ 3-15 (median: 9)	.63	.62
7	Coping	Alcohol/drugs are used to cope with stressful life situations.	5/ 5-25 (median: 15)	.76	.83
8	Moral weakness **	Using alcohol/drugs is a sign of moral weakness and is a willful action.	5/ 5-25 (median: 15)	.63	.68

* reverse scored subscale

** not included in structural models

Because the scores are lower, the authors stress that recent psychometric work has indicated "important limitations of the alpha as a single index of internal consistency" (p.104). Schmidt (1996) asserts that problems arise when researchers view the alpha as being desirable or consistent at a level of 0.7 but fail to consider that the relationship between alpha and test length. The ABI developers believe that the small number of items in each of the subscales have resulted in lower alpha scores. The ABI authors bolster their claim to reliability because of the "good fit of the confirmatory factor analysis" (p. 105) that was completed.

Stability of the tool was assessed by administering it to the dual diagnosis sample at two time points, two months and six months following discharge from the hospital. Evidence of the subscale stability was indicated by the average magnitude of the correlations indicating that each subscale is more related to itself than to the other scales over time.

Validity evidence was initially established by relating the ABI to concurrently measured demographic and substance use variables including treatment variables, self-help group participation and individual perceptions of whether or not respondents considered themselves to be an "addict". The magnitude of the expected relationship between the ABI subscales and demographic variables was expected to be small to modest and each of the ABI subscales was expected to be significantly related to each of the substance use variables. Validity was assessed by asking if demographic variables are related to addictions beliefs and if addiction beliefs are a function of prior substance use

treatment history, prior self help participation and persons' perceptions of whether they considered themselves to be addicted or not.

The intent for developing the research tool was to provide a reliable and valid measure of addiction beliefs that could be readily and promptly administered to clients, treatment staff or the widespread population. Dr Luke states that the scale was designed to evaluate beliefs based on the separate subscales. There is no overall score for the instrument as substance abuse principles are multifaceted with no one individual's beliefs being more "ideal" than another's beliefs. Because it is a new tool, no true population based norms have yet been established from the scale (personal communication, July 17, 2003).

Data Analysis

An SPSS (Statistical Program for the Social Sciences) data base was created from the demographic survey and the Addictions Belief Inventory responses. The frequencies of demographics were calculated based on valid responses (i.e., the respondent provided an answer to the question) and did not include missing data.

All the items on the Addictions Belief Inventory were scored using a Likert-type scale ranging from 1 to 5 with 1 indicating "strongly agree" and 5 indicating "strongly disagree." The four questions related to subscale 1 labeled "inability to control" and the three questions for subscale 4 labeled "responsibility for actions" required reverse scoring. Lower mean scores for the subscales are judged to be indicative of higher levels of agreement with the statements in the subscales.

The mean score for each subscale was calculated for each group of students i.e., first and final year nursing and first and final year education. Independent t-tests were computed for each hypothesis to test for significant statistical differences. Using a confidence interval of 95%, a value of $p < .05$ was considered statistically significant between groups.

For hypothesis 1, the mean scores between the first year nursing students and the first year education students were tested using independent *t*- tests on all of the ABI subscales. Hypotheses 2, 3 and 4 involved testing the mean scores of the final year nursing students and the first year nursing students using independent *t*- tests. Testing of hypotheses 5, 6 and 7 consisted of independent *t*- tests to test the mean differences between the final year nursing students and the final year education students. Subscales 2, 3 and 6 were used to evaluate hypotheses 2 and 5. Subscales 1, 3, 4, 5 and 7 were used to evaluate hypotheses 3 and 6. Subscale 8 was used to evaluate hypotheses 4 and 7.

Ethical Considerations

The research project was submitted for ethical review and approved at the University of Manitoba (ENREB) (see Appendix I). Because a segment of the research also involved student body contact at Red River College, the project was also submitted for ethical review to the Red River College Ethics Committee for permission to access the Red River student population (See Appendix J). Permission was granted by the University of Manitoba's Faculties of Nursing and Education and Red River College Department of Nursing to access their student population (see Appendices K, M & L).

The students were informed that participation in the survey was voluntary, that no academic penalty would be incurred for not participating and that the study involved no foreseeable risks or harm to them. Following a verbal explanation of the study, a consent form, demographic survey and copy of the ABI were distributed to each student. A copy of the consent form was returned to them. All students were asked to place the consents and two questionnaires into a separate box for each item. Because of the possibility of coercion existing in the collection of data for the fourth year nursing students, a research assistant collected the data for this group.

CHAPTER 4

Results

A total of 292 subjects participated in the study. Two subjects chose not to submit a demographic form and only submitted a completed copy of the Addictions Belief Inventory. As a result, two forms were omitted from the analysis; however, they were included in calculations related to the reliability and validity of the ABI. When calculated using the total number of students enrolled in each class of each faculty and year, the response rate for each of the four groups of students registered in each class was: a) Education First year: $n=62(87\%)$ b) Nursing First year: $n=78(39\%)$ c) Nursing Final year: $n=58(64\%)$ d) Education Final year: $n=95(78\%)$ (Table 2 identifies the logistical information related to the data collection process for each individual group surveyed).

Table 2 Data collection logistics

<i>Faculty and Year</i>	<i># of students registered in the class</i>	<i># of Addictions Belief Inventories returned</i>
Education First year	71	62
Nursing First year	201	78
Nursing Final year	90	58
Education Final year	120	94

Sample demographics

The sample

Overall sample demographics ($n = 290$) in this section have been identified as percentages with the raw score in brackets. The mean age of the survey respondents was 25.24 ± 6.21 years with one individual (0.03%) not identifying age. The youngest respondent was 17 years of age and the oldest was 52 years of age. Overall, 18.6% ($n = 54$) of the sample identified themselves as male and 80.7% ($n = 234$) were identified as female. Two (0.06%) respondents did not indicate a gender.

When asked to identify which ethnic or racial group respondents identified with most, 57.6% ($n = 167$) chose Caucasian/white, 2.8% ($n = 8$) chose aboriginal/Métis; 7.2% ($n = 21$) chose Asian; 1.4% ($n = 4$) chose black; 14.8% ($n = 43$) identified themselves as Canadian and the remaining 9.7% ($n = 28$) were identified as other. Nineteen respondents (6.6%) did not provide a response to this question.

For the question related to highest level of education completed, 23.4% ($n = 68$) identified high school, 2.8% ($n = 8$) chose post secondary certificate; 4.5% chose post secondary diploma; 55.5% ($n = 161$) identified undergraduate university degree; 9% ($n = 26$) chose university graduate degree and 1.7% ($n = 5$) responded with other. The high percentage of undergraduate university degrees is mainly due to the Faculty of Education students who enter into the Baccalaureate program for Education with a pre-requisite degree in Arts. Whether the university undergraduate or graduate degree was obtained in Canada was not identified on

the survey. Nine respondents (3.1%) chose not to provide a response to this question (table 3 identifies the basic demographic data identified for each group of students surveyed).

Table 3 Basic demographic data identified by group

Faculty & Year	First year nursing <i>n</i> = 77	First year education <i>n</i> = 61	Final year nursing <i>n</i> = 58	Final year education <i>n</i> = 94
Variable				
Mean age	23.62	23.92	27.66	25.93
<u>Sex</u>				
Female	68	55	52	59
Male	8	5	6	3
Missing	1	1	0	0
<u>Race or ethnic group</u>				
Caucasian	47	30	37	53
Aboriginal/Métis	6	2	0	0
Asian	6	3	7	5
Black	1	1	1	1
Canada	7	15	5	16
Other	5	5	5	13
Missing	5	5	3	6
<u>Highest level of education</u>				
High school	49	2	16	3
Post-secondary certificate	7	0	1	0
Post-secondary diploma	5	0	4	2
Undergraduate degree	11	54	31	65
Graduate degree	2	3	5	16
Other	3	0	1	1
Missing				7

Personal and/or Family History of Drug and/or Alcohol Use

Overall sample demographics in this section have been identified as percentages with the raw score in brackets (total sample size: *n* = 290). When questioned about a personal history of drug and/or alcohol problems, 12.1% (*n* = 35) admitted to a problem while 87.6% (*n* = 254) responded that they had never had a problem. One individual (0.3%) chose not to respond to the question. When asked about having been in treatment for a personal drug and/or alcohol

problem, 1.7% ($n = 5$) admitted to having been in treatment and 96.6% ($n = 276$) identified that they had not been in treatment. Five respondents (1.7%) did not provide a response to the question.

When questioned about parental problems related to drug and/or alcohol use, 2.4% ($n = 7$) identified their mother, 15.5% ($n = 45$) identified their father, 1.4% ($n = 4$) identified both parents, and 79.7% ($n = 231$) stated neither parent had had a problem. Three respondents (1%) chose not to answer the question. When asked about parental treatment for drug and/or alcohol problems, 0.3% ($n = 1$) identified mother, 3.1% ($n = 9$) identified father and 94.5% ($n = 274$) stated neither parent had ever been in treatment. Six (2.1%) individuals did not answer the question (table 4 identifies personal and/or parental history of drug and/or alcohol use in each group).

Table 4 Personal and/or parental history of drug and/or alcohol use

Faculty & Year	First year nursing <i>n</i> = 77	First year education <i>n</i> = 61	Final year nursing <i>n</i> = 58	Final year education <i>n</i> = 94
Variable				
<u>Personal problems</u>				
Yes	12	4	3	16
No	65	59	55	78
Missing	0	1	0	0
<u>Treatment for personal problems</u>				
Yes	1	1	0	3
No	75	56	55	91
Missing	1	1	3	0
<u>Parental problems</u>				
Mother	3	0	3	1
Father	13	9	12	11
Both parents	0	2	0	2
Neither	58	50	43	80
Missing	3	0	0	0
<u>Parental treatment</u>				
Mother	1	0	0	0
Father	3	1	4	1
Neither	71	59	51	93
Missing	2	1	3	0

Results of Hypotheses Testing

Cronbach's Alpha

Cronbach's alpha is a test for a model or survey's internal consistency and assesses the reliability of a rating summarizing a group of test or survey answers which measure some underlying factor (e.g., some attribute of the test-taker) (Polit & Hungler, 1995).

Cronbach's alphas for each subscale of the Addictions Beliefs Inventory ranged from .43 - .72 indicating low to moderate internal consistency and reliability in each subscale (see Table 5). These results could be related to the small number of items comprising each subscale (3 – 5) and the variability of responses among respondents as illustrated by the range of standard deviations (1.56 –

3.71). Traditional measurement theory recommends an acceptable alpha of $\geq .8$ for new instruments and $\geq .7$ for established instruments. The ABI is a new instrument that has been tested on a clinical population with alpha scores ranging from .61 - .83 (Luke et al, 2002).

Caution is required when interpreting the findings of this study given the lower internal consistency results for this population. In particular; the lack of statistically significant differences between groups may be attributable to the low to modest internal consistency results.

Table 5 Addictions Belief Inventory Subscales Cronbach's alpha

Subscale	Cronbach's alpha
Inability to control	.54
Chronic disease	.43
Reliance on experts	.64
Responsibility for actions	.49
Responsibility for recovery	.66
Genetic basis	.52
Coping	.72
Moral weakness	.69

Mean Scores of the Nursing and Education Students on ABI Subscales

Lower scores on all of the subscales indicate the respondent expressed a higher level of agreement with the subscale statements while higher scores indicate the respondent expressed a lower level of agreement with the statements. (See Table 6 for a summary of the mean scores of all four groups).

The mean scores for the first year nursing students are as follows: subscale one (inability to control): 9.91 ± 2.83 ; subscale two (chronic disease): 8.75 ± 2.72 ;

subscale three, reliance on experts: 7.16 ± 2.47 ; subscale four (responsibility for actions): 6.2 ± 1.7 ; subscale five (responsibility for recovery): 6 ± 2.16 ; subscale six (genetic basis): 10.1 ± 2.57 ; subscale seven (coping): 11.4 ± 2.61 ; and subscale eight (moral): 14.27 ± 2.8 .

The mean scores for the final year nursing students are as follows: subscale one (inability to control): 9.82 ± 2.32 ; subscale two (chronic disease): 8.98 ± 2.07 ; subscale three, reliance on experts: 8.33 ± 2.1 ; subscale four (responsibility for actions): 6.0 ± 1.56 ; subscale five (responsibility for recovery): 6.44 ± 1.85 ; subscale six (genetic basis): 9.6 ± 1.79 ; subscale seven (coping): 11.65 ± 2.32 ; and subscale eight (moral): 15.98 ± 2.72 .

The mean scores for the first year education students are as follows: subscale one (inability to control): 10.47 ± 2.4 ; subscale two (chronic disease): 9.68 ± 2.64 ; subscale three, reliance on experts: 7.68 ± 1.91 ; subscale four (responsibility for actions): 56.2 ± 1.89 ; subscale five (responsibility for recovery): 5.98 ± 2.11 ; subscale six (genetic basis): 10.11 ± 2.08 ; subscale seven (coping): 12.13 ± 2.47 ; and subscale eight (moral): 14.6 ± 2.88 .

The mean scores for the final year education students are as follows: subscale one (inability to control): 10.14 ± 3.08 ; subscale two (chronic disease): 9.41 ± 2.64 ; subscale three, reliance on experts: 7.4 ± 2.39 ; subscale four (responsibility for actions): $6.08 \pm 2/02$; subscale five (responsibility for recovery): 6.29 ± 2.05 ; subscale six (genetic basis): 9.77 ± 2.18 ; subscale seven (coping): 11.58 ± 2.84 ; and subscale eight (moral weakness): 15 ± 3.77 .

Table 6 Mean scores of the four groups of students

Subscale	First year nursing	Final year nursing	First year education	Final year education
1. inability to control	9.91 ± 2.83	9.82 ± 2.32	10.47 ± 2.4	10.14 ± 3.08
2. chronic disease	8.75 ± 2.72*	8.96 ± 2.07	9.68 ± 2.64*	9.41 ± 2.64
3. reliance on experts	7.16 ± 2.47*	8.33 ± 2.1*	7.68 ± 1.91	7.4 ± 2.39*
4. responsibility for actions	6.2 ± 1.7	6 ± 1.56	5.62 ± 1.89	6.08 ± 2.02
5. responsibility for recovery	6 ± 2.16	6.44 ± 1.85	5.98 ± 2.11	6.29 ± 2.05
6. genetic basis	10.16 ± 2.57	9.6 ± 1.79	10.11 ± 2.08	9.77 ± 2.18
7. coping	11.41 ± 2.61	11.65 ± 2.32	12.13 ± 2.47	11.58 ± 2.84
8. moral weakness	14.27 ± 2.8*	15.98 ± 2.72*	14.6 ± 2.88	15 ± 3.77

* statistically significant differences found

Hypotheses Discussions

Hypothesis 1 which examines the beliefs of first year nursing and first year education students will be discussed initially. This will be followed by a discussion of hypotheses 2 and 5 which examine beliefs systems related to medical management of substance abuse; a discussion of hypotheses 3 and 6 which examine belief systems related to client participation in the management of substance abuse and concluding with a discussion of hypotheses 4 and 7 which examine moral beliefs related to substance abuse. The identified *p*-values are with equal variances not assumed (See Table 7 for subscales used to evaluate each hypothesis).

Table 7 Subscales used to evaluate hypotheses

Hypothesis	Subscales used to evaluate
1	Inability to control; Chronic disease; Reliance on experts; Responsibility for actions; Responsibility for recovery; Genetic basis; Coping; Moral weakness
2	Chronic disease; Reliance on experts; Genetic basis
3	Inability to control; Responsibility for actions; Responsibility for recovery; Coping
4	Moral weakness
5	Chronic disease; Reliance on experts; Genetic basis
6	Inability to control; Responsibility for actions; Responsibility for recovery; Coping
7	Moral weakness

Hypothesis 1

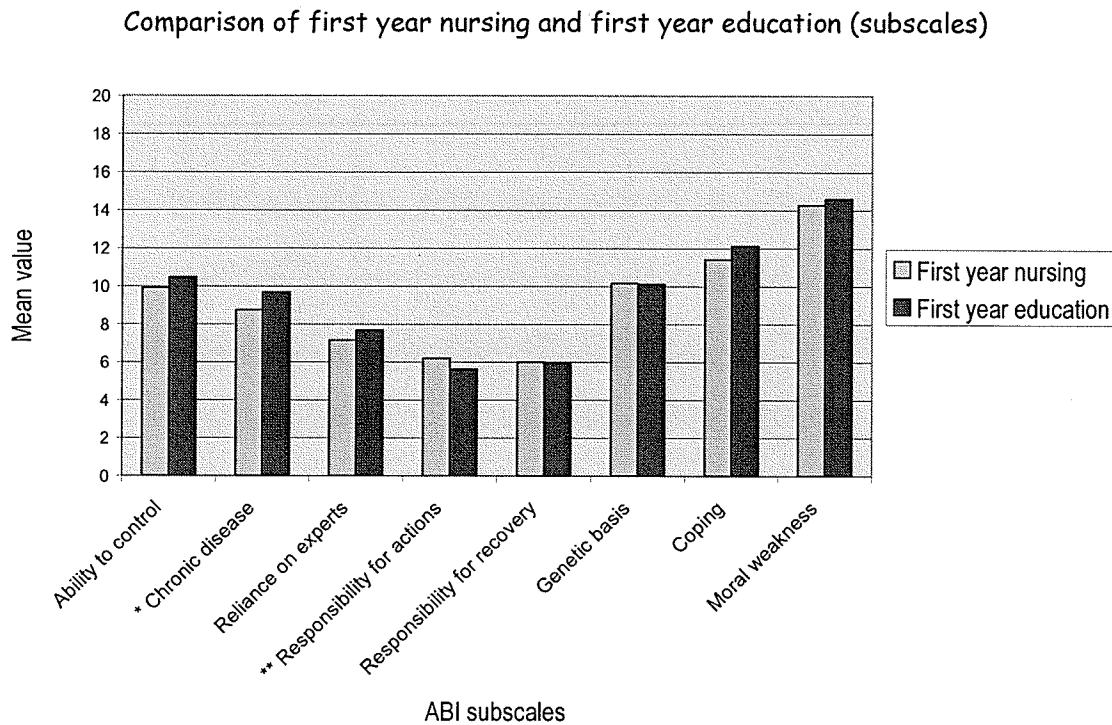
There will be no significant difference in beliefs towards substance dependence and abuse between the first year nursing students and the first year education students. All the subscales were used to test the hypothesis. There was one statistically significant difference in one of the subscale measurements, chronic disease (subscale 2). The mean score of the first year nursing students is 8.75 ± 2.72 which is less than the mean score for the first year education students of 9.68 ± 2.64 with $p = 0.046$, $t_{(133)} = -2.011$. This result suggests that the first year nursing students appear to agree with the statements related to recognizing substance dependence as a chronic disease process more so than the first year education students.

For subscale 4, responsibility for actions, a tendency towards statistical significance between the groups was noted where the mean score of the first year

nursing students is 6.20 ± 1.7 which is slightly greater than the mean score for the first year education students at 5.62 ± 1.89 with $p = 0.067$, $t_{(134)} = -1.848$ indicating a trend towards significance (see figure 1). This suggests a trend among the first year education students in believing that a substance abuser has a personal responsibility for his/her actions that is stronger than the beliefs expressed by the first year nursing students related to this issue. For p -values $0.05 \leq p < 0.10$, a trend towards statistical significance is sometimes noted (Rosner, 1990).

There were no statistically significant differences between groups for subscales 1 (inability to control), 3 (reliance on experts), 5 (responsibility for recovery), 6 (genetic basis), 7 (coping) & 8 (moral weakness). For subscale 1, the mean of the first year nursing students is 9.91 ± 2.83 and the mean of the first year education students is 10.47 ± 2.4 , $t_{(133)} = 1.233$. For subscale 3, the mean of the first year nursing students is 7.16 ± 2.47 and the mean of the first year education students is 7.68 ± 1.91 , $t_{(133)} = 1.393$. For subscale 5, the mean of the first year nursing students is 6 ± 2.16 and the mean of the first year education students is 5.98 ± 2.11 , $t_{(134)} = .044$. For subscale 6, the mean of the first year nursing students is 10.16 ± 2.57 and the mean of the first year education students is 10.11 ± 2.08 , $t_{(134)} = .113$. For subscale 7, the mean of the first year nursing students is 11.41 ± 2.61 and the mean of the first year education students is 12.13 ± 2.47 , $t_{(133)} = -1.624$. For subscale 8, the mean of the first year nursing students is 14.27 ± 2.8 and the mean of the first year education students is 14.6 ± 2.88 , $t_{(133)} = -.683$ (see figure 1).

Figure 1



* statistically significant difference ($p = .046$)

** trend towards significance ($p = .07$)

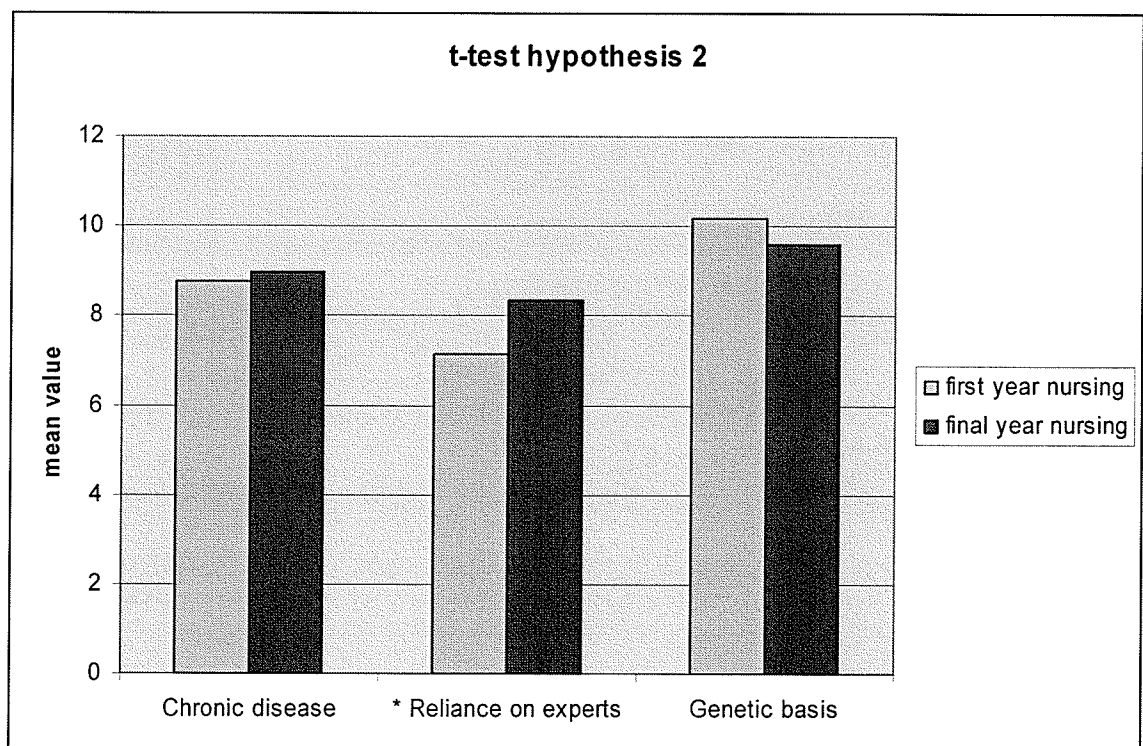
Hypothesis 2

Nursing students in their final year of the program will demonstrate a greater belief in medical management of substance dependence and abuse compared to those students beginning a nursing education program. The subscales that apply to medical management of substance dependence and abuse include subscale 2 (chronic disease), subscale 3 (reliance on experts) and subscale 6 (genetic basis). There was a statistically significant difference in subscale 3 (reliance on experts) where the mean score of the final year nursing students is 8.33 ± 2.10 which is greater than the mean score for the first year nursing students of 7.16 ± 2.47 with $p = 0.004$, $t_{(128)} = -2.921$ (see figure 2). This

suggests that there is less belief in the need for expert help among the final year nursing students compared to the first year nursing students.

There were no significant statistical differences between the groups for subscale 2 (chronic disease) with the mean score of the first year nursing students being 8.75 ± 2.72 and the mean score of the final year nursing students at 8.98 ± 2.07 with $t_{(127)} = -.532$. No significant statistical difference is seen in subscale 6 (genetic basis) with the mean score of the first year nursing students being 10.16 ± 2.57 and the mean score of the final year nursing students at 9.6 ± 1.79 with $t_{(139)} = -1.465$ (see figure 2).

Figure 2



* statistically significant difference ($p = .004$)

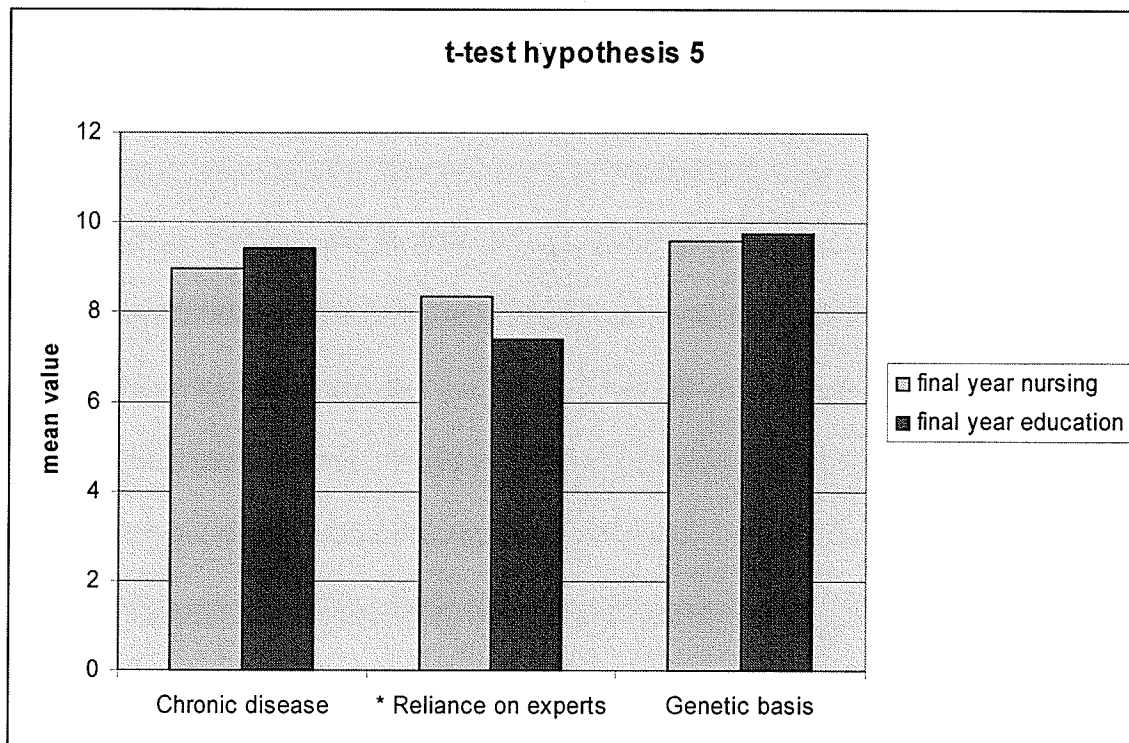
Hypothesis 5

Nursing students in their final year of the program will demonstrate a greater belief in medical management of substance dependence and abuse compared to education students in their final year of an education program. The subscales used to test hypothesis 3 include subscale 2 (chronic disease), subscale 3 (reliance on experts) and subscale 6 (genetic basis).

There was a statistically significant difference in subscale 3 (reliance on experts). The mean score of the final nursing students is 8.33 ± 2.10 which is higher than the mean score for the final year education students at 7.40 ± 2.39 with $p = 0.015$, $t_{(143)} = -2.464$. This suggests that there is less belief in the need for expert help among the final year nursing students compared to the final year education students.

There were no significant statistical differences between the groups for subscale 2 (chronic disease) with the mean score of the final year nursing students at 8.98 ± 2.07 and the mean score of the final year education students at 9.41 ± 2.64 , $t_{(143)} = -1.095$. No significant statistical difference is seen in subscale 6 (genetic basis) with the mean score of the final year nursing students at 9.6 ± 1.79 and the mean score of the final year education students at 9.77 ± 2.18 , $t_{(145)} = -.520$ (see figure 3).

Figure 3



* statistically significant difference (p= .015)

Hypothesis 3

Nursing students in their final year of the program will demonstrate a greater belief in client participation in the management of substance dependence and abuse compared to those students beginning a nursing education program.

The subscales that apply to client participation in treatment of substance dependence and abuse include subscale 1 (inability to control), subscale 4 (responsibility for actions), subscale 5 (responsibility for recovery) and subscale 7 (coping). There were no statistically significant differences in any of these subscales between the two groups. For subscale 1, the mean of the first year nursing students is 9.91 ± 2.83 and the mean of the final year nursing students is

9.82 ± 2.32 , $t_{(129)} = .209$. For subscale 4, the mean of the first year nursing students is 6.2 ± 1.7 , the mean of the final year nursing students is 6 ± 1.58 , $t_{(130)} = .698$. For subscale 5, the mean of the first year nursing students is 6 ± 2.16 , the mean of the final year nursing students is 6.44 ± 1.85 , $t_{(131)} = -.1285$. For subscale 7, the mean of the first year nursing students is 11.41 ± 2.61 , the mean of the final year nursing students is 11.65 ± 2.32 , $t_{(130)} = -.548$.

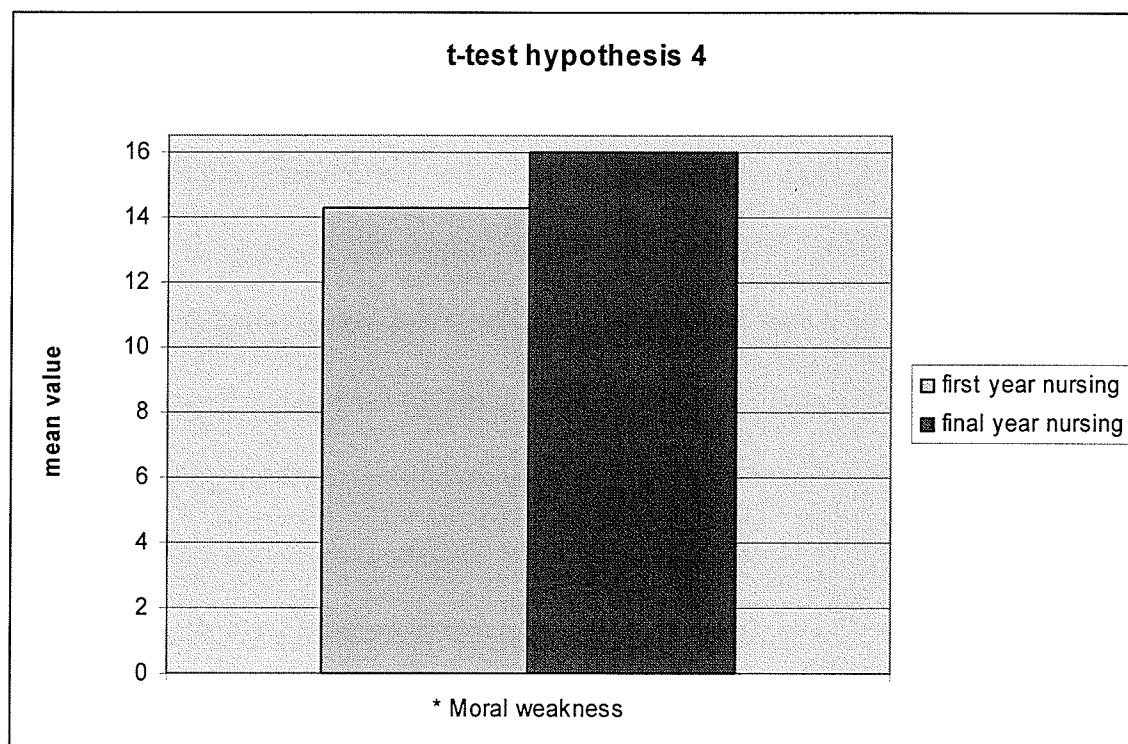
Hypothesis 6

Nursing students in their final year of the program will demonstrate a greater belief in client participation in the management of substance dependence and abuse compared to education students in their final year of an education program. The subscales used to test hypothesis 6 include subscale 1 (inability to control), subscale 4 (responsibility for actions), subscale 5 (responsibility for recovery) and subscale 7 (coping). There were no statistically significant differences in the scores of these subscales between the two groups. For subscale 1, the mean of the first year nursing students is 9.82 ± 2.32 , the mean of the final year education students is 10.14 ± 3.08 , $t_{(144)} = -.716$. For subscale 4, the mean of the first year nursing students is 6 ± 1.56 , the mean of the final year education students is 6.09 ± 1.56 , $t_{(145)} = -.299$. For subscale 5, the mean of the first year nursing students is 6.64 ± 1.85 , the mean of the final year education students is 6.29 ± 2.05 , $t_{(147)} = .466$. For subscale 7, the mean of the first year nursing students is 11.65 ± 2.32 , the mean of the final year education students is 11.58 ± 2.84 , $t_{(145)} = .165$.

Hypothesis 4

Nursing students in their final year of the program will demonstrate less judgmental beliefs about substance dependence and abuse compared to those students beginning a nursing education program. The subscale used to test moral beliefs is subscale 8 (moral weakness) (see figure 4). There was a statistically significant difference in subscale 8 (moral weakness). The mean score of the final year nursing students is 15.98 ± 2.72 which is greater than the mean score for the first year nursing students at 14.27 ± 2.80 , $t_{(130)} = -3.538$, $p = .001$ (see figure 4). This suggests that the final year nursing students expressed less judgmental beliefs related to substance abuse than did the first year nursing students.

Figure 4

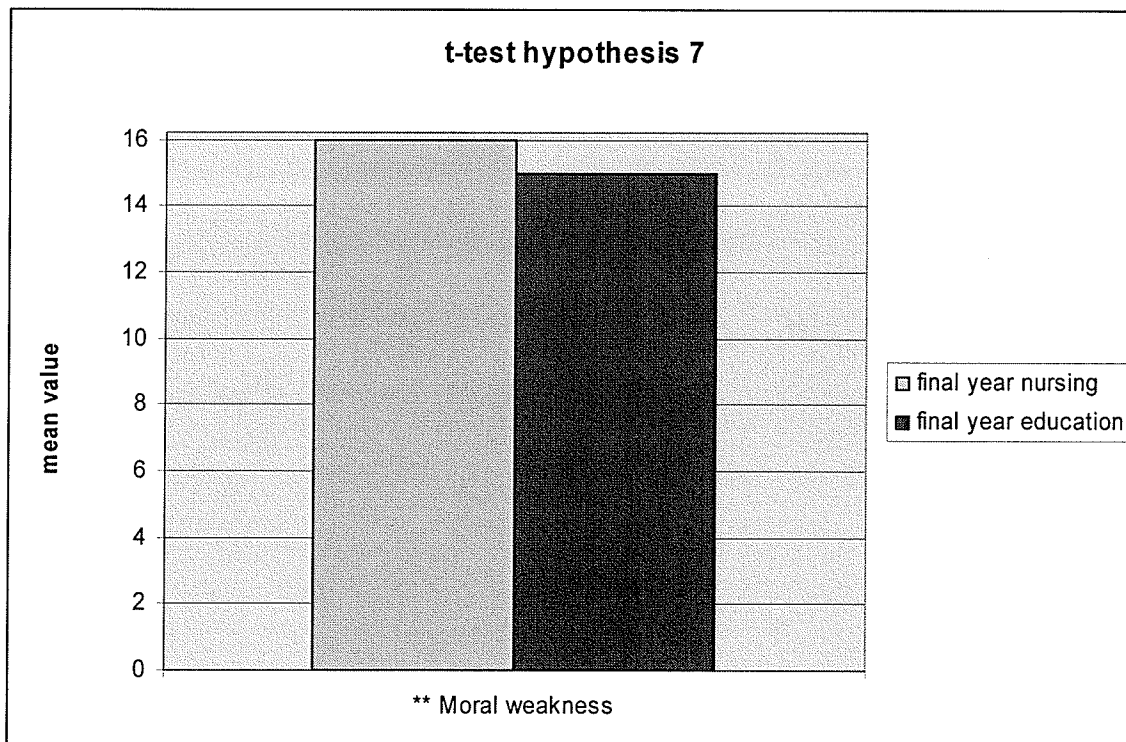


* statistically significant difference ($p = 0.001$)

Hypothesis 7

Nursing students in their final year of the program will demonstrate less judgmental beliefs about substance dependence and abuse compared to those students ending a baccalaureate education program. The mean score of the final year nursing students is 15.98 ± 2.72 which indicates a tendency to be more than the mean score for the final year education students at 15.0 ± 3.77 , $t_{(145)} = 1.831$, $p = 0.069$ (see figure 5). These results suggest that the final year nursing students tend to have less judgmental attitudes related to substance abuse than the final year education students.

Figure 5



** trend toward significance ($p=0.069$)

Summary

When compared to first year education students, first year nursing students appear to express a greater belief that substance abuse is a chronic disease. The final year nursing students appear to believe less in the need to rely on expert help when compared to the first year nursing students and the final year education students. The final year nursing students appear to have less judgmental beliefs when compared to the first year nursing students and demonstrate a tendency to be less judgmental than the final year education students.

CHAPTER 5

Discussion, Nursing, Education and Research Implications

Application of Data to the Research Questions

The following discussion will address the research questions. A section relating significant demographic findings will be included. Beliefs of the first and final year nursing students as well as the final year education students in relation to substance abuse will be identified. Similarities and differences between the three groups of students will be noted and potential reasons for the similarities and differences will be explored. Even though no research question addresses the issue, one statistically significant difference was found between the first year nursing and first year education students. This difference will be identified and potential reasons for the difference will be discussed. With the modest internal consistencies found on the ABI with this sample, the findings of the study need to be interpreted with caution.

Demographic Characteristics of the Respondents

Sample demographics indicate that students entering the study of nursing tend to be older than the students entering the Faculty of Education which appears consistent with the national average. Average age among Canadian nursing students was difficult to determine. The Canadian Association of University Schools of Nursing (CAUSN) stated that some schools do not collect this information either because the set up for collection of such data is not available or because it is a human rights issue (K. Whittle, personal

communication, July 7, 2003). The Canadian Nurses Association (CNA) states that the average age of a graduate nurse in Canada is 40 years (CNAa, 2002). Regular enrolment and graduation surveys of the CNA do not include age as a variable but statistics from CNA note that >55% of students graduating from a nursing program in Canada are 24 years of age or older (CNAa, 2002).

The number of females in the nursing program ($n = 134$) was 120 (89.5%) with 14 (10%) male students identified. Women outnumber men in the health care related professions at a ratio of 4 to 1 (Statistics Canada, 1998). Only 5% of nurses in Canada are male and, in Manitoba, this percentage drops to 4.2 % (CNAa, 2002). Compared with the national and provincial percentages of men in the nursing profession, this sample had a slightly higher percentage of men.

Conclusions related to ethnic origins are difficult to make because of the numerous ways in which respondents chose to address the question in the survey. The one finding of note in this category was the small number of Aboriginal students. The percentage of survey respondents who identified themselves as either Aboriginal or Métis was 2.8% ($n = 8$).

Aboriginal participation and completion of programs in post-secondary educational institutions trails well behind that of the general Canadian population (Association of Universities and Colleges of Canada, 1996). It has been identified that 9.4% of registered Aboriginal people have attended university compared to 22.5% of the remainder of the population of Canada and only 3% of the registered Aboriginal population has a university degree compared to 13.9% of

the broader Canadian population (Association of Universities and Colleges of Canada, 1996). Aboriginal voice is not adequately represented in the sample.

Personal and Familial History of Substance Use and/or Treatment

Of the population surveyed for this study, 12.1% ($n = 35$) individuals admitted to having had a personal history of drug and/or alcohol problems. The Canadian Campus Survey completed by the Centre for Addiction and Mental Health (CAMH) (Gliksman, Adlaf, Demers, Newton-Taylor & Schmidt, 2000) identified that 30.4% of students surveyed admitted to a personal history of drug and/or alcohol problems. If the numbers from the CAMH survey are compared with the results of this project, these respondents report significantly less problems with alcohol and drug use. One potential reason for this is the higher number of females in the sample (80.7%, $n = 234$). It is recognized that more male students have problems with alcohol and drugs than females (Gliksman, Adlaf, Demers, Newton-Taylor & Schmidt, 2000).

There may also be potential differences in interpretation of what constitutes a "problem" with alcohol or drug use. The CAMH survey results are based on specific questions related to alcohol use problems while this survey did not identify specific aspects defining a problem with drugs and/or alcohol; therefore, an exact interpretation of "problem" was up to the respondent.

The survey results also appear to provide evidence supporting that substance abuse predominantly affects males in the overall population. The most common member of the Canadian population affected with a drinking problem is a young adult male (Single, Brewster, MacNeil, Hatcher & Trainor,

1995). The AFM noted that in 2001-02, of 3,330 participants in their Adult Rehabilitation Services, 2,368 (71.1%) were males compared to 9,762 (28.9%) females (AFM, 2002).

While not all the statistics are included in this document, respondents were asked whether they were aware of parents, grandparents, siblings along with co-workers and friends' having problems with drugs and alcohol as well as being asked about personal problems with drug and/or alcohol use. As the degree of personal or familial closeness became less, the number of positive responses to the query of whether the subject responded "yes" to knowing of a problem with drugs and/or alcohol with an individual became greater. For example, while only a small percentage of respondents admitted to a personal history of drug or alcohol problems (12.1%), when questioned about a close friend's problems with alcohol or drugs, $> \frac{1}{2}$ (57.9%) of the respondents stated that they were aware of such an individual.

First Year Nursing, Final Year Nursing and Final Year Education Student Beliefs

For the three groups of students, for the subscales inability to control, chronic disease, reliance on experts, responsibility for actions, responsibility for recovery and coping, there were higher levels of agreement with the statements in first and final year nursing as well as final year education. For the subscale genetic basis, there were lower levels of agreement among the first year and final year nursing students as well as the final year education students. For the moral weakness scale, there was a higher level of agreement with the subscale for the first year nursing students (indicating more judgmental beliefs); a lower level of

agreement for the final year nursing students (indicating less judgmental beliefs) and the mean score for the final year education students was at the median which indicates neither agreement or disagreement.

While both first year and final year nursing students as well as the final year education students overall evidenced higher levels of agreement with the subscale reliance on experts, the mean score for the final year nursing students compared to the first year nursing students indicated a further move towards a lower level of agreement on this subscale that was statistically significant. This same pattern was seen when comparing the final year nursing students to the final year education students. This suggests that the final year nursing students have less belief in the need for expert help for recovery from substance abuse than both the first year nursing students and the final year education students.

Why are the Majority of Beliefs Similar?

In the Manitoba high school, junior high and public (i.e. ,elementary) school curricula, content related to substance abuse includes use, abuse and misconceptions related to drug and alcohol use in society; encouraging abstinence from drug and alcohol use; issues related to chemically dependent families; addressing attitudes and behaviours relating to substance use; encouraging alternatives to drug use; recognizing substance abuse as an illness that can be treated; and pharmacology of commonly abused drugs and alcohol (Saranchuk & Koss, 1986; Manitoba Education and Training, 1993). Since the majority of the students surveyed for this research presumably were educated in Manitoba public schools at the time these curriculum guidelines were in place, they would have all

been exposed to the same content. One could speculate that the inclusion of content related to substance abuse in Manitoba public schools could account for the similarity of beliefs expressed by the nursing and education students for the majority of substance abuse beliefs tested, with the exception of genetic basis.

A review of the nursing program curriculum indicates there was no information found that relates to a genetic basis for substance abuse. The complexity of genetic research related to substance abuse and that the majority of the research has been restricted to animal models (Nestler, 2002) would likely preclude its usage nursing education curricula. As a result, it is possible to speculate that the first and final year nursing students, having had no exposure to this concept, would express a lower level of agreement on the subscale genetic basis.

The four years of the nursing education process did not significantly alter many of the beliefs of the final year nursing students compared to the first year nursing students. This may be partially attributed to the fact that a limited amount of content taught relates to substance use and abuse. While the ABI is able to characterize substance abuse beliefs on a broad scale of strongly agree to strongly disagree, the tool may not be sensitive enough to capture the strengthening of beliefs that may occur during the education process.

Subscale Three: Reliance on Experts

The study results indicate a statistically significant difference on this subscale between the first and final year nursing students as well as the final year education students that indicates the final year nursing students are showing less

agreement with the need to rely on expert help than the other two groups of students. While nursing education recognizes the importance of the health care professional's role, this suggests that there is also growing recognition among nurses that other modes of therapy are important components in successful outcomes of treatment for the substance abuser. This is an important finding as it supports that a shift in the care of substance abusers is occurring and this is being reflected in nursing education. In recent years, there has been a shift in the locus of treatment from hospital based inpatient care to community residential care for substance abuse disorders. Components of this community approach include stabilization, education and self- management of the disorder (Timko, Lesar, Calvi & Moos, 2003).

These findings are different from other research that supports a greater belief in medical management occurring as a result of nursing education (Hagemaster, Handley, Plumlee, Sullivan & Stanley, 1993; Gerace, Hughes and Spunt, 1995; Ogborne, Rush & Ekdahl, 1986). Newer research is beginning to emerge that recognizes the need for preventative health services as a supplement to more traditional physician based clinical medicine (Babor and Higgins-Biddle, 2000). It has also been noted that university nursing education programs are moving towards the adoption of independent discipline focused models of care which are becoming independent of the medical model (Arthur, 1998).

In the curricula of many nursing programs, education related to substance abuse includes a variety of learning experiences that increase knowledge about appropriate management of substance abuse including exposure to self-help

approaches and support groups such as AA or NA (Davidhizar and Golightly, 1983; Hoffman & Heinemann, 1987; Murphy, 1989; Jack, 1994; Naegle & D'Arcangelo, 1992; Espeland, 1996; Markey & Stone, 1997; Freed & Nattkemper, 1998). While most individuals will require assistance from a health care professional in the termination of destructive use of substances, self help is considered an important adjunct to formal treatment programs and is often incorporated into treatment activities (Naegle & D'Avanzo, 2001).

Subscale Eight: Moral Weakness

For this subscale, there was a statistically significant difference in the beliefs between first and final year nursing as well as a shift in the overall direction of beliefs (i.e., higher level of belief in the first year nursing students and lower level of belief in the final year nursing students) about the issue of moral weakness. In addition, there was a trend towards statistical significance between the final year nursing students and the final year education students that suggests the final year nursing students have less judgmental beliefs than the final year education students. One could speculate that the process of nursing education will have been a factor in this change in beliefs.

There is a body of nursing research that supports that education aids in changing or improving attitudes about substance abuse and abusers (Harlow and Goby, 1980; Davidhizar and Golightly, 1983; Hoffman and Heinemann, 1987; Tamlyn, 1989; Hagemaster, Handley, Plumlee, Sullivan and Stanley, 1993 & Arthur, 2001). While these studies do support that nursing education is a factor that contributes to the development of less judgmental beliefs as nursing students

progress through their education program, there is a dichotomy in the literature that has continued over time that also suggests ambivalence (Feigenbaum, 1995) or a move to more judgmental attitudes (Wechsler and Rohman, 1981; Engs, 1982; Ewan and Whaite, 1982; Meiderhoff, Ray and Talarchek, 1986, Moodley-Kunnie, 1988; Norman, 2001a).

Various limitations to the studies that either support improved attitudes or those where ambivalence or more judgmental attitudes were identified included small sample sizes; low response rates or the use of convenience sampling; a lack of description of theoretical underpinnings and limited or no discussion on reliability and validity of the tools used. For those studies that did discuss reliability and validity, some tools reported alpha scores $< .7$. Because a few of the studies included other health care professionals apart from nursing, it was not possible to determine which health care population accounted for any one study result. One of the earlier studies (Harlow & Goby, 1980) noted that some aspects related to attitude improvement dissipated with the passage of time.

Comparison of Beliefs in First Year Nursing and First Year Education Students

While there was no research question that addressed the differences between first year nursing students and first year education students, there was one statistically significant difference between the two student groups that will be discussed. For the subscale chronic illness, there was a statistically significant difference between these two groups indicating that the first year nursing students showed a higher level of agreement that substance abuse is a chronic illness than did the first year education students.

The terms illness and disease are often used interchangeably (Naegle & D'Avanzo, 2001). The American Medical Association (AMA) defines disease as "any deviation from a state of health, an illness or sickness; more specifically, a definite marked progress having a characteristic train of symptoms. It may affect the whole body or any of its parts, and its etiology, pathology, and prognosis may be known or unknown (1963). Addiction is an illness that fits this definition (Naegle & D'Avanzo, 2001).

While a student who is entering nursing may not fully appreciate the term "chronic", the student would understand the term "disease". One could speculate that recognition of substance abuse as an illness would be greater in the beginning nursing students because of the potential beliefs this student would possess related to the practice of nursing. At the very beginning of the process of nursing education, students are aided in recognizing the responsibilities inherent in being a nurse. These would be to assist individuals, families and communities in the promotion of health and prevention of illness, to attend to the needs of the sick by helping them to the fullest return of health compatible with their illness, or providing comfort and support in the event of incurable disease (Dugas & Knor, 1995).

Conclusions Related to the Research Findings

Overall, the results from this survey appear to suggest that two features related to beliefs about substance abuse are affected by the process of nursing education – the idea that reliance on professional assistance should not be the primary or only approach in substance abuse treatment and that less moral

attitudes towards substance abusers develop as the nursing education program proceeds.

Brickman et al. (1982) defined four models of helping and coping; the medical model, the compensatory model, the enlightenment model and the moral model; to determine which behaviour an individual will display when seeking help or when seeking to help another individual. Brickman et al. go on to state "that each set of assumptions for the four models has consequences for the competence, status and well being of actors, and that the wrong choice of model in a situation will undermine effective helping and coping." The results from this study suggest that nursing education is succeeding in fostering beliefs that will be beneficial when providing care related to substance abuse and the substance abuser. Brickman et al. (1982) note that the moral model is not considered applicable in contemporary addictions therapies and this is reflected in the study results that indicate, as the process of nursing education in Manitoba proceeds, the nursing students become less judgmental towards substance abusers. The medical model remains a principal treatment model employed in the treatment of substance dependence and abuse, but is not always regarded as suitable. Because the individual is not assessed blame in either cause of the problem or in identifying appropriate solutions; this provides the dependent client or abuser with opportunity to continue with undesirable and harmful health and social behaviours. The results of this study indicate that there is a move away from the belief in the medical model being the primary focus of care.

No difference in beliefs between first and final year nursing students and between final year nursing and final year education students that would reflect an increased belief in responsibility for actions and responsibility for recovery was found in this study. With further effort on the part of nursing education and educators, students could develop further understanding of self-help approaches such as AA or NA (which would reflect belief in the enlightenment model) and in support of the biopsychosocial approach (which would reflect belief in the compensatory model). In the development of Brickman's models, the authors recognize AA as a prime example of application of the enlightenment model that views an individual as responsible for a problem but is unwilling or unable to independently generate a solution. The person is believed to need help and /or discipline to change his/her behaviour (1982). Alcoholics Anonymous (1976) functions on this premise in its belief of a "higher power" aiding in controlling undesirable behaviour.

The compensatory model permits an individual to focus their resolve outward towards resolution of a substance abuse problem and examine how alterations of environments may have contributed to the problem's development. Valuable time and effort is not spent on reproaching themselves for situations or deficiencies that occurred prior to the problem being recognized (Brickman et al., 1976). A belief in the compensatory model may be reflected in the endorsement of the biopsychosocial approach which is currently one of the predominant models in addictions therapies. The biopsychosocial approach accepts that addiction consists of a complicated array of biological, psychological and social

determinants. No one factor predominates to independently produce substance abuse and no one treatment approach will be effective for every substance dependent individual (AFM, 2000a).

Limitations

The chosen design for this research study is, in itself, a limitation. Cross-sectional research is subject to contamination from sampling error and socio-cultural changes over the period of time of the research. For example, media coverage, either positive or negative, related to the diagnosis of a celebrity with substance dependence problems may have acted to colour the students' perceptions and beliefs. It is not possible to determine causal relationships with a cross sectional design as I was not able to determine if the change that occurred is related to the change that was hypothesized because the same subjects were not being followed over a prescribed time frame as would occur with a longitudinal study. A longitudinal approach would be better for this type of study, however, the time frame required for following the same group of students over four years of the baccalaureate nursing program would not have allowed me to complete this project within the two years that had been allotted for this purpose.

The instrument used, the Addictions Belief Inventory, is a method of self-report and represents a variety of measurement that may have been limited by the respondent's unconscious wish to appear as he/she believed I would have liked him/her to appear. This phenomenon is called social response bias. The tool was originally developed based on the responses of clients with drug and alcohol problems; however, the authors note the tool is intended for use with this

population as well as treatment staff or the general population; however, it has never been used on such a group.

The low to modest internal consistency for this population may account for the findings of no difference. As a result, no certainty exists that there is no difference between groups as reported or if the findings of no difference are due to the low to modest internal consistency seen on several subscales.

One of the authors reported that the tool was currently being utilized in other research projects but no results from any of these have been published up to this point (D. Luke, personal communication, May 29, 2002). Further communication with the tool's primary developer indicates that no true population based norms are yet available based on the tool's use to date (D. Luke, personal communication, July 17, 2003).

Because a non-random sample was employed, findings may have been related to unique features of the sample that was being studied. Because participation in the study was voluntary, the students who agreed to participate may have exhibited different characteristics from those who chose not to participate.

Implications

Nursing Education

The results of this study suggest that nursing students nearing the end of their program of education recognize that substance abusing clients need not rely primarily on professional assistance in order to control their disease process when compared to students beginning a program of nursing education. These beliefs

were also noted to be stronger in the nursing students in fourth year in comparison with the Faculty of Education students who were completing their program. While some previous research has indicated a greater belief in medical management occurs as nursing students proceed through the nursing education process, (Hagemaster, Handley, Plumlee, Sullivan & Stanley, 1993; Gerace, Hughes and Spunt, 1995; Ogborne, Rush & Ekdahl, 1986), the results of this study indicate students' understanding is shifting to other models of understanding recovery from substance abuse.

Holleman, Hornby and Merrill (2000) question why health care providers are expected to persist in attaining the ideal and be successful in managing individuals who are resistant to change. The assertion that abstinence is the ideal outcome in substance abuse treatment is an illustration of this notion. It is generally recognized in the long history of substance abuse treatment that abstinence, on its own, does not work. In 1987, the Canadian government embraced harm reduction, by adopting it as the conceptual framework for Canada's Drug Strategy (CAMH, 2004).

Movement away from the medical model could begin with the incorporation of the theories related to harm reduction into the curriculum of both nursing schools and inservice education provided for graduate nurses. Teaching these concepts would provide nurses with strategies that encourage affected individuals to become more involved in their care and treatment.

The medical model places emphasis primarily on abstinence as being the ideal outcome for the substance abusing client (AFM, 2003). Current research is investigating the concept of harm reduction related to substance abuse treatment.

The AFM Harm Reduction position paper states:

In the context of rehabilitation, AFM promotes abstinence as the most appropriate goal for dependent clients, and views harm reduction as complementary in initiating action toward this objective. Harm reduction strategies focus on reducing or containing the negative impacts of substance use. From a community perspective, the reduction and containment of harms may be more acceptable than efforts to eliminate use entirely, however desirable that may be (AFM, 1998).

Harm-reduction is a relatively recent social policy with respect to drugs that can be used as a framework for all drugs, including alcohol. It has primarily been applied to injection drug use because of the life-threatening quality of the harm associated with this activity. The principal objective of harm-reduction policy is to facilitate a reduction in the detrimental consequences of drug use and acknowledges that abstinence may be neither a realistic nor a desirable goal for some, especially in the short term (Riley & O'Hare, 2000). Harm reduction is a public health approach that recognizes an individual's informed choice to use drugs, with the provision that this usage does not result in other individuals being placed at risk (Mathias, 2001). This policy contrasts with abstinence, which is the dominant substance abuse treatment policy in North America where the primary emphasis is on reducing and curtailing the incidence of drug use. Harm reduction

and abstinence are not considered mutually exclusive but harm reduction considers that abstinence is not the only acceptable or important goal (Riley & O'Hare, 2000).

While this move away from relying primarily on expert help is a positive step, it is tempered by the result that indicates no difference in beliefs between nursing students beginning and ending a program of baccalaureate program was found in beliefs related to personal responsibility for actions and personal responsibility for recovery. Nursing students would benefit from additional emphasis on identifying the importance of responsibility for personal actions and recovery on the part of the substance abuser as part of their education. However, findings of no difference must be tempered in light of the low to modest internal consistency found in this sample.

Substance abuse is considered a chronic illness (Hoeschen, 2000). Cluff (1981) defines chronicity as a condition that cannot be cured by medical interventions. A chronic illness requires periodic monitoring and supportive care to reduce the degree of illness and involves an expectation that the affected individual will maximize their own functioning and responsibility for self-care by actively participating in the treatment regime (Cluff, 1981).

Nurse educators need to consider the value in providing all nursing students with both hospital and community settings as part of their clinical education related to substance abuse. Clinical practice provides access to the social reality of practice and experiential learning experiences (Marcus, Gerace & Sullivan, 1996). This is happening in Manitoba nursing education programs on a limited basis and

only in selected areas of clinical practice. In a recent informal survey of the students taking mental health clinical practice at Red River College in Winnipeg, out of a class of 70 students, approximately six were assigned to clinical practice areas in which substance abuse was the primary focus. Of the six students, only one was accessing a self help group (i.e., AA) as part of the compulsory clinical hours. While it is acknowledged that arranging clinical practice settings in the substance abuse clinical areas is limited by numerous factors including limited space for a large number of students and lack of knowledgeable nursing staff who are capable of providing the students with clinical and theoretical expertise in the area, further exposure to clinical educational experiences for greater numbers of students could have potentially resulted in other significant changes in beliefs related to substance abuse that were not seen in this study.

At present, in Manitoba nursing education programs, the small minority of students assigned to clinical practice in substance abuse related areas receive a maximum of 12 hours of clinical practice weekly over 12 weeks in a four year program. Length of exposure of a clinical experience where students are involved in caring for substance has been identified as a factor affecting attitudes (Harlow & Goby, 1980). Again, given the prevalence of substance abuse in the population, the number of clinical hours needed to provide knowledgeable competent care for this client population appears to be lacking.

The results of this study suggest that as the process of nursing education proceeds, Manitoba baccalaureate nursing students develop less negative attitudes towards the issue of substance abuse and substance abusers and

believe that treatment for substance abuse should not focus primarily on the medical model. The following discussion will focus on recommendations proposing potential methods for nursing education to continue to improve attitudes and find alternate foci for substance abuse education which could result in a wider spectrum of beneficial beliefs related to substance abuse and abusers. The discussion will examine programs related to nursing as well as other disciplines. In addition, some of the programs discussed examine other issues apart from substance abuse. Suggestions as to how these programs could be applied to substance abuse in nursing education are provided.

A portion of the theoretical underpinning for this project discussed attributions for behaviours and how an individual uses these attributions as a basis for their helping interventions and in determination of their effectiveness. Holleman, Hornby & Merrill (2000) suggest that attribution theory can be used to redefine what represents a successful outcome when caring for substance abusers and that this could diminish health care professionals' negative causal attributions. For example, in a study involving senior medical students and care of geriatric clients which was replicated in a second study related to caring for substance abusers, Holleman et al. applied attribution theory concepts to three identified sources of professional satisfaction: Do I enjoy treating clients with this particular issue? Is this type of client difficult to care for? Will the client's condition improve as a result of my care? After experiencing repeated therapeutic disappointments in these areas, the caregiver experiences frustration and may try to avoid or provide substandard care to this type of client (Kelley & Michela, 1980).

In these research projects, the concepts of success expectancy of treatment, sense of control over client outcomes, professional satisfaction with treatment outcome and resultant client stereotyping were examined. Furthermore, Holleman et al. theorized that it would be possible to prevent the development of negative stereotypes of substance abusers. If this same approach were applied to nursing students, the potential for creation of positive beliefs and attitudes exists. A challenge for nursing education exists to target attitudes early on and regularly to persuade the students under their guidance to analyze restrictions on practice produced by automatic adherence to societal norms (Norman, 2001a). One manner in which to begin this process is discussed earlier in the discussion on harm reduction methodology.

When planning clinical experiences related to substance abuse, nursing education needs to look beyond the walls of acute care centers and hospitals. Acute care settings provide the appropriate measures to treat altered physiological functioning related to the physical ravages that substance abuse wreaks on the body but the resources for meeting the psychosocial needs of the substance abuser lie elsewhere. Students should be obligated to access self-help groups such as Alcoholics Anonymous (AA), Narcotics Anonymous (NA), Al-Anon, Alateen and Adult Children of Alcoholics. The encouragement and support that adherents of these organizations provide to one another will assist students in developing a broader view of substance abuse than the one garnered from acute care hospital settings.

As part of the educational preparation for attainment of my Master's degree, a clinical practicum was arranged with the triage nurse at the Chemical Withdrawal Unit (CWU) at the Health Sciences Centre in Winnipeg. Even though direct nursing care of substance abusing clients on the CWU was an element of the practicum, what I found most useful were the expeditions to the various community settings including the AFM, Misericordia Methadone Maintenance program, Christie House, River House, the Main St. Project, the Salvation Army Anchorage program and numerous AA and NA meetings. I was able to achieve a much better appreciation of the spectrum of treatment modalities related to substance abuse along with the population of substance abusers who are living successfully with their disease than if the entire practicum had focused solely on the acute care withdrawal unit.

The use of peer coaching as a technique to foster professional development may also be useful. In Sekerka and Chao's (2003) study of peer coaching, the technique was found to enhance physicians' abilities in the areas of critical reflection and personal learning and development. Specific areas where changes were noted included an awareness of how views or behaviours may have changed as a result of the coaching process. While this study focused on physicians working in ambulatory care settings, the ideas used could be transferred to other disciplines such as nursing and alternate clinical settings such as substance abuse treatment. For example, in an Australian study of nurses who specialized in working with substance abusers, the researchers noted that these individuals were extremely skilled in their area of practice. It was suggested that they could potentially provide information and support to nurses in other clinical

areas and act as a liaison to help minimize the negative experiences frequently encountered by non-specialist nurses working with the substance abuser (Happell & Taylor, 1999).

Norman (2001b) devised a social simulation scenario as an educational workshop to address drug and alcohol issues in nursing education. In a social simulation, it is not possible to totally control the participants' responses to events in the simulation but the designer of the simulation is able to control the processes or situations that participants encounter (Gredler, 1992). Norman's simulation workshop was created to target the needs of nursing students related to curriculum requirements, workplace expectations, identified community needs and nursing attitudes based on current research. The students were broken up into groups of four and worked through a predetermined progression of events and problems, tasks and achievements based on four simulated drug-user scenarios. During the simulation, one of the students in each of the groups of four acted as the drug user and was expected to "stay in character" throughout the simulation based on the scenario information. The other group members examined the health, social and legal consequences of drug use; helped the "user" to identify negative aspects of drug use and how positive life achievements were potentially destroyed followed by an examination of modes of treatment for drug users. Each session was followed by a debriefing session that examined empathy and insights that were garnered as a result of agitation, frustration, surprise or the emotional turmoil experienced during the simulation. The workshop was considered successful in presenting an alternative view of stereotypical images of drug abusers and aided

the participants in learning to convey a caring, non-punitive and non-judgmental attitude. Students left the workshop feeling that nurses have an important role to play in health promotion with substance abusers; that these individuals deserve caring and respect. The students also developed an increased ability to focus on the individual and not their disease process.

As part of the course related to chronic illness in the nursing program at U of M/RRC JBN program where I am an instructor in the third year of the baccalaureate program, a variation on this idea has been implemented. Called "Integration Day", the class is structured around having the students interview and offer potential interventions for a "client" who is actually one of the students' instructors playing the role of client. I regularly play the role of a single mother with substance abuse issues that have impacted on her physical health. Comments from the students relate to gaining a different perspective on chronic illness by recognizing that only a minority of chronic illness clients spend extended time in acute care hospitals due to complications from their illnesses. The students learn to recognize that with active participation in their care, clients can incorporate their illness successfully into everyday life.

The social psychology literature identifies three strategies relevant to changing stigma related to mental illness: protest, education and contact. Protest seeks to suppress the stigmatizing attitudes through appeals of moral indignation. Education replaces stigma with more accurate information. Contact challenges attitudes through direct interactions with an affected individual (Corrigan and Penn, 1999). It has generally been found that protest results in no significant reduction in

stigma; education yields some positive benefits in attitude change while contact appears to be the best manner in which to improve stigmatizing attitudes (Corrigan, Rowan, Green, Lundin, River et al., 2002). Since substance abusers also suffer from stigma, clinical experiences for nursing students could be developed that involve contact with substance abusers who have learned to live successfully with their illness. A study completed by Martinez and Murphy-Parker (2004) indicated that student contact with an individual who had been successful in maintaining sobriety was a very effective teaching strategy as opposed to lectures alone.

Wykurz and Kelly (2002) devised a program where trained clients were employed as teachers for learners; in the case of this study, medical students. These researchers discovered that important educational benefits were gained and that the students acquired new skills and improved attitudes towards clients through instruction and constructive feedback from the clients who were teaching them. Study subjects commented on gaining new insights, increased confidence when caring for individuals who are ill and developed increased respect for clients and understanding of the accompanying disease processes.

In a conference aimed at modifying medical residents' attitudes about substance abuse, Karam-Hage, Nerenberg & Brower (2001) found that exposing residents to a concentrated sequence of informed and positive role models in addiction medicine resulted in increased knowledge and changed beliefs related to substance abuse. This is supported by other research that notes how doctors early in their careers illustrate a significant improvement in the ability to diagnose and intervene with substance abusers following a clinical rotation where the focus was

substance abuse. This research also noted a rapid drop-off in these abilities once the teaching stopped which suggests that sustained teaching and supervision are needed if clinical practice changes are to be maintained (Warburg, Cleary, Rohman, Barnes, Aronson & Delbanco, 1987). If applied to the nursing curriculum, the information taught to students about substance abuse could be spread out over the four year program with new information building on and reinforcing previously learned data from earlier years using the trained client approach, contact with individuals who are successfully living with their disease in the community along with concentrated contact with addictions professionals. By building on and reinforcing previous knowledge, this could aid in the maintenance of positive attitudes and knowledge that might otherwise dissipate if the content was only taught once throughout the entire four year program.

Nursing Practice

Graduate nurse beliefs and attitudes towards substance abuse are influenced by various societal factors including religious beliefs, familial influence, education and training, personal and professional experiences, and other forms of socialization (Hughes, 1989). A review of the nursing literature suggests that nursing attitudes may be becoming more informed about the new information available related to the origins and treatment of substance abuse; however, this view has not been reflected in peer-reviewed literature (i.e., as opposed to the popular literature) (Arthur, 1998).

My review of the literature indicates while some positive movement towards the creation of beneficial attitudes is seen as the new millennium has dawned, a

good deal of ambivalence on this issue remains evident with some studies supporting the creation of improved attitudes (Sullivan & Hale, 1987; Hagemaster, Handley, Plumlee, Sullivan and Stanley, 1993; Allan, 1993; Rassool, 1994; Marcus, Gerace & Sullivan, 1995) and others indicating neutral (Happell & Taylor, 2001) or negative attitudes (Potomianos, Winter, Gorman & Peters, 1985; Ogborne, Rush, Ekdahl & Fondacaro, 1986; Selleck & Redding, 1998; Raeside, 2003).

Further research on graduate nurses and substance abuse beliefs is recommended. Potential research projects could focus on how factors outside of nursing (e.g. personal or family of origin issues, religious faith) influence beliefs about substance abuse. Examining potential differences among practice areas, levels of nursing education, rural vs. urban practice, and influences in the work environment could be other topics for future researchers to explore.

Graduate nurses should be encouraged to seek out increased opportunities for continuing education that incorporates the new knowledge and research about substance abuse that is available. The College of Registered Nurses of Manitoba (CRNM) (2004) has recently implemented the Continuing Competence Program which is designed to aid graduate nurses in identifying their own learning needs in their areas of nursing practice. Graduate nurses should be encouraged to consider learning more about substance abuse as part of their responsibility in maintaining competence in practice.

The nursing literature identifies that substance abusing clients are a difficult population to care for with nurses experiencing frustration, anger and cynicism in

their interactions with them. As a result, the potential for substandard or minimal care is created. The possibility of inadequate nursing care may cause a substance dependent client to sever the therapeutic relationship resulting in no care given to an individual in need (Ogborne, Rush, Ekdahl & Fondacaro, 1986; Allen, 1993; Graham, Christy, Emmitt-Myers & Zyzanski, 1997; Moodley-Kunnie, 1988; Hardie, 2002). The higher scores on the moral weakness subscale as illustrated by the data in this research project indicate the potential for this situation to occur upon graduation and when these students enter the workplace appears to be less. The result of this study indicates that the process of Manitoba nursing education appears to decrease judgmental attitudes towards substance abusers.

The decrease in belief that substance abuse is a moral issue displayed by the nursing students in this study supports the tenets of the CNA Code of Ethics. In the provision of care, the value of health and well-being is being met where nurses are obliged to "assist... persons to achieve their optimum level of health in situations of ...illness (CNA, 2002, p.8). The value of dignity is acknowledged as "nurses recognize and respect the inherent worth of each person and advocate for respectful treatment of all persons" (CNA, 2002, p.8). The individual affected by substance abuse will receive fair care and justice where "nurses uphold principles of equity and fairness to assist persons in receiving a share of health services and resources proportionate to their needs and in promoting social justice (CNA, 2002, p.8).

Discrimination based on a person's health status or lifestyle choices while imparting nursing care is not ethical. Nurses must cultivate a nonjudgmental and

non-punitive attitude if they are to provide assistance to ill individuals who are in need of substance abuse treatment. Labeling a sick person as “alcoholic” or a “drug addict” promotes stigma, rejection and punitive responses. Deficiencies related to comprehension and lack of insight related to substance abuse issues results in individuals going undetected and/or not being referred for appropriate treatment. These responses contribute to the obstacles substance abusers confront related to recovery and abolish hope for successful integration into the community.

A portion of the literature appears to suggest that many nurses and other health care professionals begin their careers with positive attitudes related to substance abuse, but that these attitudes change as the nurse progresses in her/his career (Harlow and Goby, 1980; Karam-Hage & Nerenberg & Bower, 2001; Raeside, 2003). Longitudinal studies need to be conducted to determine the length of time over which attitude changes persist. Possible avenues to explore that could account for changes in attitudes after graduation include examining the impact of repeated contact with substance abusers where treatment outcomes are consistently negative and the issue of professional socialization of nurses.

Nursing Research

Instrumentation was an issue that was identified in the majority of studies included in the literature review. This issue was also present in this study. The ABI was originally tested on two clinical samples of substance abusers with the results indicating modest to good internal consistency. However, when this same tool was used on a non-clinical sample in this study, the results obtained indicated low

to modest internal consistency. While the tool does have distinct advantages because of its relevance to and use of language reflective of current addiction beliefs, results from this study indicate low to moderate alpha scores that suggest that the ABI needs further testing with this population. Future researchers may wish to explore modification to the tool that would improve sub-scale internal consistency for this population.

Nursing researchers need to address the issue of poor response rates because of the mail-in survey method chosen in studies; the lack of well-developed, replicated instruments, difficulty in establishing reliability and validity; lack of information related to theoretical underpinnings; too heavy a focus on the use of the medical model; limited geographical samples and the fact that the majority of the literature comes from the United States. It should also be recognized that past research may appear biased because of the high proportion of convenience sampling methods where the respondents likely had an interest in the subject to be researched (Ewan & Whaite, 1982; Arthur, 1998). Unless these issues are addressed, future nursing research in the area of substance abuse will continue to provide information that may not be reflective of reality.

Strategies to correct these problems might include further emphasis on the importance of research in all elements of nursing education, the development of a theoretical framework that reflects the multifaceted nature of substance abuse, pilot studies and increased development of research tools that use contemporary addictions research and language and the implementation of new treatment strategies such as harm reduction and preventative approaches to care.

This study adds to the small collection of nursing research in Canada that focuses on nursing education and substance abuse. Additional research exploring the beliefs of nursing students at other Canadian universities is recommended. Differing social, cultural and political climates in the various countries such as the USA, Australia and Europe, particularly the UK, where the majority of nursing research on this subject appears to originate may affect the process of nursing education and development of beliefs in ways that may or may not be a factor in Canada. Some of the findings from this study may be different as a result of the influence of these factors.

Since this is an area that has been identified by other researchers as lacking overall (Arthur, 1998; Howard, Walker, Silk-Walker & Suchinsky, 1998), increased nursing research that addresses substance abuse and nursing education is necessary. Inaccurate beliefs about substance abuse in nursing students could be further addressed through the use of qualitative research studies involving such strategies as focus groups. The use of such methods would give participants the opportunity to respond in greater depth and detail and would provide the researcher with opportunity to clarify questions and comments in a way that was not possible with the questionnaire method chosen for this study.

The results of this study would be strengthened by replication with another sample of Manitoba baccalaureate nursing students. The selection of Deborah Tamlyn as the new president of the CNA may provide some impetus for this as her doctoral dissertation addressed the issue of substance abuse and nursing

students. The influence of her new position could potentially increase interest in substance abuse research.

The loss of competent practitioners due to a treatable disease such as substance abuse could decrease with more Canadian nursing research that promotes understanding of chemical dependency among nurses. Due to shrinking enrollment in nursing education programs, recruitment and retention of nurses are recognized issues for nursing and nursing education in Canada (CNA, 2002).

Research that addresses the beliefs and attitudes of nursing educators is needed. Nursing students often emulate and admire their instructors and will accept or incorporate professors' beliefs into their own (i.e., the students') developing belief system. The result may be a perpetuation of poor beliefs and attitudes that will affect the care of substance abusers the student encounters both as a student and as a graduate nurse. Faculty ability and willingness to incorporate current knowledge and curriculum materials into their work with students requires examination. It has been found that merely having educational materials available for use did not necessarily result in faculty utilization of the materials (Church and Babor, 1995).

Other areas that require further investigation are the effect of familial problems with substance abuse on an individual's beliefs and attitudes. As with the moral issue, a dichotomy of research findings was found with some research suggesting that attitudes are not affected by family background (Tamlyn, 1989) and others (Feigenbaum, 1995) did discover a difference in the attitudes of students who had a family member with a history of substance abuse. The small number of

respondents in this study who admitted to a personal or family history of substance abuse did not make it feasible to explore this issue. A replication of this study with a larger sample may provide the opportunity for other researchers to accomplish this.

Nursing educators need to understand the link between beliefs and education as the purpose of nursing education is to acquire and distribute knowledge about individuals, communities, the environment, and health as well as illness. Nursing is a science and an art that benefits society by promoting health, ensuring equality of care and improving the quality of life of all populations, including those affected by substance abuse. Educational preparation that results in knowledge acquisition and skills is relatively straightforward. Education that shifts beliefs is much more difficult to achieve. Through the use of empirically tested strategies, nursing students can be assisted in developing their own practice in positive ways that achieves these benefits.

Conclusion

Nursing needs to address the amount of content related to substance dependence and abuse in nursing education vis-à-vis the extent of drug and alcohol related problems in the population aged 18-44. Nurse educators need to relay relevant content to students in an objective and non-judgmental manner and increase clinical education opportunities that facilitate direct interaction between nursing students and substance abusers. In addition to content, nursing educators need to explore and discuss various strategies that may benefit students who work with individuals who abuse substances. Further investigation is needed to

understand the development of beliefs toward individuals who abuse substances and the role of professional education in affecting these beliefs.

The results of this study suggest that Manitoba baccalaureate nursing students in the final year of a nursing education program recognize that the medical model need not be the primary or only approach to substance abuse treatment. The results also indicate that students in the final year of nursing have less judgmental attitudes when compared with the first year nursing students and the final year baccalaureate education students. These findings suggest that the process of nursing education has contributed to these changes in beliefs. Increased levels of knowledge and the promotion of beneficial beliefs and positive attitudes towards substance dependence and abuse are necessary if this issue is to be managed effectively in the future. The results from this study indicate that Manitoba baccalaureate nursing students are well on their way to providing nursing care that will benefit this most difficult population.

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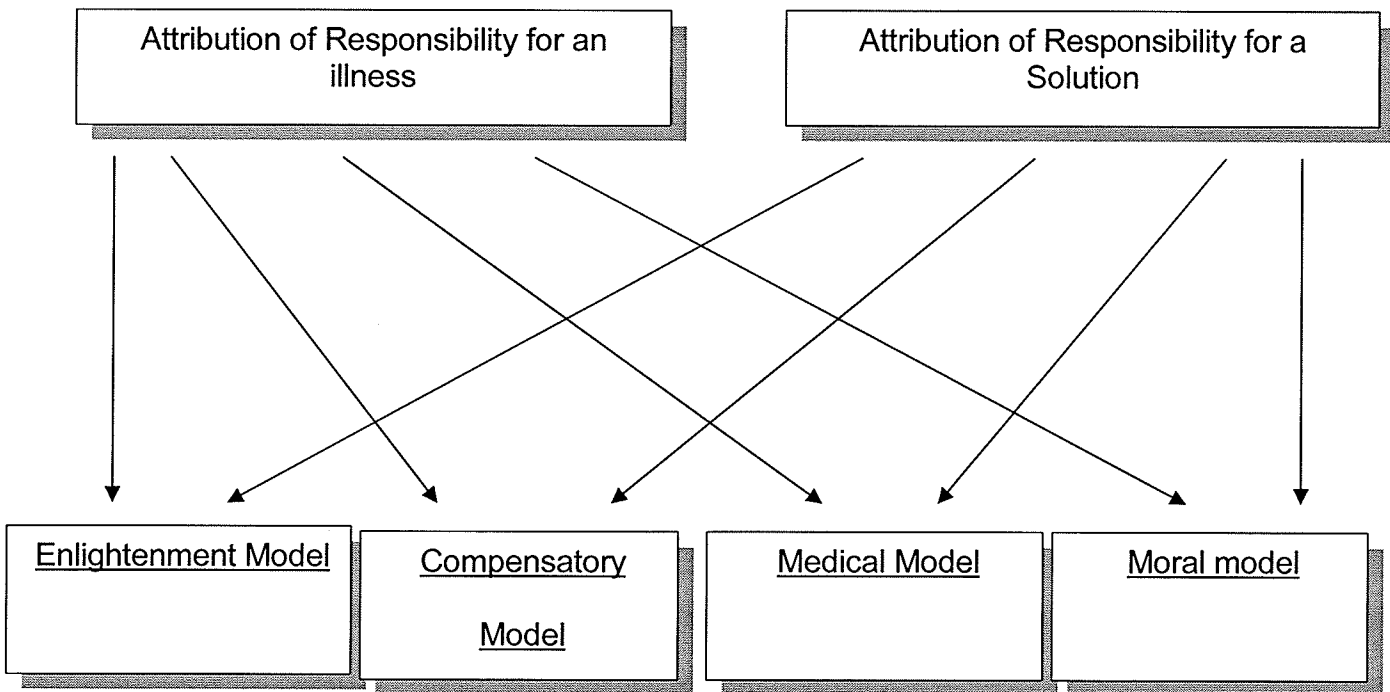
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Appendix A

Brickman's Four Models of Helping and Coping

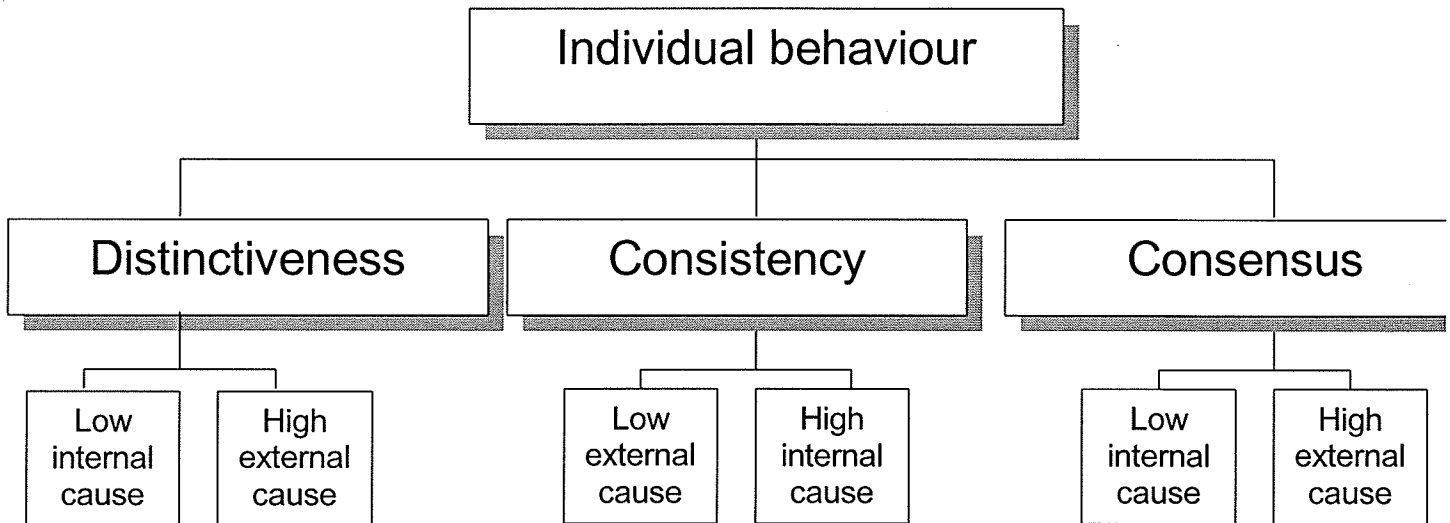
- Brickman, Rabinowitz, Karuza, Coates, Cohn, & Kidder (1982)



Appendix B

Attribution Theory

- Heider (1958), Kelley (1973)



Appendix C

Consent Form

Study Title: An Examination of Beliefs of Nursing Students regarding Substance Dependence and Abuse

Graduate Student: Evelyn Lundeen, RN, BN
Thesis Advisor: Dr. Wanda Chernomas
Faculty of Nursing, 474-6375

This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

I am a registered nurse and nursing educator conducting a study as part of the requirements for a Master of Nursing Degree in the Faculty of Nursing. The study is an examination of the beliefs of nursing students towards those with drug and alcohol problems and how the process of education affects those beliefs. Four groups of students will be asked to participate. Two groups of nursing students, one group beginning the nursing program and one group about to complete the program, and two groups of education students, one group beginning the program and one group about to complete the program. The responses of each group will be compared for similarities and differences in relation to the beliefs they hold toward those with drug and alcohol problems.

You are being asked to participate by completing two forms: (1) a 30-item questionnaire about your beliefs related to drug and alcohol dependence, and (2) a demographic form that includes age, sex, ethnic background, previous education and whether you have had any previous problems with drug or alcohol or have had any contact with a relative, friend or colleague with a drug and/or alcohol problem. Participation is voluntary; you are under no obligation to participate. There will be no academic penalty if you choose not to participate in the study. Any past or future relationship with me as a nursing instructor will not be jeopardized in any manner. You may choose to complete the 30-item questionnaire and leave the demographic form blank. You may also choose to leave specific questions blank.

The questionnaire and demographic form will take approximately 20 - 30 minutes to complete. You are free to withdraw your consent and discontinue participation at any time. Following completion of the questionnaire and demographic data, please place them in the boxes provided. If you wish to examine the questionnaires further before choosing to answer them, please mail them in the self-addressed stamped envelope provided when you have completed the questions to your satisfaction before

Confidentiality regarding your participation in the study will be maintained. Do not place your name on the questionnaire or the demographic form. The informed consent sheet containing your name will not be connected to the either the questionnaire or the demographic form. In reporting the results of the study, no participant's name will be used. All study data collected will be stored in a safe and secure environment.

While participation in this study may not benefit you personally, the information may be used to further the process of nursing education in the province of Manitoba. The study involves no foreseeable risks or harm to you. The study and its procedures have been examined and approved by the Nursing/Education Ethics Review Board at the University of Manitoba. Any complaint or concern about this project may be reported to the Human Ethics Secretariat at 474-7122.

Further questions about the study may be directed to:

Evelyn Lundeen, RN, BN
C-610 2055 Notre Dame Avenue
Faculty of Nursing
Red River College
Phone: 632-2923
e-mail: elundeen@rrc.mb.ca

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researcher, sponsors or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and/or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information during your participation.

Signature

Date

Graduate Student

Would you like to receive feedback about the results of the study? If so, please print your name and address below. Once the study is completed, a brief summary will be mailed to you.

I would like to receive feedback about the study Yes No

Name:

Street:

Apartment:

City:

Postal Code:

Appendix D

Research Study Information Sheet

Evelyn Lundeen, RN, BN
C-610 2055 Notre Dame Avenue
Faculty of Nursing
Red River College
Phone: 632-2923
e-mail: elundeen@rrc.mb.ca

Study Title: An Examination of Nursing Students' Beliefs towards Substance Dependence

Investigator: Evelyn Lundeen, RN, BN

Dear Student,

I am a registered nurse and nursing educator studying the beliefs of nursing students towards those with drug and alcohol problems and how the process of nursing education affects those beliefs. While participation in this study may not benefit you personally, the information may be used to further the process of nursing education in the province of Manitoba.

The study and its procedures have been examined and approved by the Ethics Committee (ENREB) at the University of Manitoba. You are enrolled as a student at this institution. The study involves no foreseeable risks or harm to you. The procedures will include:

1. completion of a 30-item questionnaire about your beliefs related to drug and alcohol dependence.
2. optional provision of demographic data including age, sex, ethnic background, previous education
3. optional provision of information regarding any previous personal or family history of a drug and/or alcohol problem.

The survey will take approximately 20 minutes to complete. You are free to ask questions about the study or about being a subject at any time during completion of the consent, questionnaire or demographic form. If you have further questions, you may contact me at the phone number/e-mail address listed above.

Your participation in the study is purely voluntary; you are under no obligation to participate. There will be no academic penalty of any sort incurred on your part if you choose not to participate in the study. Your relationship with me as a nursing instructor will not be jeopardized in any manner. You have the option of leaving the entire questionnaire blank if you so choose. You have the option of completing any or all of the 30 questions related to substance dependence attitudes on the questionnaire and leaving the information related to demographics

and previous contact with a substance dependent individual blank. Following completion of the consent, survey questionnaire and demographic form, please place them in the boxes provided at the front of the room. A separate box will be provided for each of the three (3) forms. If you wish to examine the forms further before deciding to answer the questions, please place them in the self-addressed stamped envelope that has been given to you and mail them to me after you have answered the questions to your satisfaction. Please return all forms no later than _____.

Because it is not necessary for you to provide your name and other personal identifying information on the questionnaire or demographic form, your identity is protected while the study is being conducted, while the data is gathered and analyzed and the results published. All study data collected will be stored in a safe and secure environment and will not be made available to other persons.

I thank you in advance for your participation in the research project.

Sincerely,

Evelyn Lundeen, RN, BN

Appendix E

Addictions Belief Inventory

- Luke, Ribisl, Watson & Davidson (2002)

Each item below relates to an individual's beliefs about drug and alcohol problems. Please circle the response that you feel is closest to your own personal beliefs.

Scale

Strongly agree: SA Agree: A Neutral: N Disagree: D Strongly disagree: SD

An addicted person can control their use.	SA	A	N	D	SD
A drinking or drug problem can only get worse.	SA	A	N	D	SD
Alcoholics/addicts are not capable of solving drinking/drug problems on their own.	SA	A	N	D	SD
An alcoholic/addict should not be held accountable for things they do while drunk/high.	SA	A	N	D	SD
Alcoholic/addicts are responsible for their recovery.	SA	A	N	D	SD
Some people are alcoholics/addicts from birth.	SA	A	N	D	SD
An addicted person uses alcohol/drugs to avoid personal problems.	SA	A	N	D	SD
Abusing alcohol/drugs is a sign of personal weakness.	SA	A	N	D	SD
Alcoholics/addicts can learn to control their drinking/using.	SA	A	N	D	SD
Recovery is a continuous process that never ends.	SA	A	N	D	SD
An alcoholic/addict must seek professional help.	SA	A	N	D	SD
It is not an alcoholic/addict's fault they drink/use.	SA	A	N	D	SD
Only the alcoholic/addict themselves can decide when to stop drinking/using drugs.	SA	A	N	D	SD
Alcoholism/drug addiction is inherited.	SA	A	N	D	SD
People use drugs/ alcohol to feel better about themselves.	SA	A	N	D	SD
Alcoholics/addicts are personally responsible for their addiction.	SA	A	N	D	SD

Addicted persons are capable of drinking/using drugs socially.	SA	A	N	D	SD
To be healed addicted persons have to stop using all substances.	SA	A	N	D	SD
A recovering addict should rely on others experts for help and guidance.	SA	A	N	D	SD
Alcoholic/addicts are not responsible for things they did before they learned about their addiction.	SA	A	N	D	SD
Ultimately, the addict is responsible to fix him/herself.	SA	A	N	D	SD
Children of alcoholics/addicts who drink or use drugs will become alcoholics/addicts.	SA	A	N	D	SD
People use substances to lessen their depression.	SA	A	N	D	SD
Relapse is a personal failure.	SA	A	N	D	SD
Treatment can allow alcoholics/addicts to drink/use socially.	SA	A	N	D	SD
Alcoholism/drug abuse is a disease.	SA	A	N	D	SD
Alcoholics/addicts use because they cannot cope with life.	SA	A	N	D	SD
Alcoholics/addicts start drinking/using because they want to.	SA	A	N	D	SD
Alcoholics/addicts use to escape from bad family situations.	SA	A	N	D	SD
It is their fault if an alcoholic/addict relapses.	SA	A	N	D	SD

Appendix F

Scoring and Interpretation of the Addictions Belief Inventory

- Luke, Ribisl, Watson & Davidson (2002)

Scoring: 1: strongly agree → 5: strongly disagree

1. Inability to control

- | | |
|-------|--|
| AB101 | An addicted person can control their use. |
| AB102 | Alcoholics/addicts can learn to control their drinking/using. |
| AB103 | Addicted persons are capable of drinking/using drugs socially. |
| AB104 | Treatment can allow alcoholics/addicts to drink/use socially. |

Subscale one: Reverse scoring (1: strongly disagree → 5: strongly agree)

Low scores: agrees (or has belief) that abuser has inability to control

High scores: disagrees (or does not believe) that abuser has inability to control

2. Chronic disease

- | | |
|-------|--|
| AB105 | A drinking or drug problem can only get worse. |
| AB106 | Recovery is a continuous process that never ends. |
| AB107 | To be healed addicted persons have to stop using all substances. |
| AB108 | Alcoholism/drug abuse is a disease. |

Subscale two

Low scores: agrees (or believes) that abuse is chronic disease

High scores: disagrees (or does not believe) that abuse is chronic illness

3. Reliance on experts

- | | |
|-------|---|
| AB109 | Alcoholics/addicts are not capable of solving their drinking/drug problem on their own. |
| AB110 | An alcoholic/addict must seek professional help. |
| AB111 | A recovering addict should rely on others experts for help and guidance. |

Subscale three

Low scores: agrees (or believes) that abuser requires professional assistance

High scores: disagrees (or does not believe) that abuser requires professional assistance

4. Responsibility for actions

- AB112 An alcoholic/addict should not be held accountable for things they do while drunk/high.
- AB113 It is not an alcoholic/addict's fault they drink/use.
- AB114 Alcoholic/addicts are not responsible for things they did before they learned about their addiction.

Subscale four: Reverse scoring (1: strongly disagree → 5: strongly agree)

Low scores: agrees (or believes) that personal responsibility for actions exists

High scores: disagrees (or does not believe) that personal responsibility for actions exists

5. Responsibility for recovery

- AB115 Alcoholic/addicts are responsible for their recovery.
- AB116 Only the alcoholic/addict themselves can decide when to stop drinking/using drugs.
- AB117 Ultimately, the addict is responsible to fix him/herself.

Subscale five

Low scores: agrees (or believes) that personal responsibility for recovery exists

High scores: disagrees (or does not believe) that personal responsibility for recovery exists

6. Genetic basis

- AB118 Some people are alcoholics/addicts from birth.
- AB119 Alcoholism/drug addiction is inherited.
- AB120 Children of alcoholics/addicts who drink or use drugs will become alcoholics/addicts.

Subscale six

Low scores: agrees (or believes) that substance abuse has genetic basis

High scores: disagrees (or does not believe) that substance abuse has genetic basis

7. Coping

- AB121 An addicted person uses alcohol/drugs to avoid personal problems.
- AB122 People use drugs/ alcohol to feel better about themselves.
- AB123 People use substances to lessen their depression.
- AB124 Alcoholics/addicts use because they cannot cope with life.
- AB125 Alcoholics/addicts use to escape from bad family situations.

Subscale seven

Low scores: agrees (or believes) that substance abuser uses chemicals to cope

High scores: disagrees (or does not believe) that substance abuser uses chemicals to cope

8. Moral weakness

- AB126 Abusing alcohol/drugs is a sign of personal weakness
AB127 Alcoholics/addicts are personally responsible for their addiction.
AB128 Relapse is a personal failure.
AB129 Alcoholics/addicts start drinking/using because they want to.
AB130 It is their fault if an alcoholic/addict relapses.

Subscale eight

Low scores: agrees (or believes) that substance abuse is a moral issue

High scores: disagrees (or does not believe) that substance abuse is a moral issue

Appendix G

Questions related to Demographics

Dear Student,

You have now completed the Addictions Belief Inventory. Could you please describe yourself by answering the next few questions? Your answers will remain anonymous and confidential and will be used to make group comparisons that help us explain some of the findings.

a. How old are you?

_____ yrs.

b. What sex are you?

1. M
2. F

c. What ethnic or racial group do you identify with most?

_____ (please describe)

d. Please identify the highest level of education you have completed.

1. high school.
2. post secondary certificate
3. post secondary diploma
4. university undergraduate degree
5. university graduate degree
6. other _____ (please describe)

e. Have you ever experienced a problem with alcohol or drugs?

1. yes
2. no

f. Have either one of your parents ever experienced problems with drugs or alcohol? (please indicate any or all that apply)

1. mother
2. father
3. both
4. neither have ever had problems

g. Have any one of your grandparents ever experienced problems with drugs or alcohol? (Please indicate any or all that apply)

1. maternal grandmother
2. maternal grandfather
3. paternal grandmother
4. paternal grandfather
5. none of them have ever experienced problems

h. Have you ever had a sibling who has experienced problems with drugs or alcohol? (Please indicate any or all that apply)

1. sister
2. brother
3. both
4. no siblings have ever had problems

i. Have you ever had a close friend who has experienced problems with drugs or alcohol?

1. yes
2. no

j. Have you ever worked (i.e., co-worker) with someone who has experienced problems with drugs or alcohol?

1. yes
2. no

k. Have you ever been in treatment for drug or alcohol use?

1. yes
2. no

l. Have either one of your parents ever been in treatment for drug or alcohol use? (Please indicate any or all that apply)

1. mother
2. father
3. both
4. neither have ever been in treatment

m. Have any one of your grandparents ever been in treatment for drug or alcohol use? (Please indicate any or all that apply)

1. maternal grandmother
2. maternal grandfather
3. paternal grandmother
4. paternal grandfather
5. none of them have even been in treatment

n. Have you ever had a sibling in treatment for drug or alcohol use? (Please indicate any or all that apply)

1. sister
2. brother
3. both
4. no siblings have ever been in treatment
- 5.

o. Have you ever had a close friend who has been in treatment for drug or alcohol use?

1. yes
2. no

p. Have you ever worked (i.e., co-worker) with someone who has been in treatment for drug or alcohol use?

1. yes
2. no

Appendix H

Permission to use Research Scale

From: Doug Luke [dluke@SLU.EDU]
Sent: Wednesday, May 29, 2002 10:49 AM
To: Evelyn Lundeen
Subject: Re: Addictions Belief Inventory

Evelyn,

Thanks for your interest in the ABI. You of course may use the instrument in your work—I hope it is useful.

The scale itself is simple enough that you should be able to use it based on our article without any additional information. Note that each item is scored on a 5-point Likert scale from 1=strongly disagree to 5=strongly agree.

There are a couple of other research projects that I know of that are using the ABI, but nothing published as of yet.

Please feel free to contact me if you have any specific questions about the ABI. I'm more than happy to help you out if I can.

Good luck,

--Doug Luke—

Douglas Luke
 Associate Professor of Community Health
 Saint Louis University School of Public Health
 3545 Lafayette Ave. St. Louis, MO 63104
 (314) 977—8108 dluke@slu.edu

Original Message

From: "Evelyn Lundeen" <ELundeen@rrc.mb.ca>
To: "dluke@slu.edu" <dluke@SLU.EDU>
Sent: Wednesday, May 22, 2002 11:51 AM
Subject: Addictions Belief Inventory

From: Evelyn. Lundeen
To: dluke@slu.edu
Subject: Addictions Belief Inventory

Dear Dr. Luke,

I am a Master of Nursing student at the University of Manitoba in Winnipeg, Canada and I am working on my thesis which examines nursing student attitudes towards substance abuse/dependence. My external committee

member, Dr. David Patton from the Addictions Foundation of Manitoba, was kind enough to locate a tool that you and some of your colleagues have developed called the Addictions Belief Inventory.

I am writing to ask for permission to use the tool in my research study. Your article on the development of the tool from the journal Substance Use and Misuse describes the tool. Is there other information (e.g., scoring key) that I would need to use the tool? What would be the cost of using it?

In addition, one of my thesis committee members suggested that I ask you if you are aware of any studies that used your tool to evaluate the attitudes of health care workers.

I will provide you with a brief summary of the intent of my project. This will be a quantitative study employing a two by two factorial design. The factors are the levels of education of the students (i.e., either first year or fourth year) and the faculties (i.e., nursing and education). Two groups of nursing students and two groups of education students will be selected at different stages in their education (i.e., first year and fourth year). The fourth year nursing students will have progressed through the nursing education process that the first year students are beginning. The students in their final year of education studies will have progressed through the same program that the first year education students are beginning. It is hypothesized that the process of nursing education will result in a change in attitudes towards substance dependence/abuse in the fourth year students that will be different; either in a positive or negative manner; from the first year students. In addition, it is hypothesized that the attitudes of the fourth-year nursing students will be different from those in fourth-year education. The purpose of the study will be to identify how the process of nursing education for Manitoba baccalaureate nursing students acts to facilitate the development of attitudes that nursing students display in relation to substance dependence/abuse.

If you require any further information, please do not hesitate to contact me. I would appreciate hearing from you at your earliest convenience.

Sincerely,

Evelyn Lundeen, RN, BN

Nursing Instructor

Red River College

C-610-2055 Notre Dame Avenue,

Winnipeg, Manitoba

Canada R3H 0J9



Appendix I
UNIVERSITY
OF MANITOBA

OFFICE OF
RESEARCH SERVICES

ORS
244 Engineering Building
Winnipeg, Manitoba R3T 5V6
Telephone (204) 474-8418
Fax (204) 261-0325
www.umanitoba.ca/vpresearch/ors

APPROVAL CERTIFICATE

25 September 2002

TO: Evelyn Lundeen
Principal Investigator

FROM: Lorna Guse, Chair
Education/Nursing Research Ethics Board (ENREB)

Re: Protocol #E2002:069
"An Examination of Beliefs of Nursing Students regarding Substance
Dependence and Abuse"

Please be advised that your above-referenced protocol has received human ethics approval by the **Education/Nursing Research Ethics Board**, which is organized and operates according to the Tri-Council Policy Statement. This approval is valid for one year only.

Any significant changes of the protocol and/or informed consent form should be reported to the Human Ethics Secretariat in advance of implementation of such changes.

Appendix J

October 21, 2002

Evelyn Lundeen, RN, BN
Nursing Instructor
Red River College
C610-2055 Notre Dame Avenue
Winnipeg, MB R3H 0J9

Dear Ms Lundeen:

**Re: Research project: An examination of beliefs of nursing students
regarding substance dependence and abuse. RAC 2002-016**

Please be advised that your above referenced research proposal has received human ethics approval by the Red River College Research Approval Committee, which operates, generally, according to the Tri-Council Policy Statement on the Ethical Conduct for Research involving Humans.

Any significant changes in the research protocols or informed consent procedures should be reported to the Chair of the Committee in advance of any implementation of such changes.

Yours truly,

Jim Goho
Chair,
Research Approval Committee

Cc: RAC members



Appendix K

UNIVERSITY
OF MANITOBA

Faculty of Nursing

Beliefs 146

Office of the Dean
Helen Glass Centre for Nursing
Winnipeg, Manitoba
Canada R3T 2N2
Telephone: (204) 474-9201
Fax: (204) 474-7500
Email: David_Gregory@UManitoba.ca

DATE: September 27, 2002

To: Ms. Evelyn Lundeen
From: Dr. David Gregory, Dean
Subject: Faculty of Nursing Access

Dear Ms. ~~Lundeen~~:

I am now in receipt of the ENREB Approval Form and your e-mail message in which you identify how you will access faculty and students. I understand that you will be working with Dr. Wanda Chernomas, Associate Dean (Undergraduate Programs) in this regard. Furthermore, you noted that you will not directly recruit former RRC students in light of possible coercion (real or perceived).

As noted in the ENREB Approval Form, your research is "covered" for one year. Should you require more time to complete your study, please apprise me before the end of this time period.

I wish you every success in your research.

cc: Dr. Wanda Chernomas, Associate Dean (Undergraduate Programs)
Dr. Lorna Guse, Chair, ENREB

Karen Wall, Chair of Nursing
Office C607
Phone: (204) 632-2297
Fax: (204) 633-5944
E-mail: kwall@rrc.mb.ca

August 30, 2002

Evelyn Lundeen
Instructor - Red River College
Office C610
2055 Notre Dame Avenue
Winnipeg, MB
R3H 0J9

Dear Evelyn:

Your study sounds most interesting and relevant to nursing and I am pleased to support your research. You may certainly have access to the group of students requested for purposes of conducting your data collection. The teacher for that course is Allison Murdoch-Schon and I will advise her that you will be making arrangements with her to access the students.

Good luck with your work and I look forward to seeing the results of your study.

Sincerely,

Karen Wall RN BScN MN
Chair of Nursing

Appendix M

Evelyn Lundeen

From: Dave Jenkinson [jenkinso@Ms.UManitoba. CA]
Sent: August 29, 2002 2:58 PM
To: Evelyn Lundeen
Subject: RE: Request for B.Ed. students

Dear Ms. Lundeen:

As per our telephone conversation, I am prepared to support your study by attempting to identify opportunities for you to recruit students for your study from our Faculty.

Yours truly, Dave Jenkinson

Associate Dean (Undergraduate Programs)