

The Characteristics of Recovering Chemically Dependent Manitoba Nurses

by

Veryl Margaret Tipliski

A thesis
submitted to the University of Manitoba in partial
fulfillment of the requirements for the degree of

Master of Nursing

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DEPENDENT MANITOBA NURSES**

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VERYL MARGARET TIPLISKI

**A thesis submitted to the Faculty of Graduate Studies of
the University of Manitoba in partial fulfillment of the requirements
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THE CHARACTERISTICS OF RECOVERING CHEMICALLY DEPENDENT MANITOBA NURSES

ABSTRACT

The literature notes that nurses are at high risk for chemical dependency, with estimates of the incidence of this illness among nurses ranging from 6 - 8% (ANA, 1987), to 10 - 20% (Curtin, 1987). There have been multiple suggestions as to the origin, risk factors and characteristics of susceptible nurses. However, the research effort with chemically dependent nurses has been minimal, especially outside of the United States, and there has not been a concerted effort to identify common characteristics and risk factors. In Manitoba, there was no empirical data. The purpose of this descriptive replication study was to provide information about the characteristics of recovering chemically dependent Manitoba nurses, and to identify variables associated with both chemical dependency and recovery. Information about these characteristics would also reveal if the nurses' profiles were unique, or similar to a national or international profile.

The study utilized an anonymous mailed survey to collect quantitative data from chemically dependent Manitoba nurses who were in the recovery stages of their illness. The instrument used in the study was an adapted version of the Sullivan Survey of Chemical Dependency in Nursing. The sample consisted of 22 female recovering nurses who had been referred to the provincial peer assistance program.

It was found that the majority of characteristics of the recovering Manitoba nurses are similar to those found in American studies, in particular, Sullivan (1987a). Some characteristics were found to be unique to the Manitoba sample: there were no males; the nurses are slightly older; less often divorced, experienced eating disorders; have higher incidences of sexual molestation, parental dependence, maternal depression, and a significant other who is also dependent; experienced less disciplinary action against their licences; believe that a clinical setting had no effect on becoming dependent; did not seek out a setting for easy drug access; and obtained prescription drugs from physicians rather than through diversion.

Several implications for the nursing profession were submitted, as well as recommendations for further study.

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CHAPTER I

INTRODUCTION

Chemical dependency is recognized as a major public health problem in Canada. One of every ten persons who consumes alcohol is or will become dependent on that chemical (Bissell & Haberman, 1984; Mendelson & Mello, 1985; Smart & Ogborne, 1986). Only cardiac disease and cancer exceed alcohol dependency in terms of personal health and economic costs (Mendelson & Mello, 1985).

Giangrego (1987) emphasizes that chemical dependency has probably ruined more lives than any war ever fought, ravaged families, and turned promising careers into agonizing failures. Chemical dependency is no respecter of age, sex, race, economic status, or profession. The chemically dependent Canadian is therefore female, male, young, elderly, white, black, new immigrant, native, labourer, homemaker, executive, and health professional, including nurse.

During the past decade there has been a change in societal recognition of chemical dependency. National attention was attracted to the problem of chemical dependency among professional athletes, celebrities, and in the work force. Occupational chemical dependency became a subject for investigation (Fillmore, 1984b). Although little research

has been conducted with health professionals, chemical dependency is considered to be the major occupational hazard for this group. Rates of the illness are reported as being dis-proportionately higher than that of the general population (Bissell & Haberman, 1984). The exact number of dependent health professionals is not known, but estimates vary from 5% to 20% of that population (Talbot & Gallegos, 1989). It has been further estimated that the populations of three medical schools and ten nursing schools are lost to chemical dependency each year in the United States (Jefferson & Ensor, 1982).

Yet chemical dependency among nurses for the most part, has been ignored until this past decade. Recently, articles on the topic have been published, but data regarding this illness among nurses are still limited and inconclusive. The scope of chemical dependency among nurses and the impact on the nursing profession are therefore largely unknown.

Popular belief has it that nurses are at a 50% higher risk for developing this illness than the general population, with one in seven nurses estimated by experts in the field to be at risk (Sullivan, Bissell, & Williams, 1988). While somewhat lower, the American Nurses Association's (ANA) most

recent estimate is that six to eight percent of their total registered nurse population is chemically dependent (ANA, 1987). Data aggregated by their National Council of State Boards of Nursing revealed that 67% of the total disciplinary actions in 1985 were related to chemical dependency (Chesney, 1988). These data suggest lower incidence rates because they may only reflect a portion of the problem. It is well documented that the majority of dependent nurses studied thus far were never reported to state boards, yet the majority of board actions are related to chemical abuse (Sullivan, Bissell & Leffler, in press). One can surmise therefore, that the reported cases are only the tip of the iceberg. Chemically dependent nurses are frequently not identified, ignored, fired, or asked to resign rather than being reported (Bissell & Haberman, 1984), hence their disappearance from formal sources of data on the problem.

While there are no available data, there is no reason to believe that the scope of this illness among Canadian nurses is any different. In the absence of full access to those affected, and applying the American Nurses Association's figure (6% to 8%) to the 9,986 practicing registered nurses in Manitoba (J. Tkachuk, personal communication, Feb., 1990),

it is estimated that 600 to 800 nurses could be at risk for developing chemical dependency. In Manitoba between 1973 and 1986, 39% (5) of the 13 disciplinary cases heard by the Manitoba Association of Registered Nurses (MARN) were related to chemical abuse problems (Steven, 1988). This Association's peer assistance program, Nurses At Risk (NAR), has had over 90 referrals since its inception in 1986 (S. Mitchell, personal communication, Aug., 1989).

These data confirm that chemical dependency is a problem within the nursing profession, but indeed do not establish the actual incidence of this illness within the profession. No survey is currently available to document the incidence of chemical dependency within the nursing profession. In fact, no investigation done to date supports the belief that nurses have a greater incidence of chemical dependency than the general population (Haack & Hughes, 1989).

Statement of the Problem

Whether the incidence of chemical dependency in nursing is less or greater than the estimates, there is enough information to suggest that the consequences are significant. It is a problem that affects individual nurses, the public,

the profession, employers, and even the researcher.

The possibility that nursing practice is carried out by nurses under the influence of chemicals raises serious legal and ethical questions. The risk of harm to patients caused by nurses whose judgement and skills are impaired is a concern. Jordon (1985) noted that chemically dependent nurses have responses which are slowed and often inappropriate to the situation.

Devastation to the individual nurse who is ill with this disease is a tragedy. Although they work among other health professionals and despite visible signs of dependency, they most often suffer alone. The risk of admitting the need for help is great because of the potential loss of a licence to practice (Rohner, 1982). As well, most health professionals lack the education to enable them to recognize and intervene in the early stages of chemical dependency problems (Hoffman & Heinemann, 1987). Thus, there has been three to five years of chemical abuse before job performance begins to deteriorate and the nurse is identified (O'Connor & Robinson, 1985). The significance of the problem to the nurse has been further shown through a study of death certificates undertaken in California. In one county it was found that

one nurse dies every five weeks from chemical dependency (Buxton, Jessup, & Landry, 1985).

It is Curtin's (1988) conviction that anything that destroys the practitioner undermines the profession. Far from being the "bad apples" of the profession, chemically dependent nurses are likely to be highly respected for their excellent work before becoming ill. Most of them functioned competently in demanding and responsible jobs (Bissell & Haberman, 1984; Green, 1984). With treatment, the progress of this illness can be arrested and the nurse can return to safe nursing practice. It has been noted that 85% of recovering chemically dependent nurses do return as productive care-givers (Dunkin, 1983).

The cost of chemical dependency is high for the employer. The chemically dependent nursing population works with 50% less efficiency, uses 50% more sick time, and places the employer at greater risk for liability (O'Quinn-Larson & Pickard, 1989). La Godna and Hendrix (1989) analyzed the cost of a dependent nurse to the employing agency to be \$17,860.00, and Jordon (1985) determined that the theft of narcotics by dependent nurses cost over one million dollars in the state of Texas alone.

Chemical dependency has been variously described as the major health problem affecting nurses (Sullivan et al., 1988), the primary problem affecting nurses' job performance (Kabb, 1984), and as "a major public health problem for the nursing profession" (Professional Nurses Quarterly, 1986, p.1). Green goes even further by calling chemical dependency the number one problem affecting professional nursing today (1989a).

Given that a profession has both a responsibility to its members and an obligation to preserve public safety (Naegle, 1989), the nursing profession and indeed many of its leaders have tended to look the other way from the dependency issue. Just ten years ago, North America's largest professional nursing organization was not yet ready to acknowledge and address the problem of chemical dependency within the profession. A resolution that addressed the issue was introduced but defeated at the American Nurses Association (ANA) convention in 1980 (Bissell & Jones, 1981). This "conspiracy of silence" was officially broken by the organization in 1982 with the adoption of a resolution "to address chemical dependency as a health problem that compromises nurses' ability to function within the standards

and code of conduct for professional practice" (ANA, 1982). This resolution reflects an awareness that chemical dependency is a fact of life in nursing, and indicates that nurses may be at risk related to personal characteristics and factors inherent to the professional environment (Sullivan, 1987b). The resolution noted that the stigma still associated with chemical dependency contributes to resistance in facing the problem. The resolution therefore called for ongoing collection and dissemination of information, including education and research activities (ANA, 1982). Currently, more than 30 states now offer peer assistance programs for their dependent nurses (Green, 1989b). With the adoption of this so-called Impairment Resolution in 1982, the American nursing profession officially recognized chemical dependency among nurses.

The literature notes that nurses are a high risk population, and there have been multiple suggestions as to the origin, risk factors, and characteristics of susceptible nurses. Some descriptions of the characteristics of the recovering nurse are contained in the literature. However, most descriptions are anecdotal profiles of individual nurses, or clinical impressions (Haack & Hughes, 1989). Only

recently have assumptions about the chemically dependent nurse begun to be substantiated by research (Estes, 1986).

Some of the American research indicates that certain characteristics can be expected in a sample of recovering chemically dependent nurses. For instance, these nurses report more familial alcoholism than does the general population (Bissell & Haberman, 1984; Sullivan, 1987a), and males appear to be over-represented (Sullivan, 1987a; Talmadge-Reed, 1982). Academic success is common (Bissell & Haberman, 1984; Sullivan, 1987a), as are extensive medical histories (Levine, Preston, & Liscomb, 1974; Sullivan, 1987a). Although the data are not conclusive, some common denominators in the characteristics of chemically dependent American nurses are emerging.

The etiological complexity of chemical dependency precludes that one profile will fit the characteristics of all chemically dependent nurses (Haack & Hughes, 1989). Nonetheless, characteristics must be studied in a systematic way. Researchers emphasize that the logical first step in dealing with this illness is to understand the personal and professional variables that may contribute to chemical dependence among nurses (Clark, 1988; Sullivan, 1987a). A

systematic identification of characteristics and potential risk factors for chemical dependency in nurses can guide the development of prevention and intervention strategies, and provide a data base for further studies (Haack & Hughes, 1989).

Dr. Eleanor Sullivan, one of the foremost nurse researchers in this field, has been studying the characteristics of recovering American nurses in the most systematic manner thus far. Her initial quantitative descriptive study of a national sample of 139 recovering nurses reported a family history of alcoholism, familial depression, sexual problems, and infrequent relapse (1987a). A subsequent study compared the findings from the original sample with a control group of non-dependent nurses. Significant differences between the two groups were found in gender, familial alcoholism, sexual problems, and marital histories (1987b). Sullivan's studies have contributed to an increased comprehension of the recovering American nurse population. But in a world of diversity, it cannot be assumed that all recovering chemically dependent nurses are the same as American nurses. Non-American samples of recovering nurses still need to be studied (Sullivan et al.,

1988). Systematically building on the work that Dr. Sullivan has begun was deemed to be an appropriate task for this investigator.

In Canada, a resolution was brought before the Canadian Nurses Association's 1986 annual meeting requesting an examination of chemical dependency among nurses. The resolution was defeated, and from the discussion at the meeting, it was evident that the voting delegates believed that this problem should be addressed at the provincial association level, rather than the national (M. Eberlin, personal communication, June, 1989). In the past five years, three provincial nursing associations, Manitoba, Ontario, and British Columbia have established peer assistance programs for their memberships.

Chemically dependent nurses may also pose a problem for the researcher due to the sensitivity of the topic. It is extremely difficult to conduct research on an illness that is stigmatized as self-induced (Isler, 1978), that is often denied by affected nurses as well as their colleagues, and that the profession historically prefers not to recognize. This population is difficult to identify and reach, even when in recovery (Sullivan, 1987a). Hence, there exists gaps in

our understanding of the problem. In particular, little is known about the characteristics and risk factors of chemically dependent nurses. Without this information, it is difficult to embark on wise courses of action which might help reduce the risk and provide the most helpful form of assistance.

In summary, chemical dependence among nurses presents a multi-faceted problem - a problem for the nurse, the public, the profession, the employer, and for the investigator.

Purpose of the Study

The purpose of this descriptive replication study was to provide information on the common characteristics of recovering chemically dependent Manitoba nurses, and to identify those variables associated with chemical dependency and recovery. Information about the characteristics of the recovering chemically dependent nurse would also reveal if these nurses' profiles were unique, or similar to a national or international profile.

Research Questions

The study was guided by these questions:

1. What are the personal, familial, and professional characteristics of recovering chemically dependent Manitoba nurses?
2. What factors are associated with chemical dependence in Manitoba nurses?
3. What factors are associated with the recovery of chemically dependent Manitoba nurses?
4. Are the characteristics of recovering chemically dependent Manitoba nurses unique or similar to a national/international profile?

Definition of Terms

The following terms are defined as they were used in the study:

- | | | |
|----------------|---|---|
| Characteristic | - | that which exhibits the distinctive qualities of a person. |
| Chemical | - | a generic term which includes alcohol and other drugs taken for mood-altering purposes. |

Chemical Dependence - a primary disease process whereby an individual becomes physically and/or emotionally dependent upon one or more chemicals, with resulting negative consequences. Chemical dependence is also referred to as addictive disease.

Chemically Dependent Nurse - an individual nurse who is unable to meet the requirements of the professional code of ethics and standards of practice due to cognitive, interpersonal or psychomotor skills affected by conditions of the individual in interaction with the environment (American Nurses Association, 1984). The nurse may be dependent upon drugs, alcohol or both. The term impaired nurse is a synonym for chemically dependent nurse.

Disease Model of Chemical Dependency - a concept identifying chemical dependency as a primary disease process in and of itself and not a symptom of another problem.

- Nurse - an individual who is registered and practicing as a professional nurse. When used in this study, the nurse is licensed by the Manitoba Association of Registered Nurses (MARN) or the Registered Psychiatric Nurses Association of Manitoba (RPNAM).
- Onset - the beginning of chemical abuse behaviour, as defined by the subject.
- Recovery - a self-report of abstinence from chemicals which is initiated when the chemically dependent individual is able to acknowledge that she or he is dependent upon chemicals.

Recovering Chemically Dependent Nurse - an individual nurse

who is self-defined as chemically dependent and is now in the recovery process of the illness. For this study, a minimum of six months of chemical abstinence warrants this term.

Need for the Study

Nursing, like the other health professions, has been limited in its approach to dealing with chemically dependent colleagues because of a lack of organized, scientific, validated approaches to determining the extent, (Green, 1984), identification and intervention (Solari-Twadell, 1987), and prevention of the problem (Naegle, 1987). Since there is little research data to guide the profession, unfounded statements and even moralizing about chemical dependence in nursing is common. Research findings are needed to guide in the identification and reduction of the incidence of chemical dependence, and the impact upon the individual nurse, the profession, and the public.

Furthermore, Haack (1989) states that peer assistance programs are more likely to produce positive results when there is a data base built on scientific information. There have been several recent appeals to the profession to increase the research effort on the problem (Haack & Hughes, 1989; Naegle, 1988; Sullivan et al., 1988). Information about chemically dependent nurses is virtually nonexistent outside of the United States, and hence systematic and reliable information is needed about the nature of chemical dependency in diverse samples of nurses (Haack & Hughes, 1989).

The nursing profession itself is believed by some to generate risk factors inherent to the development of chemical dependency (Clark, 1988; Green, 1989a). Risk factors may include easy access to drugs, a faith that drugs will relieve discomfort, and self-medication behaviour. Because of such factors, recovering nurses consistently warn the profession that becoming chemically dependent is "so easy" (Talmadge-Reed, 1982). However, the majority of nurses do not become dependent upon chemicals. Why one nurse becomes dependent and another does not is a fascinating question in itself. The disease has been suggested to be related to the

interaction among certain biologic, psychologic, and sociocultural factors (Crosby & Bissell, 1989), though exactly what combination or how is not known. To date, little has been done to establish a profile or description of the nurse who develops a dependency on chemicals. Effective education, prevention, and treatment methods can be developed when there is an understanding of the demographic characteristics and risk factors that may be associated with the development of this illness in the nursing population (Haack & Hughes, 1989).

This study was undertaken because, although MARN's peer assistance program Nurses at Risk had received over 90 referrals since 1986, there were no reported empirical data to guide the program. In an effort to assure nurses of confidentiality, few records were kept. There was a lack of factual information as to the demographic characteristics of the nurses being referred, and generally very little was known about the problem from the Manitoba context. One way to provide more information on the chemically dependent nurse in Manitoba was to establish an in-depth data base on recovering nurses.

This study is important because it helped to fill a gap in information about the nature of chemical dependency in a Canadian sample of nurses, while at the same time, systematically building upon the work of Dr. Sullivan. Finally, the study sought to provide a data base on which to build broader studies about chemical dependency among nurses.

Assumptions

The assumptions of this study are:

1. Nurses who are in the process of recovering from chemical dependency are able to reflect on their experiences of chemical dependency and recovery.
2. Recovering chemically dependent nurses have characteristics that can be measured.
3. The anonymity of the questionnaire will enhance the disclosure of accurate information by the respondents.
4. Information about characteristics and risk profiles of recovering chemically dependent nurses may help suggest profiles of those nurses not yet identified, thus aiding the identification and intervention process.

Limitations of the Study

Several limitations in methodology indicate that the results of this exploratory study should be considered cautiously.

1. Due to the inaccessibility of the recovering chemically dependent nurse population, a convenient purposive sample was utilized, and this investigator did not control the sample selection. Representatives of the peer assistance program distributed the survey to their referred nurses, and this selection may have been influenced by the time or method of distribution as well as by other unknown conditions. For example, some recovering nurses who met the study criteria did not receive a survey as their addresses were unknown.
2. Since the subjects were self-selected volunteers, variables associated with responsiveness to complete the questionnaire also are unknown.
3. Subjects who volunteered may differ from those unwilling to participate. For example, the responding nurses may possibly be better recovered or longer into recovery.

4. This is a population of recovering nurses; nurses who are actively chemically dependent were not included due to a lack of accessibility. Therefore there may be characteristics associated with the ability to recover that are unknown.
5. Chemically dependent nurses who have recovered without a referral to Nurses At Risk were not included.
6. Since this was a retrospective study, the participant may have had difficulty responding to questions dealing with events and behaviours that happened in the past.

Because of these methodological issues, conclusions are tentative and limited. The results are not generalizable beyond the sample itself.

Summary

Chemical dependency among nurses is a significant problem that affects not only the caregiver but the care receiver as well. Studies concerning the problem have been few, especially outside of the United States. No studies have been conducted in Manitoba. This descriptive replication study sought to describe the characteristics of

recovering chemically dependent nurses in the province of Manitoba, and to identify those variables associated with their dependency and recovery. It was hoped that a risk profile might emerge for Manitoba nurses, which could be of assistance in generating further study, or suggesting directions for assisting more nurses experiencing chemical dependency.

CHAPTER II

REVIEW OF THE LITERATURE

The review of the literature is organized into the following related research categories: (1) chemical dependency in the general population; (2) females and chemical dependency; (3) health professionals and chemical dependency; and (4) chemically dependent nurses.

Chemical Dependency in the General Population

In North America, one in ten people who drink alcohol will develop the disease of chemical dependency (Smith, Talbott, & Morrison, 1985). In Manitoba, one in every twenty-one Manitobans over age fifteen can be considered alcoholic (Alcoholism Foundation of Manitoba, 1986), and in 1984, it was estimated that 21,600 Manitobans had alcoholism (Adrian, Jull, & Williams 1989). The method used for establishing the prevalence of alcoholism is based on liver cirrhosis fatalities. Because there is no accepted method for establishing the number of persons dependent on chemicals other than alcohol, these figures therefore underestimate the total chemically dependent population in Manitoba (Adrian, Jull & Williams, 1989). In an attempt to identify possible risk factors for nurses, research on chemical dependency in the general population was first examined.

Traditionally, chemical dependency was viewed as an intrinsic moral weakness or "badness" in the individual (Conrad & Schneider, 1980), and prior to the 1960's, scientific studies of chemical problems were rare. The ideas that developed previous to 1960 were based on the experiences of persons who had problems with alcohol and the clinical experiences of those who dealt with them. The ideas which emerged from this period are still popular today and are embodied in the work of Alcoholics Anonymous (1957) and Jellinek (1946), a pioneer in the study of alcoholism.

Jellinek (1946) postulated a psychological component to explain why some individuals develop alcoholism and why having experienced adverse consequences of drinking, drinking had become a compulsion. Furthermore, he later theorized that the physiology of some persons changes after a great deal of drinking (1952). He introduced the term "loss of control" to characterize the state of physical dependence in which the addicted drinker could not simultaneously stop drinking and avoid withdrawal symptoms. Jellinek was the first to propose that alcoholics suffer from a disease, not a moral weakness, and are in need of medical care (1960). This disease concept of alcoholism, while not considered a theory (Chaudron & Wilkinson, 1988) is a descriptive explanation of alcoholism which has increasingly replaced the traditional moral perspective (Naegle, 1988b).

The search for a contemporary explanation of chemical dependency follows from a variety of broad perspectives - biological, psychological and sociological. Traditionally, theoretical formulations have tended to emphasize only one particular perspective. Research has generated numerous theories from each of these major orientations. Because alcohol remains as the major addictive chemical within the general population, limited research has been done on chemicals other than alcohol (Naegle, 1988b). However, Mendelson and Mello (1985) note that alcoholism is not necessarily different from other types of chemical dependency. Following is a brief overview of research from each explanatory perspective.

Biological Perspective

This orientation is relatively new and has assumed great importance in recent years. The possibility of a genetic predisposition to developing alcoholism has been intensely researched, and the findings suggest a genetic factor. More than 100 studies confirm alcoholism as a genetically transmitted disease (Goodwin, 1976), and since 1980 at least 700 articles have been published on the subject (U.S.A. Dept. of Health, 1985). The type of genetic factor is thought to be a difference

in alcohol metabolism (Vesell, 1972).

Alcoholics are more likely to have at least one alcoholic biologic parent than non-alcoholics (Schuckit, Goodwin, & Winokur, 1972). Family studies have revealed a three to fivefold increased risk for the disorder in sons of alcoholic fathers (Cotton, 1979; Goodwin, 1979). The evidence is more conclusive among male than female offspring (Schuckit, 1984). Studies consistently report greater rates of paternal as opposed to maternal alcoholism in children of alcoholics. A review by Cotton (1979) shows that two-thirds of the studies of alcoholics found that at least 25% had fathers who were alcoholics, while maternal alcoholism occurred in fewer than 5% of the alcoholics' families. This familial tendency does not necessarily imply causation since environmental and sociocultural variables could also influence the family. In order to identify genetic influences, other research approaches have thus been utilized in an attempt to control for environmental factors.

Studies of twins (Schuckit, 1981) evaluate the relative contributions of genetics and environment by comparing the risk of alcoholism in identical and fraternal twins of alcoholics. Because both types of twins share major childhood events, if the alcoholism risk is closely related to environment, identical and fraternal twins of alcoholics should be at equally high risk.

However, because the identical twins share 100% of their genes and fraternal twins share only 50%, if alcoholism is genetically influenced, the risk for the identical twin of an alcoholic should be significantly higher than the risk for the fraternal twin. The majority of studies demonstrate a significantly higher concordance for an identical twin of an alcoholic than for a fraternal twin (Murray & Stebenau, 1982; Schuckit, 1981).

In addiction research, the most impressive evidence for genetic transmission comes from adoption studies. These studies have evaluated biological children of alcoholics who were adopted and raised separately from their real parents. Such investigations have consistently revealed a three to fourfold higher risk for alcoholism in adopted-out sons of alcoholics, even when they were raised by non-alcoholic adoptive parents (Goodwin, 1979; Goodwin, Schulsinger, & Hermansen, 1973). In a unique study combining twin and adoption designs, Schuckit's (1985) results were consistent with previous findings.

Such results helped put to rest the popular assumption that alcoholics began drinking simply because they witnessed drinking at home. However, it has frequently been noted that even high-risk studies involving a heavy genetic loading of family vulnerability typically find less than half the at-risk offspring themselves become dependent on chemicals (Cotton, 1979). As

well, researchers have estimated that 30% of alcoholics have no family history of the illness (Alexander, 1987; Desmond, 1987).

Most of the genetic research has failed to control for interacting psychological, environmental and sociocultural factors that could also account for the development of the disease in some individuals and the failure of others to develop an addiction, given similar genetic histories (Naegle, 1988b). Therefore, on the basis of research up to 1988, Monteiro and Schuckit stated that genetic predisposition appears to be a significant but modest risk factor (1988).

However, there has recently been further and stronger support given to genetic predisposition. The latest research has identified the receptor gene for dopamine, which appears to place some individuals at risk for developing alcoholism (Blum et al., 1990). The brain chemical dopamine plays a role in all pleasure-seeking behaviors, including alcoholism. The researchers studied the brains of 35 individuals who died from alcoholism, and a control group of 35 others who did not die from the disease. The receptor gene for dopamine was present in 77% of the alcoholic brains, and absent in 72% of the nonalcoholic brains. The researchers noted that while the statistical evidence for the genetic link was strong, some individuals with the gene did not develop alcoholism, while some who lacked the gene did become

alcoholic. They therefore emphasized that sociocultural factors may act as mediating conditions to the genetic predisposition. Such factors could not be controlled for in their study. The scientists also theorized that this gene is likely not specific to just alcoholism, but more generally, all pleasure-seeking behaviors, for example, eating.

Considerable research is also being directed toward identification of biological markers of vulnerability to alcoholism in individuals at genetic risk for the disorder. Markers are biologic factors that might mediate an enhanced genetic risk for alcoholism. Although the mechanisms by which an inherited tendency for alcoholism ends up being expressed have not been established, young males with and without a family history have been shown to differ from matched controls in their reaction to ethanol (Monteiro & Schuckit, 1988). Sons of alcoholics showed a decreased intensity of reaction to ethanol compared with control subjects. Biologic marker studies are still in their infancy.

Psychological Perspective

This orientation involves exploring associations between psychologic factors and alcoholism. Psychologists generally prefer either an intra-psychic or learning theory approach to

alcoholism, and two were considered.

Personality theories

It has long been theorized that some trait might contribute to the development of alcoholism, and this explanation assumes that alcoholism is a symptom of an underlying psychological problem. There has thus been an ongoing search for an "alcoholic personality" that would have a predisposition to the illness. The psychopathological conditions that have been most frequently associated with chemical dependency are depression and antisocial personality characteristics.

Some studies suggest that depression is more prevalent in alcoholic populations than in non-alcoholics (Guze, Cloninger, Martin, & Clayton, 1988). It is estimated that between one-quarter and two-thirds of alcoholic populations experience symptoms of depression that are severe enough to interfere with functioning (Parker, Parker, Harford, & Farmer, 1987). The relationship between suicidal behaviour and chemical dependency, particularly alcohol, is also well-documented in the literature (Health & Welfare, 1987). Studies have reported an alcoholism rate ranging from 8 to 12 percent among suicides and suicide attempters, up to twice the rate of the general population (6%) (Maris, 1981).

Winokur (1979) reported strong family concordance in alcoholism and depression. Cotton (1979) describes the relationship that has been found between alcoholism and affective disorders. Relatives of patients having affective disorders, when compared with medical patient controls, have higher rates of both alcoholism and affective disorders; and affective disorder is the only psychiatric illness found in excess in near-relatives of alcoholics. These findings suggest an association between depression and alcoholism.

These studies, however, are plagued by a paucity of valid psychological measures, and often rely only on retrospective anecdotal recall, which may be cognitively distorted. In some studies, alcoholic individuals are administered tests such as the Minnesota Multiphasic Personality Inventory (MMPI) and do score high on the depression scale (Schuckit, 1986). But since the elevated depressive score occurs after years of chronic drinking, it cannot be said that depression leads to alcoholism. The reverse may be true. It may be that feeling depressed increases the likelihood that an individual with alcoholism will seek psychological help, thereby accounting for the increased frequency of depression associated with alcoholism.

The literature indicates that depression in alcoholic individuals is heterogeneous and may occur before, concurrently

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or after the onset of alcohol problems (Weissman & Meyers, 1980). For the majority of alcoholic individuals, symptoms of depression are associated with central nervous system effects of alcohol ingestion or withdrawal, and occur only during and shortly after periods of heavy drinking (Aneshensel & Huba, 1983). For fewer alcoholics, symptoms of depression may represent an affective disorder which is unrelated to their alcoholism (Schuckit, 1986). Vaillant's (1983) thirty-three year prospective study of 456 males gave strong empirical support to the hypothesis that both depression and anxiety are not the cause of alcoholism, but rather the consequence.

Most of the attention and debate over the "alcoholic personality" centres around personality deficits such as impulsivity, aggressiveness, and poor impulse control. Such characteristics are the defining personality features of some of the personality disorders and also may describe some individuals with alcoholism (Glenn & Parsons, 1987). Many studies investigating the relationship between antisocial and borderline personality traits and alcoholism assume that these traits precede the alcoholism and are therefore part of the etiology (Barnes, 1979; Nurco, 1979; Robins, 1980). However, as with the studies on depression, it is not clear from these results whether the characteristics identified are antecedent to or a consequence

of alcoholism. Vaillant (1983) believes that personality deficits do not contribute to the illness but are a result. Donovan (1986) argues that work by Nace, Saxon and Shore (1983), and Schuckit (1980) give hints but do not constitute conclusive support for the hypothesis that personality deficits may predispose to alcoholism, therefore proposing that personality deficits not be dismissed.

The personality research to date has not supported the concept of an inherently "addictive personality" type that can be measured as being necessary for the development of alcoholism (Alexander & Hadaway, 1981; Carroll, 1982), nor is there absolute evidence that alcoholism can be attributed to any unique personality trait. Instead, there is a wide variation in personality types, and the range of personality types of individuals with alcoholism is not different from that found in the general population (Donovan, 1986; Westermeyer, 1976). The study of personality factors is hampered by the fact that clinical rather than normal populations are studied, and cross-sectional rather than longitudinal studies are used. These problems in methodology may obscure the differentiation of personality characteristics existing prior to dependency from those that developed as a consequence of it. As well, personality theories do not allow for the influence of sociocultural factors

in relation to chemical dependency. Studies are needed which examine personality over time, in the context of sociocultural factors. It would then be possible to see, within a normal population, which personality factors are associated with the development of alcoholism, and to compare these with those who do not develop alcoholism. Additionally, the role of external, family and sociocultural events could be identified.

The tension reduction hypothesis (TRH)

Some behavioural psychologists view chemical dependence as a learned behaviour and a maladaptive attempt to reduce physiological tension (Wilson, 1988). The notion that alcohol reduces tension and that people drink in order to obtain this effect appears to make common sense and is deeply ingrained in folklore (Wilson, 1988), and early formulations of social learning theory (Bandura, 1969). The tension reduction hypothesis is based on two assumptions: (1) that alcohol consumption reduces tension, and (2) that this tension-reducing effect motivates drinking (Wilson, 1988). For example, tension reduction was given as a reason for drinking by a representative sample of men living in a London suburb in a study by Edwards (1972). Problem drinkers in this sample tended to show high scores on the tension-reduction factor. This finding, showing that outcome expectations

of tension-reducing effects of alcohol are associated with problem drinking is consistent with social learning theory's emphasis on anticipated consequences as a determinant of behaviour.

With respect to the first assumption, an overview of the laboratory evidence on this topic concluded that no consistent pattern of alcohol's effects on tension had been demonstrated (Cappell, 1975). In the laboratory, alcohol has been shown to increase, decrease, or not affect tension (Wilson, 1982) and therefore social learning theory now emphasizes that the relationship between alcohol and stress reduction is complex and influenced by many variables - the amount of alcohol consumed, the person's prior experiences with alcohol, physiological responses to ethanol, and the social setting in which drinking occurs (1988). Since these other determinants of alcohol abuse have now been identified, Bandura (1982) concluded that the stress reduction theory of alcoholism had been given too much explanatory weight.

The second assumption of the tension-reduction theory is that this effect of alcohol motivates drinking. If this assumption was true, we would expect the disease to be more common than it is. The literature, however, suggests that drinking will increase only in those situations perceived to be

stressful and for which the individual expects alcohol to reduce the experience of stress (Wilson, 1988). There appears to be no automatic relationship between stress and increased drinking for all persons.

Stressful life events are also reported by some researchers to precipitate the onset of chemical dependence. Pittell (1972) proposed that some individuals who appear to have a reasonable degree of psychological stability may become dependent on chemicals when they are subjected to unusually severe situational stress. However, there is little empirical data to support a direct cause-and-effect relationship between any specific stressor and the onset of this illness. Morrissey and Schuckit's (1978) study found no particular type of event or events had even a close association with alcoholism's onset. Although the relationship between stress and chemical dependency is not fully understood, the present thinking is that for certain individuals, stress may lead to dependence only if there is a pre-existing vulnerability to the illness (Schuckit, 1986; Smith, Talbott, & Morrisson, 1985).

Sociological Perspective

The final orientation examines the relationship of demographic, family, environmental, and cultural risk factors to

the onset of alcoholism. Sociologists suggest that the social conditions to which an individual is exposed may place an individual at risk for alcoholism, and emphasize social learning, social forces, social trends, and role modelling (Naegle, 1988b).

Social learning theorists have proposed that chemical use is a learned behaviour, and that for the most part, such learning occurs in a social context (Harford, 1984). According to these theorists, modelling as a factor in the development of chemical use habits has been noted in various situations involving social forces (Collins & Marlatt, 1983).

In this form of learning, people acquire new knowledge and behavior by observing other people and events, without engaging in the behavior themselves, and without any direct consequences to themselves. Vicarious learning may occur when people watch what others (models) do, or when they attend to the physical environment, to events, and to symbols such as words and pictures (Wilson, 1988). Models serve to teach new behaviours, strengthen or weaken previously learned behaviours, or increase the value of particular behaviours. Cultural norms about chemical use are transmitted to individuals by socializing agents, including family, peers, and the media (Naegle, 1988b).

Alcoholism has been characterized as a family illness, with the disease affecting one of every three North American families

(Kiehne, 1988). A long-standing controversy in the study of alcoholism revolves around whether the familial pattern is genetically inherited or is behaviour learned within the family environment. While the part played by genetics can't be ignored, social and cultural factors within the family environment also influence the behaviour of children (Seldin, 1972).

Current studies suggest that children with alcoholic parents are at higher risk than the general population for the development of chemical dependence, affective disorders, social deviance, and marriage to an alcoholic spouse (Russell, Henderson, & Blume, 1984). Children of alcoholics often come from alcohol-centered dysfunctional families with little family unity where parental fighting, abuse, and divorce are common (MacDonald & Blume, 1986; Stark, 1987).

The literature reveals a variety of behaviours adopted by children in an attempt to cope with parental alcoholism. Codependency is the term used in discussing the range of behaviours learned by persons as they cope with the stress of having a close relationship with a person dependent on chemicals (Kiehne, 1988). These behaviours are essentially coping strategies that help individuals adapt to the stress of living in a dependent family system. In time, as codependent family members continue to utilize these strategies, they occur independently of

the alcoholic's behaviour, and frequently persist long after leaving the family system. Many of these children exercise control over their unpredictable family environment by taking on the role of family hero. They are also the children who engage in achievement-oriented or caregiving activities in an effort to compensate for the family deficiencies (Avery, 1989).

As codependent children get older, chemical dependency, anxiety, depression, or eating disorders may bring them to the attention of health professionals (Sexias & Youcha, 1986). However, since the majority of children raised by their biologic alcoholic parents do not themselves become alcoholic (Mendelson & Mello, 1985), current thinking is that dysfunctional nurturing in and of itself does not explain the etiology of chemical dependence (Donovan, 1986; Monteiro & Schuckit, 1988). Vaillant explains that whether a child of an alcoholic develops alcoholism depends more on alcoholism in their biological relatives rather than the degree to which their lives were bent out of shape by alcoholism (1988).

Although the sociocultural factors involved in chemical dependency almost always revolve around the family, the socialization process is not restricted to the family. As noted earlier, 30% of alcoholics do not have a family history of the illness (Alexander, 1987; Desmond, 1987). Early in life a child

begins to learn from her/his peers, and pressures to use chemicals often originate with peers. The most consistent finding in chemical research is the strong relationship between an individual's use of chemicals and the concurrent use by friends (Jessor, Collins, & Jessor, 1972). In North American society, peer influences are much more powerful after puberty than are home and family values (Jessor & Jessor, 1977). Both Canadian and American studies have shown that peer pressure greatly affects young people's drinking, particularly for adolescent boys. Adolescent cliques tend to be composed of either drinkers or non-drinkers, and members are expected to conform (Alexander & Campbell, 1967; Rogers, 1958).

Many factors within an individual's larger social environment or subculture also exert powerful influences. The beliefs, attitudes, and values that a population holds with respect to chemicals serve to shape an individual's behaviour (Heath, 1988). Ethnic and cultural differences in the use of chemicals and in the prevalence of dependence suggest that such factors do play an important role. Different populations have different attitudes toward chemicals, set different standards for what constitutes appropriate use of chemicals, and provide greater or less environmental support for consumption. For example, the Irish and North American Native groups positively

sanction men's drinking to intoxication away from home and in these cultures the rates of alcoholism are high (Bacon, 1974; Bales, 1962; Vaillant 1983). Similarly, a lack of consistency among the norms that a population holds about chemicals has been associated with alcoholism (Heath, 1988). Illustrative are the general North American taboo on drinking by children and adolescents, and at the same time a widely shared view that drinking not only is permissible for adults but is a valuable skill in social and business relations.

Vaillant's (1983) longitudinal studies found that alcoholics were more likely to come from ethnic groups that tolerate adult drunkenness but that discourage children and adolescents from learning safe drinking behaviours. Mendelson and Mello (1985) point out that it is important to recognize that wide variations in alcohol use and abuse exist for individuals within any one cultural or ethnic group. They explain that there has not been a systematic comparative study between any two cultures, and that studies thus far have been culture-specific.

It is therefore possible that other factors aside from culture are operating to affect alcoholism rates in one culture which have no effect in another. In other words, the drinking practices of cultural groups do not exist in a vacuum. Furthermore, people of a similar culture do share genes (Donovan,

1986) so a biological risk for the disease cannot be ruled out.

Another proposed etiologic variable forwarded by sociologists is chemical accessibility (Rittenhouse, 1979; Winick, 1980). Sociologists hold that the greater the physical and economic accessibility of chemicals within a society, the greater the prevalence of dependency (Single, 1988). A case in point is the abuse of heroin by American soldiers during the Vietnam War. Drugs were readily available. However, follow-up studies showed that 90% of heroin-dependent soldiers recovered from that dependency upon returning to the United States (Gelman & Drew, 1989).

Sociologists also believe that access is not the sole or primary determinant of abuse, and do not deny the cultural context regarding patterns of consumption. For example, there are instances where a country appears to enjoy easy access to alcohol and yet has low rates of the illness (Single, 1988). Italy is one example (Mendelson & Mello, 1985). Since World War II, North American society has achieved easier access vis-a-vis liberalization of alcohol controls. This trend, however, has been marked by increased alcohol consumption and increases of alcohol-related health and social problems (Single, 1988).

In a general sense, North American society has become dependent upon alcohol as a social "lubricant". Alcohol has come

to play an almost ritualistic role in promoting social interaction - drinking is accepted (if not expected) (Heath 1982; Mulford, 1982). In Canada, 77% of the population drink alcohol at least on occasion (Smart & Ogborne, 1986). Sociologists note that cultural norms about drinking patterns and styles of chemical use are transmitted to individuals by external socializing agents such as the media. Wilson (1988) wonders why there is surprise that one of North America's greatest health problems is chemical abuse, considering that each year children watch about 3,000 instances of drinking alcohol on television.

Some demographic variables are associated with the risk for becoming chemically dependent. In North America, men have a three to four times greater rate of alcoholism than women (Barry, 1988). Age is also an influencing factor, and over the past decade the chemically dependent population has become progressively younger.

In Manitoba in the 1970's the average age of people seeking treatment was 48. However the trend is toward alcoholism occurring in younger persons. Presently, 60% of the treatment population is under 35 years of age (AFM, 1986).

It has been suggested that patterns of chemical abuse change quickly and vary according to trends both in the general population and the chemically dependent subculture (Hurley, 1989;

Mendelson & Mello, 1985). Trends of particular significance are the increase in addictions to two or more chemicals, with alcohol remaining as the favorite drug; the widespread use of marijuana; the increase in the non-medical use of prescribed drugs; the increased rate of cocaine abuse among all socioeconomic groups; and an upturn in narcotic abuse in middle and upper income people (Bissell, 1985). Chemical abuse has emerged both nationally and internationally as a politically important issue (Hurley, 1989). Society is at present concerned with chemicals, whether it is the problem of impaired driving, steroid abuse by young athletes, or the availability of cocaine.

Sociological theories receive wide support among experts in the chemical dependency field. However, they are generally considered in conjunction with other etiologic perspectives. It may be that some sociocultural factors act to mobilize an existing predisposition in producing chemical dependence. Seldom can sociocultural factors be isolated alone as causative (Naegle, 1988b).

This review of the three theoretical perspectives concerning the etiology of chemical dependency in the general population has provided insight into potential contributing and risk factors. While there are many etiological theories, no one theory completely explains this complex illness. Newcomb, Maddahian,

Skager, and Bentler (1987) state that the search for a single causal influence to account for chemical dependency has failed. There is, therefore, a growing consensus among contemporary researchers that it is most useful to view chemical dependency from a multivariate perspective (Donovan, 1986; Chaudron & Wilkinson, 1988; Lester, 1988; Roman, 1988; Vaillant, 1988). Gomberg and Lisansky (1984) advise that the most productive course of action is to explore concepts of vulnerability to chemical dependency, taking into account a person's biological, psychological and sociocultural characteristics. Roman (1988) stresses the importance of multivariate research designs if the interaction among these biopsychosocial factors is to be better understood.

Females and Chemical Dependency

Since 97% of Manitoba nurses are women (Statistics Canada, 1988) it is regarded as relevant to review the literature on female chemical dependency. In Manitoba, it is estimated that 40% of the chemically dependent population are women (Adrian, Jull, & Williams, 1989). Alcoholism is the third leading cause of death in American women between the ages of 35 and 55 (Pape, 1986), and in Canada, liver cirrhosis fatalities are one of the four leading

causes of death in the same age group (Statistics Canada, 1987). Dual addiction has been found to be such a strikingly common female pattern that Nichols (1985) proposed that alcohol and other chemical dependencies among women are interchangeable.

Reviews of the literature have shown that most alcoholism research has been done on men (Beckman, 1975; Lindbeck, 1972; Schuckit, 1972). As of 1980 only 3 out of 374 studies on alcoholism focused on women (Moore, 1980). Curlee (1967) observed that early studies tended either to ignore women entirely or simply to assume that alcoholism is the same, regardless of the sex of the individual. Research-based theories were developed primarily from data about male alcoholics (Roman, 1988). During the past decade, both public awareness and research on chemically dependent women have increased dramatically (Naegle, 1988a), and theories are developing with regard to women's dependency on chemicals. As with the general population, some of these explanations are biological, some psychological, and still others sociological.

Biological Perspective

There is now general agreement that for both men and women there is a genetic factor in alcoholism (Holden, 1985), with the evidence more conclusive among male than female offspring

(Monteiro & Schuckit, 1988; Schuckit, 1984).

Goodwin, Schulsinger, and Knop (1977) found that, although the 4% rate of alcoholism for the adopted daughters of alcoholic fathers was higher than that for the general population, they could not replicate the high 18% rate for the sons of alcoholics found in their earlier study (1973).

Fortin and Evans' (1983) investigation of 50 alcoholic women found that 66% had biological fathers who were alcoholic, and 33% had alcoholic mothers. Their study did not examine whether the subjects had been reared by biologic or nonbiologic parents, and no control group was utilized. On the other hand, work by Bohman, Sigvardsson, and Cloninger (1981) using a larger sample and controls, suggests that alcoholism among adopted daughters is linked to alcoholism in the biologic mother but is variable with the alcoholic father.

Several studies do confirm an increased incidence of alcoholism in all first degree relatives of female alcoholics, with inconsistencies regarding paternal or maternal genetic linkage (Donovan, 1986; Schuckit, Pitts & Reich, 1969; Winokur, Reich, Rimmer & Pitts, 1970). In a summary of research data from numerous studies, Youcha (1986) found that 20 to 50% of the daughters of alcoholic parents became alcoholic themselves. There appeared to be more parental alcoholism especially in fathers,

for alcoholic women than for nonalcoholic women. However, some scientists have speculated that because the genetic evidence is more conclusive among male than female offspring, psychological and sociocultural factors may play a more important role in the development of female than male alcoholism (Goodwin, Schulsinger & Knop, 1977).

Psychological Perspective

Most of the research with females has focused on pre-existing psychopathology and psychological conflicts (Roman, 1988). Particular personality characteristics may be manifested by females who become dependent, and it is often assumed that the characteristics are part of the etiology. Psychological dimensions which have been studied are depression, personality characteristics, gender factors, and stressful life events.

Female alcoholism and depression

The relationship between depression and alcoholism in women appears repeatedly in the literature. Women who develop chemical dependency have higher familial and personal incidences of affective disorder as opposed to their male counterparts among whom personality disorders are more common (MacAndrew, 1986;

Meyer, 1986; Schuckit, 1986). It has been well documented, however, that women in general are more likely to seek medical help for affective psychopathology than males (Cooperstock, 1971; Gombert, 1986).

The theoretical base that links depression and alcoholism in women originates from observed similarities in families where both these disorders are found. High rates of depression have been documented among the female relatives of alcoholics, especially female alcoholics. Conversely, high rates of alcoholism have been observed among the male relatives of depressed women (Winokur et al., 1970). Schuckit's (1986) research, showing inconsistent genetic patterns, suggests that the familial similarities between alcoholism and depression are not due to genetic links. Similarly, using an adoption study, Goodwin et al. (1977), documented a trend for an increased risk for depressive disorders among daughters of alcoholics, but only if they had also been raised by an alcoholic adoptive parent. The adopted-out daughters of alcoholics who were raised by a non-alcoholic family did not show the increased risk for depression. Environmental conditions such as a dysfunctional family, are therefore suggested as mediating factors in the transmission of both disorders in women, and may contribute to the overlap

between women's depression and chemical dependency (Merikangas, Leckman, Prusoff, Pauls, & Weissman, 1983).

Some descriptive social histories of alcoholic women reveal that the onset of alcohol abuse is often preceded or accompanied by depressive symptomatology and low self-esteem (Halikas, Herzog, Mirassou, & Lyttle, 1980; Petty & Nasrallah, 1981). Other investigators have examined depression and low self-esteem observed in females that follows alcoholism and is thought to be a consequence of the illness (Dackis, Gold, Pottash, & Sweeney, 1986; Overall, Reilly, Kelly, & Hollister, 1985). These retrospective studies indicate that issues of temporal sequence have not been resolved and that prospective studies are required to determine which comes first, depression or alcoholism. Furthermore, all of these studies used different measures of depression which makes it difficult to compare findings.

Turnbull and Gomberg (1988) emphasize that depression seems to be a critical element in female alcoholism. Their retrospective study of 301 alcoholic women found that nearly every area of an alcoholic woman's life is affected by symptoms of depression and that the more depressed the woman, the greater the consequences of her alcoholism. They found a significant

correlation between high levels of depression and more serious alcoholism consequences such as work problems, arrests, marital breakdown, accidents, and physical illness. These results depend on retrospective data which need to be verified in longitudinal studies. The large sample size and use of a non-alcoholic control group suggests that the findings can be generalized to other alcoholic women in treatment.

It is not surprising, considering the data on depression, that attempted and successful suicides are higher among chemically dependent women than other women, and higher than those for alcoholic men (Curlee, 1969; Rimmer, Pitts, Reich, & Winokur, 1971).

Personality characteristics

There has been a consistent finding of anti-social personality characteristics in studies of female alcoholics (Roman, 1988). A comparative study by Herzog and Wilson (1979) of 47 female alcoholics and 48 non-alcoholics revealed significant differences on a scale described as anti-social behaviours, with the alcoholic women scoring much higher than the non-alcoholic women on this measure.

In one of the few longitudinal studies of alcoholic women,

Jones (1971) raises the question of impulsivity and impulse control problems. Ongoing studies of female alcoholics show an early history of difficulties in impulse control. Compared with non-alcoholic women, alcoholic women have run away from home more often and dropped out of school earlier (Gomberg, 1986).

Causation is difficult to establish because of problems in differentiating cause from effect. Roman (1988) stresses that the personality characteristics have not been proven as causes of chemical dependency because most studies have not measured these characteristics using comparison groups of non-alcoholic women. In many instances, therefore, the findings may reflect the consequences of dependence on alcohol, rather than its preceding factors. To date, there has not been found one single personality type of female addict (Taylor & St. Pierre, 1986).

Gender factors

Another often studied dimension of the female alcoholic personality is that of sex-role identification or gender-role conflict. As an explanation for female chemical dependency, gender-role identification and problems generated by socially-assigned gender roles have received attention.

There is a long-held notion that female alcoholics have a confused sexual self-concept or even tend toward masculinity

(Gomberg, 1981). Scida and Vannicelli (1979) found that the greater the gender-role conflict, the greater the tendency toward alcohol abuse. In contrast, Anderson (1980) compared 30 alcoholic women with their non-alcoholic sisters on measures of gender-role identification, and found no significant differences between alcoholics and their sisters.

Likewise, studies by Beckman (1978), Kroft and Leichner (1987) and Schwab-Bakman, Appelt and Rist (1981) have failed to show the predicted conflicts between masculinity and femininity, and generally offered no evidence of gender-role problems. To date, there is no good evidence to suggest that chemical dependency among women is related to gender-role confusion or gender-role conflict. Women with and women without alcoholism tend to have similar views of the roles of women (Anderson, 1984; McLachlan, Walderman, Birchmore, & Marsden, 1979).

Stressful life events

Stressful life events have been reported by some researchers to precipitate the development of female chemical dependence (Beckman, 1975; Gomberg, 1976). Gomberg's more recent (1986) research with female alcoholics in treatment and a group of control subjects suggests that there are significant differences between the two groups in the experience of stress and in the

repertoire of responses for coping with stress. The alcoholic women were more impulsive, angry, unpredictable, and socially isolated when reacting to stress, and were said to be poor copers with minimal defense mechanisms. However, Gomberg questions whether a stressful event is what precipitates a woman into seeking treatment for her illness, rather than stress causing her alcohol abuse, per se. This help-seeking may become more visible under stress, but does not reflect a new problem with alcoholism as induced by stress.

Allan and Cooke's (1985) extensive review of the relationship between stressful events and the development of female alcoholism is pessimistic about the quality of data in the studies published because of methodological problems. Evidence had been collected by asking alcoholic patients to recall particular events in their past that they considered may have caused their heavy drinking. The investigators noted the finding that a high degree of stressful events in alcoholic women's lives were reflections of their retrospective post-treatment reports, and their tendency to attribute their drinking to causes that would elicit sympathy, perhaps related to the stigma of the disease. Allan and Cooke concluded that alcohol abuse may increase stressful events, rather than vice versa, a confounding problem in much of the literature on stressful events and their

outcomes. To date, there has not been a study reported which prospectively tracks women for chemical abuse following a particular stressful life event (Roman, 1988).

Sexual problems

One category of stress which has received recent attention as potentially antecedent to female chemical dependence is sexual problems. Alcoholism is associated with high rates of sexual, gynecological, and reproductive problems in women. Sexual abuse has been linked to chemical dependence in the victim (Beckman, 1979; Cohen & Densen-Gerber, 1982; Covington & Kohen, 1984). Cohen and Densen-Gerber found that sexual abuse had occurred for 35% of female clients in alcoholism treatment in the United States and Australia. Covington and Kohen studied matched pairs of alcoholic and non-alcoholic females and found that 74% of the dependent females had experienced sexual abuse, while 50% of the non-dependent females had been sexually abused. Furthermore, other reports indicate that 29% to 54% of chemically dependent women in treatment have been rape victims at some time in their lives (Murphy, Coleman, Hoon, & Scott, 1980).

A significant number of gynecologic problems have been found in alcoholic women. Wilsnack (1984) reported that 78% of alcoholic women studied experienced such disorders compared to

35% of controls. As well, 25% of the alcoholic women reported infertility problems compared to 4% of controls.

In one of the few nursing studies on the extent of chemical dependency in women with gynecologic problems, Busch, McBride, and Benaventura (1986) surveyed a group of 75 women diagnosed with infertility or pelvic pain using the Michigan Alcoholism Screening Test (MAST). A high incidence of current or potential chemical dependence was found in the sample, with 31% abusing wine and/or marijuana. Though this sample size was small and self-selected, there are some implications for nursing practice from this study. Nurses working with clients who have infertility and pelvic pain problems should be aware of the potentially high risk for chemical dependency for this population.

Price, DiMarzio and Eckert (1987) found that a significantly greater number of women alcoholics suffer from severe premenstrual syndrome than a control group of non-alcoholic women. And in Estep's (1987) study, more alcoholic women in treatment had undergone abortions or experienced miscarriages than women in the control group.

Sexual problems appear to be linked to chemical dependency, but the mechanisms of these associations are not clear. Sexual problems may be both a cause and a consequence of alcoholism in women (Roman, 1988). Sexual problems often motivate women to seek

medical treatment, and coincidentally, treatment for chemical dependency (Naegle, 1988a). Alternately, there may exist other yet unknown linkages between sexual problems and chemical dependency.

Sociological Perspective

Sociologists have studied the role of childhood events and the environment in the genesis of chemical dependency among women. Chemically dependent women frequently come from dysfunctional families. Corrigan (1980) and Wilsnack (1982) cite family illness, family disruption by parental death or separation, parental disharmony, modeling of parental chemical abuse, and high rates of physical and sexual assault as characteristic of early family histories of women who become dependent.

Perhaps because the family's attention is focused on the alcoholic parent, the female child learns to put other people's needs first in order to achieve approval. She displays codependent behaviours in order to cope, or survive (Ackerman, 1989). Codependent behaviours may include denial, overachievement, withdrawal, difficulty trusting, the need to control, and disregard of personal needs. The only thing that makes the codependent female child feel worthwhile is helping

other people (Kiehne, 1988). This may have particular relevance for the study of nurses who develop chemical dependency in the course of their roles as helping professionals.

Females growing up in alcoholic families may experience problems in relationships outside the nuclear family as they become adults. They frequently marry an alcoholic spouse (Corrigan, 1980; Cotton, 1979; Wilsnack, Wilsnack, & Klassen, 1984), or have multiple marriages (Estep, 1987). In his review of 12 studies of female alcoholics, Schuckit (1972) found that between one-third and two-thirds of the subjects had broken marriages. However, extant data do not provide clear evidence about the nature of the relationship between female chemical dependency and marital breakdown (Paolino, McGrady, & Diamond, 1978). Further studies are required.

Gender factors

Researchers have explored the possible associations between chemical abuse and women's employment (Gomberg, 1977; Wilsnack, Wilsnack, & Klassen, 1984). When a working woman becomes chemically dependent, many blame her job. It has been hypothesized by some that the unique circumstances which women face when employed lead to the development of chemical dependency (Gomberg & Lisansky, 1984; Volicer, Cahill, & Smith, 1981). To

date, there is little support for this view. Although employed women in general report experiencing role overload (Dritschel & Pettinati, 1989), other studies seem to suggest that employment may have a protective function against dependency (Fortin & Evans, 1983; Verbrugge, 1983). For example, in the Fortin and Evans study of variables associated with the onset of chemical dependency in a sample of 50 alcoholic women, employed women took significantly longer than unemployed women to develop the illness. The researchers suggested that employment provided something of value to employed subjects, which they did not want to lose.

In a large national survey of American women's drinking behaviour, Wilsnack and Cheloha (1987) found that the demands of multiple roles were not significantly correlated with chemical abuse. Indeed, they found the converse appeared to be supported. Role deprivation such as loss of marital, childrearing and employment roles was associated with an increased risk for chemical dependency. These investigators concluded that multiple roles, especially involving employment, are more likely to increase women's self-esteem, self-fulfillment, supportive networks, and involvement in structured activity, perhaps thereby reducing their need to abuse alcohol.

Barnett (1989) studied 238 white women - never married, married with or without children, divorced, working and non-working. She found that rather than the work role being the culprit in role overload, it was the family role that gives women the most stress. The women with more roles had greater self-esteem, and Barnett concluded that having more roles offers women the opportunity to be challenged, to feel competent, and to have their work acknowledged.

Wilsnack and Cheloha (1987) as well as others (Fillmore, 1984; Wilsnack, Wilsnack, & Klassen, 1984), have found an important link between women's employment and normative/social drinking. In other words, there has been an apparent increase in the rate of women's social drinking associated with employment, but not an accompanying increase in alcohol abuse. This trend might be explained by norms associated with employment roles as well as greater exposure to work-related drinking opportunities (Roman, 1988).

Furthermore, Wilsnack and Cheloha's survey found that women's drinking behaviours were strongly associated with the drinking habits of significant others, including friends. This finding further provides a degree of explanation for the increase in women's social drinking associated with employment (Roman, 1988). Women with husbands or partners whom they described as

heavy drinkers were also more likely to display symptoms of chemical dependence in themselves (Wilsnack & Cheloha, 1987).

More women are drinking alcohol and in greater amounts than they did fifty years ago. However, despite public concern about escalating chemical dependency problems among women, neither American (Wilsnack, Wilsnack, & Klassen, 1984) nor Canadian data (Smart & Ogborne, 1986) supports an increase. Of special note however, is that in both countries, adolescent and young adult females are displaying increasingly high levels of alcohol consumption, leading researchers to predict a gradual increase in the alcoholism rates of women in future years (Hollobon, 1986; Whitehead & Lane, 1987.)

Roman (1988) explains that young women consistently display higher rates of consumption than those in the cohorts ahead of them because they have integrated drinking into their lifestyle, whereas older women were socialized at a time when routine female drinking met with less approval. The alcohol and advertising industries have been attempting to encourage young women to integrate alcohol consumption into their lifestyle even further by gearing specific campaigns toward them (Atkin, Hocking & Block, 1984). Some researchers now predict an overall convergence in the drinking behaviour of young females and males (Downs, 1987).

Age also determines patterns of chemical abuse and the woman's drug of choice. Alcohol is the most frequently used chemical in both women under forty and over forty. However, those under forty more often describe abusing a variety of chemicals in addition to alcohol (Harrison & Belille, 1987).

Although women's rates of alcohol use are increasing, alcoholism still occurs less often in women than in men (Barry, 1988). A partial explanation for this finding may be the strong cultural belief in most cultures that greater stigma is associated with excessive drinking among women than among men (Barry, 1988; Donovan, 1986; Roman, 1988). Drinking women are thought to be sexually loose. It may be that the socialization of women in emphasizing the potential stigma of drunkenness, may serve a preventive function for women's alcohol abuse and possible alcoholism. Makela's (1984) research found, however, that the more industrialized a country, the more egalitarian the norms between the genders related to acceptability of drinking behaviour. Therefore, as gender roles become more equalized, it is possible that the current difference in rates may become less.

Prescription drug abuse

Although society may disapprove of women overusing alcohol, the same cannot be said of psychotropic prescription drug use by

women (Celentano & McQueen, 1984). Women are far more likely than men to become addicted to psychotropic drugs and to use them with alcohol to self-medicate (Ogur, 1986). For example, it is estimated that 65% of female alcoholics are also cross-addicted to diazepam (Gomberg, 1986).

Some believe that dual addiction in women is exacerbated by the tendency for North American physicians to over-prescribe mood-altering drugs to women generally, thereby sanctioning drug usage (Corrigan, 1980; Gomberg, 1976; Nichols, 1985). Alarminglly, three-quarters of Canadian psychotropic prescriptions are written for women (Eccles, 1989). In her recent Canadian study, Thurston (1989) found that the rate of chemical dependency among battered women is high, with one in four women in abuse shelters having a prescription for psychotropic drugs. Thurston related that many physicians miss the signs of family violence, and write prescriptions rather than exploring the causes of their patients' complaints.

Traditionally, women have not abused illegal street drugs to the same extent as men (Ferrence & Whitehead, 1980). It is therefore noteworthy that trends indicate that women's rates of cocaine addiction are growing faster than that of men's (Eccles, 1989; Johnston, O'Malley, & Bachman, 1985).

Recently, the relationship between chemical dependency and bulimia in women has received increased attention. Several studies have documented the co-occurrence of bulimia and chemical dependency in young adult females (Brisman & Siegel, 1984; Bulik, 1987; Flood, 1989). Bulimia is seen as a form of food addiction, and frequently a bulimic woman will report a cross-over in the two addictions, transferring the focus of the addiction from food to a chemical.

The review of the female chemical dependency literature from the biological, psychological, and sociological perspectives revealed that the reasons behind a woman becoming dependent are legion. Female characteristics and risk factors differ from those of their male counterparts (Beckman & Amaro, 1986). It should be noted that the literature sampled contained many contradictory findings and often seemed sketchy as a body of work. A considerable number of the studies reviewed focused on women who had undergone some form of treatment. These samples may not be representative of women alcoholics who have never received treatment. There was also a gap between clinical studies of alcoholic women and the general population of women. Wilsnack, Wilsnack, and Klassen (1984) have called for more surveys of women's drinking behaviors. As well, only retrospective data on pretreatment experiences were available for review. Longitudinal

studies measuring women's drinking patterns over a several year period are required. And in spite of the fact that women frequently abuse prescribed drugs (Gomberg, 1986), most of the studies focused only on alcoholism. Roman (1988) is critical of the absence of replication of female studies, and explained that this creates confusion by the mixture of findings in the female literature.

However, given the evidence for the involvement of genetic, psychologic and environmental risk factors, the development of chemical dependency in women would be best understood within the context of a multivariate framework. Some insight into the characteristics of the chemically dependent female nurse was derived from understanding this illness among women alcoholics as a group.

Health Professionals and Chemical Dependency

The abuse of chemicals in nursing may be better understood if it is examined in the context of a larger problem which affects other health care professions. The literature related to risk factors and characteristics of health professionals other than nurses who have become dependent upon chemicals was reviewed. The bulk of the literature on dependent health professionals dealt with the male physician.

Chemical dependency among health professionals was mentioned in the literature as early as 1953 (Isbell & White), but it has received increased attention only over the past decade. This notice stems from two professional responsibilities - the responsibility of a profession to set standards for professional practice, and to care for those members suffering from an illness (Bissell & Haberman, 1984). It is generally accepted that health professionals are not protected by their knowledge or experience from the risks of chemical dependency (Bissell & Haberman, 1984). In fact, it has been suggested that health professionals are at a much higher risk for developing the illness than other members of the population with similar demographic backgrounds (Clark, Gibbons, Daugherty, & Silverman, 1987). In particular, nurses, physicians, pharmacists, and dentists have been identified as professionals at risk for dependency, since they are involved in prescribing, dispensing, and administering chemicals.

There are no incidence studies of chemical dependency in any health care professional group (Bissell, 1985). Therefore, when discussing the extent of the illness among these groups, it is generally acknowledged that we are dealing with estimates that are based upon what is known about the incidence of chemical dependency in the general population, disciplinary actions by licensing boards, and legal records (Talbot & Benson, 1980).

Farley and Talbott (1983) cite the incidence of chemical dependency among physicians as 14%. Risher-Simkin (1987) summarized research which suggests that 12 to 14% of all practicing North American physicians are or will become dependent. Among Manitoba's 2,000 physicians, it has been estimated that 10% are now dependent or have the potential for the illness. Since 1979, 170 Manitoba doctors have received assistance for chemical dependency problems from the Manitoba Medical Association's Physicians at Risk Program (Paul, 1989). Pharmacists (Normark, Eckel, Pfifferling & Cocolas, 1985) estimate that 10 to 20% of their colleagues are chemically dependent, and dentists (Peters, 1987) estimate that more than 10% of dentists are dependent.

Estimates of the incidence of chemical dependency among health professionals are therefore diverse, and it has not been demonstrated that any one health care profession has more of a dependency problem than another (Bissell, Haberman & Williams, 1989). There are almost no epidemiologic data, and Talbott and Gallegos (1989) thus emphasize that health professionals may be at no greater risk than is the general population. Without epidemiologic data, one can only speculate as to the nature and scope of the problem among health professionals.

The exact extent of chemical dependency among health professionals is unknown for several other reasons. Public image comes into play. Health professionals are perceived as infallible to this kind of "imperfection" (Anonymous, 1985). Caregivers tend to feel they must carry on, no matter what, and have difficulty asking for help for themselves (Sandroff, 1989). In spite of advances, this medical disease still carries with it a stigma. A Canadian health economist recently suggested that chemically dependent individuals should be the last to receive hospital care as they bring the illness on themselves (Winnipeg Free Press, 1989). There is also the fear of legal liability if chemical dependency is acknowledged by the professional or the health facility in which she or he may be practicing (Barr & Lerner, 1984). Roy (1987) furthermore suggests that health professionals are more adept than other professionals at hiding their dependency from colleagues. It is no wonder then, that chemical dependency among health professionals still remains cloaked in secrecy.

A variety of characteristics of health professionals and their work environment appear to coalesce to enhance their risk for chemical dependency. Studies suggest that members of the health professions who have a history of parental alcoholism may be at risk for chemical dependency. Pilat and Jones (1984-1985)

found a high prevalence of parental drinking problems among the health professionals who participated in their family alcoholism treatment course. Peters' (1987) review of several studies found that a high percentage of health professionals are adult children of a chemically dependent parent, or parents. And 83% of 1,705 physicians treated in the Georgia Impaired Physicians Program reported a family history of chemical dependence (Talbot & Gallegos, 1989). This is in contrast to the 14% of the general population who report a positive history for parental alcoholism (Midanik, 1983). Many children of alcoholics appear to select a health profession as a career. Bissell and Haberman (1984) found that health professionals have a greater incidence of being reared in alcoholic families than students who enter other fields. A survey of pharmacy students in one American state found 25% of respondents citing a family history of chemical abuse (McCauliffe, Santangelo, Gingras, Rohman, Sobol, & Magnuson, 1987). A recent study of 86 recovering pharmacists reported that 58% had a family history of dependency (Bissell, Haberman & Williams, 1989).

One explanation for such findings may be that many individuals who choose to become health professionals do so because they have learned how to take care of others as a function of their role in their alcohol-centered dysfunctional

family of origin. Codependent behaviours such as caretaker and high-achiever are used by children of alcoholics, perhaps in order to cope with the family deficiencies. These children often have the role of responsibility for the family. They disregard their own personal needs, which may lead to difficulties in asking others for help (Kiehne, 1988). As adults, they may transfer these coping behaviours into a health care career (Black, 1979; Wegscheider, 1981), bringing both assets and vulnerabilities developed earlier in their lives.

Three major factors which are often cited in the literature as contributing to the risk for developing chemical dependency in health professionals are attitude, accessibility, and self-medication. The attitude and belief in the use of chemicals to relieve discomfort is referred to as "pharmaceutical optimism" (Buxton, Jessup, & Landry, 1985). Many health professionals hold the notion that chemicals are an acceptable means of altering negative feeling states and this appears to diminish negative sanctions against their use. Many also believe that their knowledge about drugs permits them to use drugs without the same risk of becoming dependent as in the general population (Bissell, Haberman, & Williams, 1989). The health professional then self-medicates for psychological and physical pain (Martin & Talbott, 1986), rather than seeking help from other sources.

Availability of chemicals further supports the health professional who may be predisposed to becoming dependent. Health professionals are reported to be addicted to narcotics with over twice the frequency of the general population (Smith, 1988). At special risk are those who have easy and quick access to drugs, as this increases the likelihood of abuse (Hedge, 1982). McCauliffe et al., (1987) found that access to chemicals had a substantial effect on chemical abuse by pharmacy students. The lowest rates of chemical abuse were for those students with difficult access to drugs. Although access and availability of chemicals has been emphasized in the literature as key explanatory concepts, Kleber (1984) points out that access alone is insufficient reason for becoming dependent, or there would be increased numbers of chemically dependent health professionals.

It has also been noted that the chemical of choice and route of administration used by members of a particular health profession are influenced by the mores of a professional culture, and the availability of certain drugs. For example, parental abuse of narcotics is commonly found in recovering health professionals except pharmacists (Bissell, Haberman, & Williams, 1989). These researchers attribute this pattern to the fact that even though pharmacists may prepare or sell syringes, they never actually use them. In other words, syringes are relatively alien

to pharmacists, as compared to other health professionals.

The most common explanation as perceived by health professionals themselves for abusing chemicals relates to stress, both personal and occupational (Koran & Litt, 1988; Stout-Wiegan & Trent, 1981; Talbott & Wright, 1987). Traditionally, chemically dependent health professionals have been viewed as "different" than street addicts. Both the health professional and street addict have in common access to chemicals, but the health professional was perceived to be self-medicating for the relief of stress, overwork, and fatigue, as opposed to seeking euphoria (Martin & Talbott, 1986). Self-medication as a coping behaviour to perceived discomfort such as stress has been found to be associated with chemical dependency in genetically predisposed health professionals (Smith, Talbott, & Morrisson, 1985).

In contrast to those health professionals who self-medicate related to perceived stress, Kleber (1984) and McAuliffe (1984) both reported on a new breed of chemically dependent health professional who has become caught up in the recreational drug abuse epidemic in North America. The subjects were no different in their reasons for abusing chemicals than addicts in the general population - recreationally in order to obtain a "high". The subjects described their chemical dependency as a result of a conscious curiosity about how the chemicals' effects would make

them feel and perform. These subjects were typically younger than reported in other health professional studies, having grown up in the drug sub-culture of the sixties and seventies. Many were dependent before entering a health profession or became dependent during their period of training.

In their (1987) survey of pharmacists and pharmacy students, McAuliffe et al. report that 36% of the students were currently abusing drugs for recreational purposes, which significantly exceeded the practitioners' recreational drug abuse. The students reported a wider range of drugs abused, especially marijuana, cocaine, other stimulants, and tranquilizers, than did the practitioners. Among the student sample, there was no significant variation by gender for drug abuse. McAuliffe (1984) warns that health professionals are not immune to the North American drug abuse epidemic, and predicts that they will be increasingly involved in recreational drug abuse behaviour.

In medicine, there have been attempts to identify specialty areas which may create an increased risk for a physician to develop chemical dependency. Talbott, Gallegos, Wilson, & Porter's (1987) retrospective study of 1000 impaired physicians found that anaesthesiology and family practice both had significantly increased prevalence of chemically dependent physicians. Upon further analysis, Gallegos, Browne, Veit, and

Talbott (1988) reported that family physicians often practice in solo, or in rural areas with few controls, thereby increasing the likelihood of chemical abuse. The anaesthetists in their sample frequently cited that one of the reasons they were attracted to this specialty was for easy narcotic access.

Johnson and Connelly (1981) reported that over 50% of their sample of chemically dependent physicians were in family practice, obstetrics, surgery, or internal medicine. Goby, Bradley and Bespalec (1979) stated that anaesthetists and obstetricians were overrepresented in their sample, but that the distribution of medical specialties was similar to the breakdown of American physicians by specialties. Their data is consistent with Bissell and Jones (1976), who found a consistent incidence of dependency throughout all medical specialties. Medical specialty has thus not been shown to be causally associated with chemical dependence, but Talbott et al., (1987) believe there may be some association.

A lack of knowledge regarding both the disease process of chemical dependency and the occupational risk for health professionals has also been cited as a factor in the development of chemical dependence (Smith, Talbott, & Morrisson, 1985; Talbott & Gallegos, 1989). Historically, health professionals have generally been taught to care for the physical results of

alcoholism, and little attention is paid to risk factors, prevention, or early symptomatology of alcoholism and other chemical dependencies. This results in a false perception of the disease and how it may affect them. Bissell, Haberman, and Williams suggest that attention to the human side, and the process of becoming dependent are lacking in health professionals' education (1989).

A characterization of the chemically dependent American physician has been compiled using retrospective data obtained from the recognized leader in treatment and research of health professionals, the Medical Association of Georgia's Impaired Physician's Program. The sample population consisted of 1,705 physicians who were assessed for chemical dependency in the 13 year period starting in 1975 and ending in 1988. Although the sample is not representative of all American physicians, it may be representative of chemically dependent doctors who seek treatment. The physician-patients were younger and were more likely to be male and white than the general population of American physicians. Females and minorities were significantly under-represented in the sample.

The mean age of the impaired physicians was 44.4 years; 94.7% were male; 96.2% were white; more than 83% reported a family history of chemical dependence; and consistent with the

disease concept of chemical dependency, 93.2% had no psychiatric illness. In other words, chemical dependency was the primary problem; it was not related to a psychiatric illness. Although 70.1% of the sample cited alcohol as the most frequently abused chemical, only 25.8% abused alcohol exclusively. In the population, 75% reported that they abused two or more chemicals, with narcotics being cited as a drug of choice by 47.7% of the sample.

From the data, it appears that the drug of choice also appears to depend somewhat on access. As well, 40% said that they administered their drug of choice intravenously or intramuscularly. In the sample, 82.4% reported marital discord as a result of their chemical dependence, and 49.1% had experienced at least one legal and/or licensing problem as a result of their illness (Talbot & Gallegos, 1989).

Several changes in the characteristics of the treatment population were observed over the 13 years. The mean age of the physicians decreased significantly from 55 years of age in 1975 to 39 years of age in 1987, and the number of female physicians has increased over the years. The number of doctors reporting poly-drug abuse has increased significantly since 1975, and there has been an associated increase in the incidence of intravenous drug abuse. During the early years, the majority of the sample

abused alcohol exclusively. Cocaine was not reported as abused by any of these doctors until 1980, but by 1988, one in three of the sample reported cocaine abuse. The cocaine abuse is highly correlated with age, with young physicians more likely to cite cocaine as their chemical of choice than are their older colleagues (Talbot & Gallegos, 1989). The data regarding cocaine abuse among younger doctors seems to be consistent with McAuliffe's (1984) prediction that health professionals would be increasingly participating in the American recreational drug abuse epidemic.

The Talbot and Gallegos study, with its extremely large sample, provided a comprehensive picture of the recovering chemically dependent American physician, as well as documenting trends within this population. However, it was a treatment sample, attending a unique program, and therefore the results likely cannot be generalized to doctors who are actively chemically dependent.

Though physicians in general take their own lives with greater frequency and generally at an earlier age than do members of the general population (Pfifferling, 1986), it has been found that chemical dependency is a strong correlate of physician suicide (Bissell & Jones, 1976; Keeve, 1984; Ross, 1971).

High achievement appears often as a characteristic in the health professional population, and in many studies, the majority of subjects reported being in their upper class standing at graduation (Bissell & Jones, 1976; Clark, Eckenfels, Daugherty, & Fawcett, 1987; Hedge, 1982).

The literature on female physicians who are chemically dependent is scarce. In their research with exclusively chemically dependent female physicians, Bissell and Skorina (1987) and Martin and Talbott (1986) report some of the following: many are adult children of an alcoholic parent or parents, and some report having been sexually abused while growing up. High class standing at graduation from medical school, marital instability, low self-esteem and attempted suicide were common characteristics within both samples. Most subjects reported poly-addiction to alcohol and other chemicals.

A small number of women in Martin and Talbott's sample reported eating disorders, and both family practice and anaesthesiology were over-represented as specialty areas. Both Bissell and Skorina (1987) and Tatham (1984) found more than the expected number of female psychiatrists in their all female samples. Martin and Talbott (1986) were not able to find any association between stressful events and the development of the illness in their sample.

In summary, although much has been written, the characteristics and risk factors of chemically dependent health professionals have not yet been clearly defined. It appears that various genetic, personal and environmental influences may interact to promote the development of this illness in some health professionals (Talbot & Wright, 1987).

Chemically Dependent Nurses

As with the other health professions, the exact extent of chemical dependency among Manitoba nurses is not known. There are 9,968 practicing registered nurses in Manitoba (J. Tkachuk, personal communication, Feb., 1990), and according to the American Nurses Association's most recent estimate, 6 to 8% of their nurses may be presently chemically dependent or are at risk for becoming so (American Nurses Assoc., 1987). Other estimates are higher. Curtin (1987) and Kirkwood (1985) both state that 10 to 20% of all practicing nurses are chemically dependent. Others suggest that the dependency frequency of nurses and physicians is similar, at about 10% (Bissell & Haberman, 1984).

In her dissertation, Fredrick (1988) uses disciplinary actions taken by the Missouri State Board of Nursing as a vivid illustration of the magnitude of the problem. In 1981, 69 cases of chemical dependency were reported to this state board. In 1984

there were 103 cases reported, and in the first four months of 1986 there were 125 new cases before the Missouri body. One wonders if there really is an increasing problem or whether the profession is simply recognizing and addressing a situation that has been there all along.

In Manitoba between 1973 and 1986, 5 (39%) of 13 disciplinary cases heard by the Manitoba Association of Registered Nurses were related to chemical abuse problems (Steven, 1988). This association's peer assistance program, Nurses At Risk (NAR) has had over 90 referrals since 1986 (S. Mitchell, personal communication, Aug., 1989). None of these figures, however, establishes the incidence or prevalence of chemical dependency within the population of nurses. There are no epidemiologic data on the extent of chemical dependency among nurses, and no study done so far supports the belief that nurses have a greater incidence of drug abuse than the general population (Haack, 1989).

Chemical dependency amongst nurses has been an ignored, guarded, and at times even a censored secret illness. Church's (1985) historical review of the professional nursing literature examined alcohol problems in relation to the nursing profession during this century, and indicated that there has been a conspiracy of silence. Chemical dependency among nurses was

largely ignored in the literature until the late 1970's, and even then, the articles were few and far between. Although articles on the topic are now appearing in the literature with more frequency, data regarding chemically dependent nurses are still limited (Haack & Hughes, 1989). Research on the subject has been sparse.

There are several reasons for this dearth of information. It is difficult to conduct research on a medical problem that is still stigmatized by society and for which denial is a characteristic defense (Naegle, 1988c). This difficulty may be compounded in nurses who fear professional reprisal and therefore may be even more reluctant to disclose their own illness or even to deal with chemical abuse by colleagues (Green, 1984; Naegle, 1988). Furthermore, nursing is 97% female (Statistics Canada, 1988), and women have not traditionally been considered as subjects for chemical dependency research (Moore, 1980).

During the past decade, particularly in the United States, increased attention has been focused on the problem of chemically dependent nurses. The philosophical basis for this interest arises from a concern that a profession demonstrates for the well-being of its members as well as the responsibility a profession has to society to self-regulate the practice of its members to assure quality practice (American Nurses Association,

1984). The acknowledgement by the American Nurses Association that nurses' chemical dependency was indeed a problem to be solved (American Nurses Assoc., 1982) sparked an increase in research and publications on the topic (Green, 1989).

Most articles dealing with chemically dependent nurses are descriptive or anecdotal in nature and were located in the general nursing journals. These articles tend to attract attention and are often used as guides to thinking and behaving by those concerned with the issue. These publications focus on a wide range of topics such as: (1) general overview (Caroselli-Karinja & Zboray, 1986), (2) characteristics and identification of the dependent nurse (Green, 1984), (3) nurse management concerns (Kabb, 1984; Naegle, 1985), (4) ethical and legal issues (Creighton, 1988), (5) the profession's response to the problem (Curtin, 1987), (6) intervention and treatment approaches (Jefferson & Ensor, 1982; Kotyk, McKnight & Wortzman, 1988), (7) recovery (Clark, 1988), and (8) personal accounts from recovering nurses (Anonymous, 1985). Recently, articles on chemical dependency and nursing students have begun appearing in the literature (O'Quinn-Larson & Pickard, 1989). Some of the ideas presented in the aforementioned articles have been substantiated by research, whereas others are based merely on speculation.

The literature was limited in the number of reported studies related to all aspects of the problem. Haack (1989) laments the fact that studies are being reported at professional gatherings, but are not being published. Research generally falls into these major categories: (1) general overview (Bittle, 1987), (2) the process of becoming dependent (Hutchinson, 1986), (3) treatment (Crowley, 1984), (4) recovery (Jaffee, 1982), (5) nurses' beliefs about chemical dependency (Sullivan & Hale, 1987), (6) licensure and disciplinary actions (Murphy & Connell, 1987), (7) education regarding the illness (Hoffman & Heinemann, 1987), (8) chemically dependent nursing students (Haack, 1985) and (9) characteristics and risk factors of the dependent nurse. The following section reviewed those studies which have examined the risk factors and characteristics related to chemically dependent nurses. Only those references directly pertinent to this study have been cited.

Characteristics and Risk Factors of Chemically Dependent Nurses

Poplar's (1969) descriptive survey of chemically dependent nurses is the earliest reported study in the health professional literature dealing exclusively with a sample (N = 90, 2 males) of nurses. Her survey took place over a five year time frame ending in 1967. The method consisted of administration of a self-report

questionnaire to all nurses admitted to the United States Institute of Mental Health Clinical Research Centre for treatment of chemical dependency. Poplar found that the average age of the Caucasian subjects was 41.7, and the common reasons given for abusing chemicals were physical and emotional pain relief and to escape work-related stress. The subjects related growing up in a stable family environment. Their addiction began in adulthood. Opiates were the drugs of choice, with meperidine as the preferred chemical. Drugs were seldom mainlined. In addition, it was found that drugs were obtained through physicians, forged prescriptions, or theft from the hospital.

This study took place at a specialized national in-patient clinical research centre, so the sample may not be representative of all chemically dependent nurses. The findings are therefore limited to the sample in the study. Poplar's results, perhaps because they are the first, are still quoted in the general nursing literature on this topic. Assumptions are often made based on this early study. Considering societal changes since that time, they may be dated. Poplar's study does provide useful baseline data.

In another study, nurses admitted to the National Institute of Mental Health Clinical Research Centre were studied by Levine, Preston, and Lipscomb (1974). Twelve nurses were interviewed for

the purpose of examining historical antecedents of their chemical abuse. Structured interviews explored personal and family history, educational and employment history, health, finances, sexual activities, and a history of chemical abuse. The mean age of the all white female subjects was 40 years. The average length of chemical abuse was five years, with alcohol abuse preceding the abuse of other drugs.

The single most outstanding finding of this study was the health histories of these nurses. Their histories were characterized by a preoccupation with somatic complaints, extensive use of the health care system, and chronic medical problems. The researchers found that the subjects perceived that these events preceded their chemical abuse. Findings of this study are not generalizable beyond the population studied.

Bissell and Jones (1981) conducted structured face-to-face interviews with a large national American sample (N = 100) of recovering nurses during the early 1970's. Subjects living in the community were obtained through announcements at Alcoholics Anonymous (A.A.) meetings, by word of mouth, and by using snowball sampling.

In this descriptive study, the average age of the nurses was 44.6 years and over one-half had at least one alcoholic parent. They were high achievers, with the majority ranked in the upper

third of their nursing program at graduation, and many had achieved advanced degrees. Only three nurses had action taken against their nursing licence. One-third had attempted suicide. Most reported little knowledge of addiction and an inability to recognize their disease. Chemical abuse was perceived by the nurses to be related to work-related stress and easy access to drugs. It is noteworthy that the interviews were conducted by assistants who were themselves recovered alcoholics, likely resulting in rich data.

Limitations of the study were related to the sampling design, that is, there was no control group or random selection of subjects. The self-selected sample was all female, all white, the majority lived in urban centres and they were all A.A. members. It is not known, therefore, whether the characteristics of rural or male or non-A.A. or minority group chemically dependent nurses would be similar. Such sampling limitations are common among studies of chemical dependence in nurses. It is difficult to locate subjects due to the sensitivity of the topic.

Jaffee (1982) interviewed 16 recovering alcoholic nurse patients who were referred to St. Vincent's Hospital in New York City. The purpose of the study was to describe the problems of alcoholic nurses. Subjects ranged in age from 30 to 45 years. Sex and race composition of the sample was not provided. The majority

had at least one alcoholic parent. Six had attained a master's degree. The majority claimed not to have enough knowledge to identify the process of becoming chemically dependent. The anecdotal nature of the report provided an intense description of the nurses' feelings about recovery from chemical dependency. Despite the detailed personal accounts, the study findings must be interpreted cautiously. The findings are applicable only to the population studied.

Over a two year period, Estes (1986) assessed 22 recovering chemically dependent nurses upon admission to a support group. Through the use of a self-report questionnaire, she found the typical characteristics of the chemically dependent nurse to be female, in the mid-30's, most likely divorced, grew up in a family with a history of alcoholism, experienced some sexual or physical abuse, presently employed in critical care or oncology, reported chemical abuse began due to family conflict, and meperidine as the chemical of choice. Most had never been confronted by employers about their chemical abuse, even though they had been abusing for extended periods.

A variety of other American studies, most of them conducted for masters theses or doctoral dissertations, also contain descriptive and anecdotal data on characteristics and risk factors (Bittle, 1987; Brennan, 1983; Crosby, 1985; Doyle, 1985;

Kelly, 1985; McMahon, 1986; Norris, Pierson, & Waugama, 1988; Stephenson, 1987; Talmadge-Reed, 1982). These self-selected samples ranged in size from 10 to 50 subjects, and the data were gathered using face-to-face interviews or self-report questionnaires. Except for one, each study was carried out within a limited geographical area, usually one urban location, and all the subjects were involved in a single specific treatment or support group at varying stages of recovery. Few of these studies included males or those from other cultural groups, not even Black Americans.

The samples thus are not likely representative of the larger, as yet unidentified population of actively chemically dependent nurses, and the results cannot be generalized to them. Generalizing across these studies is also difficult because each used a different set of sampling assumptions, and most are reported as descriptive anecdotes rather than quantitative statements. Comparison samples of non-dependent nurses were not included, and thus some of the characteristics and risk factors found may well be present in the larger population of presumably healthy nurses.

Martin and Talbott (1986) assert that quantitative descriptive studies of single treatment populations are important as groundwork for the eventual development of a national profile

of the chemically dependent health professional. Haack and Hughes (1989) meanwhile, are critical that none of the preceding studies have been replicated, nor have there been attempts to collect data that is comparable in terms of instruments used, making it impossible to draw substantial conclusions.

Sullivan (1987a) conducted the first quantitative descriptive study of the characteristics and risk factors of chemically dependent nurses using a mailed survey with a large national convenience sample (N = 139, 17 males) of recovering nurses. The anonymous questionnaire was developed by the researcher and content validity was established. The subjects were primarily female between 26 and 40 years of age. Males were overrepresented in the sample when compared with the percentage of males in the nursing profession (12% in the sample and 3% in the profession).

Subjects were shown to have: a family history of both chemical dependence and depression; taken on parental roles in childhood; experienced sexual abuse and dysfunction; been academically and professionally successful; been divorced; and been frequent users of medical services. Recovery was associated with frequent contact with A.A.

This study yielded a wealth of information, and some of the findings are congruent with research on female alcoholism, in

particular depression (Schuckit 1986; Turnbull & Gomberg, 1988), sexual dysfunction (Wilsnack, Wilsnack, & Klassen, 1984), sexual abuse (Covington & Kohen, 1984), and divorce (Gomberg, 1986).

This was an explorative study, and conclusions and generalizations are limited. The sample was a convenient, purposive one. Subjects who responded to the survey may differ from those unwilling to participate. Once again, access to the target population limits the sampling design. Sullivan was unable to count the number of questionnaires actually distributed, and thus could not determine the response rate. The mailed questionnaire also meant that the investigator could not gain an appreciation of each subject as a person.

Utilizing the same tool, Sullivan (1987b) surveyed a random national sample ($N = 384$, 19 males) of presumed-to-be nondependent nurses, and utilizing the initial study data, conducted the first comparison study. She was able to identify some characteristics which significantly differentiated dependent nurses from their colleagues. The dependent sample significantly more often reported an alcoholic parent or an alcoholic spouse, a personal and family history of depression, assuming parental roles as children, and health and sexual problems. There were no significant differences in age or academic achievement. Males were significantly overrepresented in the dependent population.

One unexpected finding was that 18% of the presumed-to-be-nondependent control group responded positively to questions that could indicate a problem with chemicals. A limitation of this study is that the two samples may differ in representativeness because of the random versus convenience sampling procedures.

In a subsequent analysis using the data from the preceding two samples, Sullivan (1988a) explored the relationship between chemical dependency and sexual trauma and sexual problems among female nurses. The majority of the dependent sample reported both sexual trauma and other sexual problems, while less than 25% of the nondependent sample reported sexual concerns of any kind.

Differences between the groups were found for both historical events and current experiences. Dependent subjects were more often victims of abuse (incest and/or non-familial molestation) than the nondependent subjects. Dependent subjects revealed ongoing sexual problems. They were more likely to have a negative body image stemming from illness or surgery (hysterectomy, obesity) and to report sexual dysfunction (usually a lack of interest in sex). Past sexual trauma and present sexual problems were strongly correlated with chemical dependency in female nurses. The higher incidence of sexual trauma and sexual problems reported by the dependent sample is consistent with studies of chemical dependency in other populations (Cohen &

Densen-Gerber, 1982; Covington & Kohen, 1984). Sullivan also noted a higher incidence of homosexual preference in both the male and female dependent sample as compared to the nondependent nurses (1988b).

Because of the differences in the findings between the Sullivan studies (1988a, 1987a, 1987b) and the Poplar (1969) study, almost two decades apart, one must wonder if they reflect changes in society, in terms of openness about asking subjects questions, and subjects' willingness to share matters that were previously considered private. For example, whereas Poplar reported a stable, close family of origin, Sullivan found contradictory data about the family.

Murphy and Connell (1987) retrospectively looked at 100 records of disciplinary cases which had been investigated during the preceding two years in Arizona. The data on the chemically dependent nurse was compared to data compiled by the State Board of Nursing on registered nurses in general in that state. There were several significant findings related to the dependent nurse: the majority were under 40 years of age and either single or divorced, 46% were graduates of associate degree programs, 62% had graduated within the previous ten years, and 32% had been in practice less than five years. The investigators suggest that some of their findings have implications both for nursing

education and for the orientation and support of new graduates.

It has been suggested that the caregiving role of the child of the alcoholic leads to a career choice such as nursing (Dean & Edwards, 1989). As with the other health professionals, nurses are over-represented in the adult children of alcoholics population in North America (Worrititz, 1984). Bissell and Haberman (1984) reported that more nurses than college women or social workers say they have an alcoholic parent (49%, 39% and 38% respectively). And as reported elsewhere, Sullivan (1987b) found a significantly higher prevalence of parental alcoholism among chemically dependent nurses than in nondependent nurses.

However, in a study of 179 undergraduate nursing students, Haack and Harford (1988) did not find data to support their hypothesis that nursing students would report a greater prevalence of a positive family history for alcoholism. In their study, nursing students reported a positive family history for family alcoholism (13%) that is comparable to that found by Barnes, Benson, and Wilsnack (1979) in the population of undergraduate college women in general, (14.7%). Their study did find, however, that nursing students who are daughters of alcoholic fathers reported higher levels of alcohol consumption than nursing students with a negative family history for alcoholism. Haack and Harford suggested that this finding places

these nursing students at a higher risk for chemical dependency problems than their peers.

In contrast to Haack and Harford's finding, Dean and Edwards' (1989) study of 223 baccalaureate nursing students found that 33.1% were adult children of alcoholics, which is significantly higher than the 14.7% reported by Barnes, Benson, and Wilsnack (1979) for undergraduate college women. Dean and Edwards reported significant differences between the adult children of alcoholics nursing students and those nursing students with a negative family history for alcoholism. The adult children of alcoholics had a higher percentage of first born or last born than the adult children of non-alcoholics. The adult children of alcoholic students also indicated they may alter their alcohol consumption patterns when under stress, as compared to the non-alcoholic children.

In the literature, nurses' attitudes towards drugs and easy access to them are often implicated as key contributing risk factors for chemical dependency (Crosby, 1988). Nurses are constantly in contact with drugs and, as with other health professionals, may have that "pharmaceutical optimism" or a faith in drugs to relieve discomfort. They also believe that they will not become dependent because of their medication knowledge (Bissell & Jones, 1981). Some studies (Hutchinson, 1986; Poplar,

1969) have suggested that chemically dependent nurses began using drugs therapeutically to relieve both physical and emotional discomfort, and that this self-medication behaviour has developed into a dependence on chemicals. Hutchinson stated "Paradoxically, what begins as a form of self-medication results in self-harm" (1986, p.198). Nurses in the Levine, Preston and Lipscomb (1974) study had difficulty acknowledging that self-medication with psychotropic medications and drug abuse are the same phenomenon. They regarded such medications as legitimate and therapeutic, and more acceptable to use than alcohol. Furthermore, recovering nurses in Stammer's (1987) study described the laxity in supervision of controlled drugs as an important factor in contributing to their dependence. Stammer suggests that inadequate monitoring systems provide opportunities for predisposed nurses to divert drugs for their own use.

The literature mentions specialty areas of nursing that are more stressful, and allow greater access to controlled drugs, for instance, critical care and anaesthesiology (Cronin-Stubbs & Schaffner, 1985; Norris, 1986). However, Haack (1989) emphasizes that since there are no data on the incidence of chemical dependency in nursing, there is no way to identify which specialty areas hold an increased risk for nurses to become dependent.

Furthermore, chemically dependent nurses often move around from area to area so that there is not a clear pattern of clinical specialty (E. Sullivan, personal communication, July, 1989). In one study, 50 out of 300 nurses said they had changed their worksite in order to have easier access to drugs (Sullivan, Bissell, & Leffler, in press). It is not yet known whether certain characteristics of a particular clinical specialty increase the potential for nurses to first become dependent, or whether nurses are attracted to certain specialties after their illness develops.

The popular nursing literature also suggests that chemically dependent nurses prefer working evening and night shifts, and week-ends (Kolesar, 1980). However, McMahon (1986), found that the majority of recovering nurses in his sample only worked the day shift. Other studies have not reported on this variable.

The stress in nursing is well-documented in the literature (Donnelly, 1980). Maslach and Jackson (1982) have identified environmental stress an integral part of the work of most nurses. Stress, although not singled out as being the cause of chemical dependency in nurses, is often assumed to be a risk factor (Cross, 1985). The relationship between occupational stress and chemical dependency was explored in Haack's (1985) study of undergraduate nursing students. Students who reported symptoms of

stress also reported an increased abuse of alcohol. However, because of its retrospective nature, this study cannot reveal whether the abuse of alcohol led to feelings of stress, or whether alcohol was used as a consequence to stress.

Two other studies of recovering nurses (Estees, 1986; Stammer, 1987), report that stress stemming from family problems, and not work-related stress, was an important factor. This finding is consistent with data reported by Wilsnack and Cheloha (1987) on female alcoholism. Talmadge-Reed's (1982) subjects were however, divided almost equally on their perception of the sources of stress being either personal or work-related. Half described understaffing and severely ill patients as sources of stress, with the remainder citing the source as personal stress. Only two subjects in the Norris, Pierson, and Waugama (1988) sample of chemically dependent nurse-anaesthetists reported occupational stress. And they expressed that stress came from difficulties in interpersonal relationships or administrative duties within the work setting, and not from patient care.

Furthermore, McMahon's (1986) study, which compared the characteristics of chemically dependent and nondependent nurses, found that the perceived stress level for the dependent nurses was lower than reported by the nondependent group. It would seem, then, that stress is neither a unique feature of nursing, nor of

chemically dependent nurses.

Three recent studies note findings which question the assumption that chemically dependent nurses began drug use therapeutically. Norris, Pierson, and Waugama (1988) reported that 71% of their sample reported first abusing chemicals for recreational purposes, or for "kicks", and 57% purchased marijuana, cocaine, LSD, and quaaludes from street dealers. Bittle's (1987) subjects disclosed that their illness often began when they were nursing students. And in the largest sample (N = 300) of dependent nurses thus far studied, Sullivan, Bissell, and Leffler (in press) found that recreational drug abuse began at a young age, often prior to and continued through nursing school. Dependency, if not initially present, occurred a few years into their careers. There were significant differences between younger and older subjects. Those under age 35 and especially males in this age group were more apt to report a dependency on narcotic drugs; while those over age 35 reported alcohol dependence more frequently. Eleven percent of the sample reported cocaine addiction.

The finding that the younger nurses were more likely to be narcotic dependent has not been reported in previous studies of nurses. These investigators suggest that the new generation of nurses may be abusing chemicals for "kicks", rather than for

therapeutic self-medication reasons, and that nurses' choice of chemicals is changing in line with the societal choice of drugs. These results may be reflective of the recreational drug abuse epidemic in North America, and appear consistent with Kleber's (1984) and McAuliffe's (1984) finding of a new breed of chemically dependent health professional. Researchers warn that the abuse of illegal street drugs may put both the abusing nurse and her or his patients in a different kind of jeopardy than in previous times (Sullivan, Bissell, & Leffler, in press).

Education has been viewed as the key to early identification of the chemically dependent nurse, and nurses lack the information which would enable them to understand, recognize, and intervene in developing dependency problems. Although it has been more than three decades since alcoholism has been recognized as a disease, many nurses still perceive this illness as a moral shortcoming (Sullivan & Hale, 1987). Studies of recovering nurses reported that this is one reason that dependent nurses have been reluctant to seek help from their colleagues (Bissell & Jones, 1981; Bittle, 1987; Brennan, 1983).

Murphy (1989) reports that most nursing curricula provide almost no education on the process of becoming chemically dependent, current and popular drugs of abuse (other than alcohol), nor information about chemical dependence as it

pertains to nurses. Rather, the focus of teaching is on the resulting physiological problems of alcohol-dependent clients. The content most often viewed chemical dependency as a symptom of an underlying problem, and not as a primary disease process, in and of itself.

Hoffman and Heinemann's (1987) national American survey of nursing school curricula found that the amount of time spent teaching this subject ranged from one to five hours, regardless of the type of program. The investigators expressed concern that this time is extremely disproportionate to the incidence of the illness, and that education about chemical dependency is not valued in nursing education. Recovering nurses have cited that their own and their colleagues' lack of knowledge about the disease process of chemical dependency was a contributing factor to their illness (Bissell & Jones, 1981; Brennan, 1983; Stammer, 1987).

Multiple serious job performance problems is a characteristic frequently reported by recovering nurses (Brennan, 1983; McMahon, 1986; Norris, Pierson, & Waugama, 1988; Stammer, 1987). In spite of this, the majority of these subjects were not reported to their state nursing boards, and few had disciplinary action taken against their nursing licences. Even though dependent nurses frequently obtained their drugs at the worksite,

reprimand by employers was infrequent. For example, in one study of recovering nurses, 50% of the sample said that their immediate supervisors were aware of their problem, but did not intervene (Jaffe, 1982).

Two studies (Sullivan, Bissell, & Leffler, in press; Sullivan, 1987a) have found that narcotic abusers were more likely to be disciplined. The investigators suggest that record keeping and controls on narcotics leave a paper trail that may facilitate discovery of drug diversion, whereas because of their different legal status, alcohol and non-narcotic drug abuse and the job performance problems they cause receive little attention in the work setting. In one study, 75% of the recovering nurses reported that their colleagues knew that they were performing under the influence of chemicals, yet did nothing to prevent them from continuing with patient care (Norris, Pierson, & Waugama, 1988).

The recovery and relapse characteristics of chemically dependent nurses have been explored in some studies. In Brennan's (1983) study, 16 of the 50 nurses (32%) in the sample experienced one or more relapses after joining Alcoholics Anonymous. The reason given by all 16 nurses for their relapse was their own lack of acceptance that they were in fact dependent upon chemicals. In another study, Talmadge-Reed (1982) reported that 8

(31%) of 26 nurses in the sample experienced a relapse, with most relapsing only once. In almost every case, relapse was linked to a transitory or precipitating event - leaving inpatient treatment, leaving a half-way residential treatment home, stress at home, and being prescribed analgesic medication.

Sullivan's (1987a) study also found a strikingly similar rate of relapse. Forty-seven nurses (33%) in the sample of 139 had relapsed. Furthermore, Sullivan identified four variables which were significantly different when nurses who relapsed were compared with non-relapsing nurses. Relapse was most common among nurses who: were threatened with or who had lost their job; had received disciplinary action against their nursing licence; had more than one treatment for dependency; or who were infrequent/irregular attenders at A.A., N.A. or nurses' support groups.

In reviewing the literature on the characteristics of chemically dependent nurses, one is struck by the assumption that all dependent nurses are American nurses. This may be related to the lack of data from countries other than the United States. Caution must therefore be exercised in generalizing this body of findings to other areas of the world.

There have been two Canadian studies on this subject. Gaskin (1989) reports that she collected a limited number of demographic

variables from a sample ($N = 100$) of female nurses referred to Ontario's peer assistance program, Project Turnabout, from 1983 to 1986. The nurses reported a high incidence of narcotic abuse (23%), and of abusing drugs in response to unpleasant bodily sensations such as pain.

Pagliaro's (1987) sample ($N = 10$) consisted of the population of Alberta female nurses who appeared before that province's professional discipline committee over a two year period for chemical dependency problems. Descriptive data were obtained through a mailed questionnaire which does not appear to explore all aspects of the problem, and the sample size makes it impossible to generalize beyond the sample itself. The duration of chemical abuse ranged from six months to over ten years, and those nurses who self-administered injectable drugs used the intramuscular route. These findings may be useful baseline data. Pagliaro is continuing to gather data (personal communication, June 7, 1989). The foregoing is the extent of Canadian research on the topic.

In an attempt to identify risk factors which predispose to the development of chemical dependency in nurses, Clark (1988) used content analysis to examine 137 pieces of literature which in any way mentioned chemical dependence in nurses. This body of literature included case studies, self-reports by dependent

nurses, research articles, and writing by experts in the field, and covered the period from 1898 to 1984. She identified 302 citations describing risk factors and placed them in seven categories: stress (67), problems of daily living (53), enabling behaviour by others (53), attitudes toward chemicals (53), lack of education regarding chemical dependency (35), lack of controls or easy access (31), and questionable physician practices (10). It should be emphasized that since Clark's analysis covered literature that was not all researched based, some of her data may be based on assumptions made by others writing on this topic.

Summary

From this comprehensive review of the nursing literature, it is clear that the study of the characteristics and risk factors of chemically dependent nurses is still in the early stages, especially in Canada where there is a dearth of studies.

Genetic, personal, and environmental characteristics have all been implicated in the development of this illness among nurses. The etiologic complexity of chemical dependency will most likely make it impossible that one profile will fit the characteristics of all dependent nurses. Investigators, however, have identified some common characteristics and perhaps potential risk factors which contribute to a beginning understanding of

chemically dependent American nurses. A data base is emerging, but there has not been a coherent effort to build upon the work already begun by others. The various studies are not ready to be integrated into one theory of dependency. In order to improve generalizability and to develop a general profile of the chemically dependent nurse, this population needs to be studied in a more systematic way.

Sullivan's systematic research (1988a, 1988b, 1987a, 1987b) has made progress in delineating characteristics and possible risk factors (Haack & Hughes, 1989), and this effort needs to be continued. Experts in the field are encouraging nurse researchers to replicate studies with different, larger, and more diverse samples of recovering nurses (Haack & Hughes, 1989). This advice is almost identical to that given by Roman (1988) regarding the research still needed with chemically dependent women. Furthermore, American research ought to be replicated in Canada in order to determine whether the characteristics of chemically dependent nurses are unique to one country or part of an international profile.

The variety of factors identified in the literature as being associated with the development of chemically dependent nurses does not support a single, unitary explanation. Rather, they indicate that there are numerous factors and characteristics of a

nurse which may lead to chemical dependency. The remainder of this chapter will present the conceptual framework as suggested by the literature reviewed.

Conceptual Framework

A review of the literature included a perusal of conceptual models from all three perspectives of chemical dependency, biological, psychological, and sociological. At the present time, the disease model is the prevailing paradigm, and research is pointing increasingly to the validity of the disease concept as an organizing and descriptive framework in the study of chemical dependency (Chaudron & Wilkinson, 1988; Naegle, 1988b). The basic concept that chemical dependency is a primary disease process in and of itself and not a symptom of another problem provided the very broad context for this study.

Some in the field argue that the disease concept of chemical dependency is too restrictive and does not take into account the many personal and environmental variables that may contribute to the illness (Alexander, 1987; Wilson, 1988). This argument is based on a misunderstanding of the basic assumptions of the disease concept of illness generally. An essential tenet of the disease concept is that the expression of any illness depends upon the interaction between the person, the agent, and the

external environment (Leavell & Clark, 1979; Mendelson & Mello, 1985). Vaillant's (1988) genetic loading theory provided the foundation of the disease conceptualization for this study. His theory posits that there is a definite predisposing genetic vulnerability to alcoholism, but that environmental factors may influence the actual development of the disease.

Recognition of chemical dependency as a multivariate disease means that certain characteristics such as genetic vulnerability may place a person at increased risk for the disease, but are not necessarily causal in nature. The literature reviewed documents that genetic endowment is important, but that the process of becoming dependent also occurs in a social world and may also be influenced by personal characteristics. In other words, no one is predestined to becoming chemically dependent, but the presence of particular interacting and cumulative physiological, psychological and sociological conditions predisposes an individual to chemical dependency and enhances the probability of the disease (Naegle, 1988b; Zucker & Gomberg, 1986).

Rather than specify a single etiology, it is recognized that there are a variety of biopsychosocial factors that increase one's vulnerability to developing chemical dependency. This risk factor notion is one often used to understand susceptibility to other types of diseases, and has been widely used by

epidemiologists in the early stages of research and theory development (Kraus, Borhani, & Franti, 1980; Mendelson & Mello, 1985).

The application of the risk factor concept to chemical dependency proposes that with increased exposure to the factors which are known to promote chemical abuse, there is a corresponding increased risk of becoming chemically dependent (Newcomb, Maddahian, Skager, & Bentler, 1987). This concept provided an important conceptual tool for understanding the multiple characteristics associated with chemical dependency in nurses, and as Newcomb, Maddahian and Bentler (1986) emphasize, allows the researcher to draw on diverse results to determine the risk for becoming dependent.

Few conceptual models have been developed in the study of chemical dependency (Naegle, 1988b), and most of the ones reviewed were unidimensional in scope, emphasizing just one of the three theoretical perspectives. Most were not broad enough to consider the multiple influencing factors that have been associated with an increased risk for chemical dependency. Murphy (1989) has identified a "conceptual crisis" in the field of chemical dependency. Conceptually, the review of the chemical dependency literature supports a multivariate model, where several risk factors may lead to chemical dependency. Zucker and

Gomberg (1986) emphasize that the critical issue in choosing a conceptual framework in the study of chemical dependency is its ability to specify and integrate the various influences. Hughes proposes that any model of chemical dependency used by nursing "must accommodate the reality that health or illness is the outcome of multiple individual characteristics that interact with a host of interdependent factors within the larger environment" (1989, p.9).

Donovan's biopsychosocial model (1986) was chosen to provide the organizational framework for examining the characteristics and risk factors of chemically dependent Manitoba nurses. This contemporary etiological model of alcoholism is conceptually attractive in that it reflects and unifies both the multifactorial disease and risk factor concepts under discussion. It recognizes the heterogeneous causes of the disease by combining empirical evidence from all theoretical perspectives of alcoholism. It therefore simultaneously integrates and uses in a predictive fashion, a blend of physiological, psychologic, and sociologic risk factors. The development of alcoholism is complex but relatively lawful, and appears to be influenced by the presence or absence of certain characteristics and risk indicators in the individual nurse and her or his environment. Genetically determined physiologic events interact with an

individual's personal characteristics and environmental factors to produce the disease (Donovan, 1986). It is thus not random selection nor fate that determines chemical dependency, but rather a pattern or sequence of antecedent risk factors which increase the probability that the nurse will become ill. Genetic, psychologic, and environmental risk factors are conceived as interacting to predispose individuals to the development of the disease.

The areas identified as being primary risk factors are genetic and sociocultural patterns. These risks have been definitively established, and are likely interactive rather than independent. For example, those in the same family share not only genes but culture, ethnicity, family life, and possibly gender risks.

Donovan's model then notes environmental and personality factors as mediating conditions - they may increase or decrease the risk in the genetically vulnerable. Family system interactional patterns that support or decrease the development and maintenance of the disease is an example of such a variable. Two psychologic deficits, antisocial and borderline personality characteristics have been found to have some association with alcoholism, so Donovan considers that they may be either primary risk factors, mediating conditions, or factors which combine with

genetic endowment to produce a greater risk of alcoholism.

Donovan's model provides for the dynamic, flexible, and varying importance of each characteristic in contributing to chemical dependence. The combination of the different factors as they interact to produce the illness is shown by the arrows moving from left to right in Figure 1. Donovan suggests that the expression of the illness evolves from chemical abuse to dependence. However, linear causality may not always be the case. The dimensions and directions of the model need not be rigidly constant to be valid. What acts as causal at one point may serve as effect, outcome, or mediator at another. Circular causation may operate in some situations. Cause and effect may alternate their roles. For example, social isolation may lead to chemical dependency, and later, result from it. At other points, isolation may serve as a mediator, adding to the risk present genetically.

Specific individuals and groups may show a variety of combinations of risk factors, which have differing roles in the development of the disease (Donovan, 1986). The model provides for varying patterns of disease development and stresses the quantitative value of the varying factors.

Donovan's model thus allows the researcher to represent schematically multiple influencing conditions. It can be expanded as other primary risk factors or mediating conditions are

verified (Donovan, 1986). By examining these dimensions, conclusions will be drawn as to the possible association between recovering dependent nurses' characteristics and chemical dependency. It provided a helpful framework within which to study the occurrence of chemical dependency in nurses. Donovan confirmed that it is an appropriate model for this investigator's study (Appendix I).

DONOVAN'S MODEL OF ALCOHOLISM (1986)

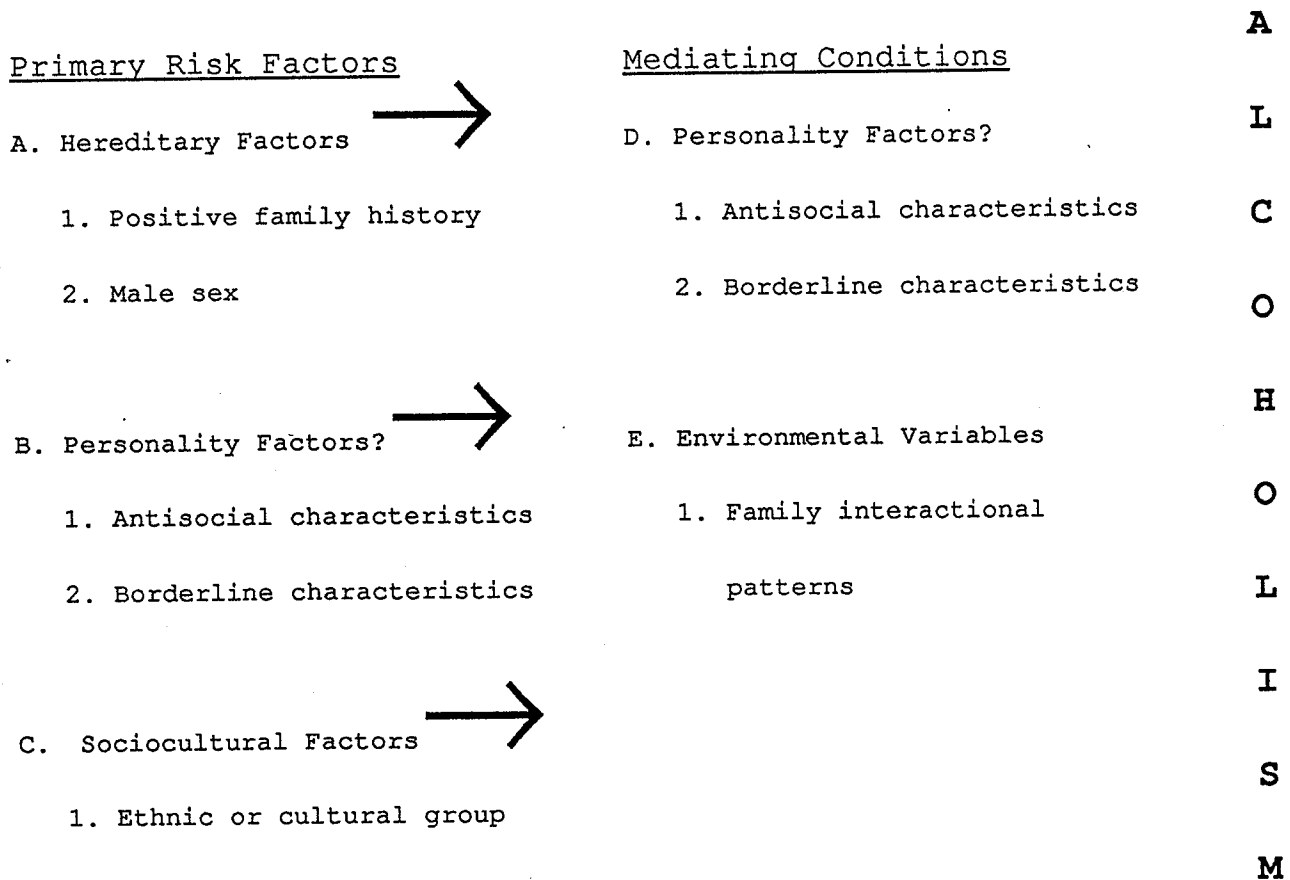


FIGURE 1

CHAPTER III

METHOD

The survey research method was selected to generate information about the characteristics of recovering chemically dependent Manitoba nurses. The research design, subjects and their protection, the procedure, and the instrument used in this replication study are presented in this chapter.

Research Design

A descriptive and exploratory research design was adopted, using the survey research method, to collect quantitative data from chemically dependent Manitoba nurses who were in the recovery stages of their illness. This research approach was utilized for several reasons. Information about chemical dependency among Manitoba nurses was nonexistent. A descriptive design using the survey method was therefore deemed the most appropriate approach for obtaining a broad data base that would provide insights, generate hypotheses for further study, and suggest the direction that future research should take.

The dynamics of the problem require confidentiality of data to protect the respondents, therefore data were collected using a self-report questionnaire distributed through the mail system.

This method of self-report by mail provides a greater guarantee of anonymity to the individual and provides greater potential for obtaining sensitive information about this population than could reasonably be expected by a face-to-face interview survey (Wood, 1985). Mailed questionnaires are not ideal and have limitations, but they are one of the few ways to study the characteristics of chemical abusers (Smart & Ogborne, 1986).

A review of the literature shows a wide range of response rates for mailed surveys. Four percent is considered a relatively high rate for political surveys (Babbie, 1979). One mail survey of 2250 on the prevalence of alcoholism among American nurses had a response rate of 53% (Wood, 1985). Babbie (1979) proposes that a rate of 50% is adequate for analysis and reporting. Because of the lack of information about chemical dependency among Manitoba nurses, it was decided that the data would be analyzed and reported, no matter what the response rate. In Sullivan's study, the response rate could not be determined because it was not known how many questionnaires were actually distributed (1987a).

The Sample

The population of interest was all chemically dependent Manitoba nurses, whose numbers are not known. However, due to

the dynamics of this illness, it is not possible to obtain a sample of actively chemically dependent nurses. They are often in denial and do not participate in studies. Access to the population of chemically dependent nurses is difficult, even during recovery. Most often, perhaps due to the stigma of chemical dependency and professional risks, they are sensitive to having their identities known. Contact was therefore established with the Manitoba Association of Registered Nurses' (MARN) peer assistance program, Nurses at Risk (NAR) to request mailing access to nurses referred to their program. In her study, Sullivan (1987a) distributed surveys to 24 state recovery programs, which then were responsible for circulating the forms to eligible nurses.

The convenient purposive sample consisted of registered nurses in Manitoba who had been referred or self-referred to NAR since 1986, who had received some form of treatment, and who were recovering for a minimum of six months. A minimum of six months of freedom from chemicals was considered long enough to attain a measure of emotional stability needed to complete the questionnaire. Participation was voluntary.

Although NAR has had over 90 referrals since 1986, not all of these nurses were eligible to participate in the investigation. Some of the referred nurses did not enter a

treatment program and therefore were not recovering. Others had not been recovering for the required six months, and still others were Licensed Practical Nurses (LPN's) who were outside the scope of this study. The population which met the study criteria and for whom addresses were found consisted of 31 nurses.

The research sample of 22 self-defined chemically dependent nurses was self-selected in that each nurse voluntarily participated in the survey. The subjects were all female, and resided in both urban and rural Manitoba, with the greater proportion living in the capital City of Winnipeg. The sample ranged in age from 26 to over 50 years.

This small provincial sample of recovering nurses is different than Sullivan's large national American sample of 139 nurses (1987a).

Procedure

The study was implemented in the following manner. The researcher was in contact with members of the Executive Committee of Nurses at Risk throughout 1989 in order to prepare for and organize this investigation. The co-chairpersons agreed to act as intermediaries for this researcher. As intermediaries, they agreed to provide a cover letter for the survey, reassuring that confidentiality had not been broken (Appendix D), and to address and mail both the survey packages and reminder letters (Appendix

E) .

The investigator personally prepared the survey packages, each containing a cover letter from the researcher (Appendix C), the cover letter from Nurses at Risk, the questionnaire (Appendix A), a bookmark (Appendix F), and a self-addressed stamped return envelope. The investigator's cover letter explained the purpose of the study, criteria, the procedure to maintain confidentiality, and requested the participation of the nurse. It was further explained that completion and return of the questionnaire implied consent to participate in the study. The bookmark was included as an inducement to respond. The opportunity to receive a summary of the findings was an additional incentive for participation. The investigator sealed and stamped the survey packages, but did not use a return address on the envelope. This was done to assure that questionnaires which could not be delivered would not be returned to anyone, thus revealing identities. The packages were then handed over to the two intermediaries for addressing and mailing. A page outlining the criteria for inclusion in the study was included for the intermediaries.

The initial plan was revised whereby secretarial assistance was obtained for the address search and mailing. This was carried out in such a manner that the subjects' connection with

Nurses at Risk was not known to the secretary seeking addresses from MARN's membership listing. The secretary was not told why she was seeking addresses, nor what the sealed envelopes contained. The reason for this procedural change was the difficulty in accomplishing the address search using the overloaded volunteer resources of NAR itself. There were 31 questionnaires mailed to the selected sample in mid-January, 1990.

The distribution of the questionnaire by the NAR intermediaries and a secretary ensured that the nurses' identities remained anonymous to the investigator. Participants mailed the completed questionnaire to the researcher in the self-addressed stamped envelope so that their responses were known only to the researcher. The follow-up reminder letter to all subjects was sent by the secretary two weeks after the initial mailing. In the Sullivan study (1987a), the state recovery program personnel either mailed or hand-distributed the questionnaires. Reminder letters were not utilized.

Although the purpose of the present investigation was to describe the characteristics of recovering nurses, not to validate them, the degree to which the results are trustworthy is an essential feature of any research. Despite the assumption that chemically dependent individuals distort self-reports,

methodological research has found little response bias in surveys of chemical abuse in which respondents remain anonymous (Polich, 1982). When response bias is found, it almost always involves under-reporting (Johnston, 1985).

Instrument

The instrument that was used to collect data (Appendix A) is an adaptation of a self-report questionnaire known as the Sullivan Questionnaire of Chemical Dependency in Nursing (Appendix B). The Sullivan tool was developed and copyrighted in 1986 by Dr. Eleanor Sullivan. Sullivan utilized the questionnaire for data collection in two studies (Sullivan, 1987a, 1987b). Other American questionnaires were also reviewed, but Dr. Sullivan's was assessed to be the most appropriate for obtaining the information which this study was seeking. It corresponded to the research questions and it would elicit data that was consistent with the multifactorial framework of the study.

Sullivan based her questionnaire on characteristics identified in the literature as associated with chemical dependency in nursing. It was designed to provide nominal response variables and it requests information on the following nine categories: demography, academics, employment history,

medical history, family background (past and present), nursing, chemical-related behaviours, and recovery experiences. Experts in the study of chemical dependency in health professionals contributed to refinement of the tool (Sullivan, 1987a). No reliability and validity scores are available. The tool obtained the information which Sullivan was seeking and therefore content validity was assumed. As it is a tool used for gathering descriptive data, it was not appropriate for this investigator to test the reliability of Sullivan's Questionnaire.

For the purpose of the present study, the investigator adapted Sullivan's questions for the Canadian context, removed items which were not deemed necessary, and replaced these with items identified in the literature and by Sullivan (Appendix H) as requiring further exploration. The original data-collection categories were not modified. The investigator obtained permission both to utilize Sullivan's tool (Appendix G), and to revise as necessary (Appendix H).

The adapted questionnaire consists of 80 questions and requires approximately 40 minutes to complete. The majority of questions are closed-ended multiple-choice items with coded responses to be circled. Use of the response "other" _____ for some items allowed space for responses which might not fit the category offered. Questions #77, #78, and #80 were open-

ended and asked for respondents' comments.

The tool was retyped in an easier to read format (Babbie, 1979), and professionally typeset onto 10 pages, back-to-back, and printed in pale green in an attempt to increase the response rate (Warwick & Lininger, 1975). The front of the survey was designed as a cover page.

Protection of Human Subjects

In this study, human rights were protected in the following manner. Participants in the study were voluntary. Anonymity of the subjects was protected through the use of NAR intermediaries and by not requesting names on the questionnaires. Covering letters informed subjects of the purpose of the study, and explained that confidentiality had not been broken. The completion and return of the questionnaire by subjects constituted informed consent. Subjects had been recovering for at least six months from their illness, giving them a measure of emotional stability, in order to avoid a potential negative impact of the survey participation on them. Approval to carry out the study was obtained from the University of Manitoba School of Nursing Ethics Committee, and both the Executive and Board of MARN.

Method of Analysis

The data on the characteristics of the recovering nurses was analyzed using descriptive statistics. These included frequency distributions (numbers and percentages), measures of central tendency, and ranges. Contingency tables were used to explore associations between certain characteristics and both the process of chemical dependency and recovery. Fisher's exact test, a nonparametric statistical test for use with a small sample size, was used to measure associations between certain characteristics of the recovering nurses and their chemical dependency and recovery. Probability was set at .05. The 95% confidence interval for proportion test was utilized to determine whether the characteristics of the recovering nurses were unique or similar to previous findings. Open-ended questions were analyzed for common themes.

Summary

Questionnaires were mailed to 31 recovering chemically dependent nurses in Manitoba. The study sample was based on self-selection. Statistical analysis included the use of descriptive statistics, contingency tables, Fisher's exact test, and the 95% confidence interval for proportion test. Analysis of the data assisted in establishing systematic information

concerning characteristics of recovering chemically dependent nurses in Manitoba. The following two chapters present results and discussion of these findings.

CHAPTER IV

RESULTS

The purpose of this chapter is to present the results of the study. It will include a description of the sample in terms of demographic characteristics, and the results of data analysis. The results have been structured to provide answers to each research question. The questions were as follows:

1. What are the personal, familial, and professional characteristics of recovering chemically dependent Manitoba nurses?
2. What factors are associated with chemical dependence in Manitoba nurses?
3. What factors are associated with the recovery of chemically dependent Manitoba nurses?
4. Are the characteristics of recovering chemically dependent Manitoba nurses unique or similar to a national/international profile?

Questionnaires were mailed to 31 recovering chemically dependent nurses who had been referred or self-referred to the Manitoba Association of Registered Nurses' (MARN) Nurses at Risk (NAR) program. There was a return rate of 71%.

The sample consisted of 22 registered nurses, all female Caucasians. Although Registered Psychiatric Nurses (RPN's) were

included in the target population, none responded to the survey. Four of the nurses resided in rural areas of Manitoba, and the remainder lived in urban centres.

RESEARCH QUESTION ONE

THE CHARACTERISTICS OF RECOVERING CHEMICALLY DEPENDENT

MANITOBA NURSES

Demographic Characteristics

Age

The ages of the respondents ranged from 26 to over 50 years. As shown in Table 1, the 36 to 40 age group contained the largest number of informants at 6 (27.3%). Seventeen informants (77.3%) were 36 years of age and/or older. No informants were less than 26 years of age.

The finding of a middle and older adult population is consistent with the age distribution of Manitoba nurses, where 6,442 (64.6%) are 35 years and older (J. Tkachuk, personal communication, Feb., 1990). The sample, however, is somewhat older than that found by Sullivan (1987a). She reported that 65% of that sample were between the ages of 26 and 40. As well, a portion of Sullivan's sample (percentage not cited) were under age 26. She did not report that there were a large number of nurses over age 40.

TABLE 1
DISTRIBUTION OF RESPONDENTS ACCORDING TO AGE GROUP

Age Group	Number	Percent
under 21	.	.
22 to 25	.	.
26 to 30	1	4.5
31 to 35	4	18.2
36 to 40	6	27.3
41 to 45	3	13.6
46 to 50	3	13.6
over 50	5	22.7
TOTAL	22	100.0

Marital status

Respondents were asked what their marital status was at the time of completing the questionnaire. Only 8 (38.1%) of the

sample indicated that they were married or living with someone as though married. Thirteen (61.9%) stated that they were not involved in a marital or common-law relationship. Table 2 provides a complete distribution. The finding that less than one-half the sample are married or living in a common-law relationship is similar to other studies (McMahon, 1986; Sullivan, 1987a).

TABLE 2

DISTRIBUTION OF RESPONDENTS ACCORDING TO MARITAL STATUS

Marital Status	Number	Percent
Married or common-law	8	38.1
Single	6	28.6
Divorced	3	14.3
Separated	3	14.3
Widowed	1	4.7
TOTAL	21	100.0

Note - one did not respond

Marital history

Informants were also asked for information about previous marriages. Seven of the nurses (33.3%) reported a history of having been divorced or separated, some more than once. This finding, although substantial, is much lower than the divorce and separation rate (59%) Sullivan noted (1987a).

Ethnic background

A variety of ethnic backgrounds were cited, but the majority were linked to the British Isles. Five nurses (23.8%) stated that one or both parents were of Irish descent. English and Scottish backgrounds were disclosed by 4 nurses (19%) each. Other backgrounds were reported, but only by one or two nurses each.

In Manitoba, individuals who report an English background make up the largest portion of the province's population. However, the proportion of individuals with a Scottish or Irish origin is not high, compared to other ethnic origins (Statistics Canada, 1986).

The finding that several nurses were of Irish descent has, however, some similarity to Brennan's results (1983). She found that 50% of her New Jersey sample had one or both parents who were of Irish descent, and that none of the other ethnic groups

accounted for such a significant proportion.

Birth order

More than one-third of the respondents (36.4%) stated that they were the oldest child in their family of origin. This is identical to Sullivan's sample (1987a).

Academic Background

Initial nursing program

Respondents were asked to indicate their first nursing program. Four of the subjects reported that the licensed practical nursing program (LPN) was their first program, and two subjects initially graduated with a baccalaureate nursing degree (BN). The remainder of the sample, 16 nurses (72.7%) initially graduated from diploma programs for registered nurses (RN). No respondents graduated from a registered psychiatric nursing program (RPN). The finding that most subjects began their nursing careers as diploma graduates is identical to other studies (McMahon, 1986; Sullivan, 1987a).

Year graduated from first program

Twelve of the nurses (54.5%) graduated from their first nursing program prior to 1971. The next largest group, 6 (27.3%)

graduated after 1980 to the present, and the smallest group, 4 (18.1%) graduated between 1971 - 1980. Table 3 provides a complete distribution of this characteristic. This finding is consistent with the age group distribution of the sample.

TABLE 3
DISTRIBUTION OF RESPONDENTS
ACCORDING TO YEAR GRADUATED FROM NURSING

Year	Number	Percent
1960 or before	5	22.7
1961 - 1965	5	22.7
1966 - 1970	2	9.1
1971 - 1975	3	13.6
1976 - 1980	1	4.5
1981 - 1985	5	22.7
1986 or later	1	4.5
TOTAL	22	100.0

Advanced academic preparation

Informants were also asked to indicate any education taken beyond their first nursing program. Sixteen of the nurses (72.7%) have taken further education. Four nurses obtained RN diplomas subsequent to their LPN program, one a BN degree, two obtained a master's degree in a discipline other than nursing, and seven nurses have obtained a specialty certification. The finding that a large proportion of the sample have advanced academic preparation is consistent with other research (Bissell & Jones, 1981; Brennan, 1983; Jaffee, 1982).

Academic achievement

Of particular note is the high level of academic achievement reported by the respondents. In their first nursing program, 7 nurses (35%) reported that they had graduated in the top ten percent of their class, while 4 others (20%) reported being in the upper twenty-five percent of their class. Additionally, 13 nurses (72.2%) reported having achieved average grades of B or higher in all their post-secondary studies. Nine nurses (40.9%) have received special academic awards in recognition of their achievements in high school, nursing, or other post-secondary work. Above average academic achievement has also been reported by Bissell and Jones (1981) and Sullivan (1987a).

Employment History

Current employment

The majority of the sample, 18 (81.8%) are presently employed in nursing, and have been for at least 5 years. Fifteen of the nurses (68.2%) have been employed in nursing for more than ten years, and several of these for more than twenty years.

The finding that the majority of the sample have been practicing nursing for over five years is similar to that found by Sullivan (1987a).

Shift work

Informants were asked to respond to the shift they primarily worked throughout their nursing careers, days, evenings, nights, or rotating shifts. Most of the nurses (9; 40.9%) worked rotating shifts. Seven (31.8%) worked days only, and 6 (27.3%) worked mostly the night shift. None of the respondents stated that they worked the majority of the time on the evening shift.

The finding that most nurses had worked rotating shifts is different than McMahon's (1986) results. The majority in that sample worked only the day shift. Other studies have not reported on this variable.

Employment status

Informants were asked to list their current nursing positions or job titles. The 18 nurses who are currently employed in nursing work in a variety of positions. There were 9 (50%) who stated that they worked as general duty staff nurses. Table 4 presents a complete distribution.

TABLE 4
DISTRIBUTION OF RESPONDENTS
ACCORDING TO CURRENT EMPLOYMENT STATUS

Position/Job Title	Number	Percent
General Duty/Staff Nurse	9	50.0
Head Nurse	1	5.5
Director of Nursing	1	5.5
Community Nurse	2	11.1
Community Nurse Supervisor	2	11.1
Nurse Educator	2	11.1
Other nursing position	1	5.5
TOTAL	18	100.0

Note - 4 nurses not employed in nursing.

Health

Health problems

Recent health problems were reported by 17 of the recovering nurses (77.3%). These nurses have been hospitalized, assessed in emergency departments, or cared for in outpatient settings over the past five years. This finding is similar to that reported by Sullivan (1987a).

The most common health problems reported by the recovering nurses were related to chemical abuse and withdrawal. These were followed by gynecologic, psychiatric, and orthopedic health problems, with the same number of nurses reporting each of these.

Depressive illness

Thirteen nurses (59.1%) reported that they have suffered from and/or received treatment for a depressive illness. This is almost identical to Sullivan's (1987a) finding.

Suicide

Suicide attempts were reported by 8 of the recovering nurses (36.4%). Some of the nurses had made more than one attempt. Several other nurses wrote that they hadn't made an active attempt, but had seriously considered taking their own lives. This data is congruent with previous studies (Bissell & Jones,

1981; Brennan, 1983; McMahon, 1986).

Eating disorders

Ten of the nurses (45.5%) indicated that they currently experience or have in the past experienced an eating disorder. The eating disorders cited ranged from addictive overeating (5), to bulimia (4), and anorexia nervosa (1).

The finding of eating disorders, especially bulimia, in the sample is similar to research done with the chemically dependent female population (Brisman & Siegel, 1984; Bulik, 1987; Flood, 1989), and with female physicians (Martin & Talbott, 1986).

Sexual

Respondents were asked to indicate events which have been stressful to their sexual identity and/or functioning. Fifteen of the nurses (68.2%) reported traumatic sexual events. The nature of the sexual difficulties varied, and several nurses have experienced more than one traumatic event. Of particular note is that 9 of these 15 nurses (60%) reported incidents of childhood sexual molestation. Table 5 outlines the nature of these events.

The high incidence of sexual difficulties supports Sullivan's (1987a) finding, as well as other research done with chemically dependent females (Wilsnack, 1984). The proportion of

nurses reporting homosexual preference (2; 13.3%) is slightly higher than the 10% estimated within the general population (Higgins & Hawkins, 1984), but it is consistent with Sullivan's group. However, the incidence of childhood sexual molestation in this sample is much higher.

TABLE 5
TRAUMATIC SEXUAL EVENTS

Sexual Event	Frequency Reported	Percent
Childhood Sexual Molestation	9	60.0
Abortion	4	26.7
Unplanned Pregnancy	4	26.7
Illness/Surgery	4	26.7
Incest	3	20.0
Rape	3	20.0
Miscarriage	2	13.3
Sexual Dysfunction	2	13.3
Aware of Homosexual Preference	2	13.3
Other	1	6.6

Note - More than one event was reported by several subjects.

Family History

Chemically dependent family member

Family histories revealed that 17 nurses (77.3%) reported that at least one family member is currently dependent on chemicals. Ten of these (58.8%) were parents of the nurses. Six of the nurses (35.3%) indicated a chemically dependent father, and four nurses (23.5%) stated that their mothers were dependent. As well, two other nurses indicated that their fathers had died from alcoholism. No mothers were reported to have died from the illness. Several nurses cited more than one family member was chemically dependent. Table 6 outlines chemically dependent family members.

The finding of a high incidence of chemical dependency among family members in the recovering nurse population is consistent with similar reports in the literature (Brennan, 1983; McMahon, 1986; Sullivan, 1987a; Talmadge-Reed, 1982). One difference was noted in the incidence of parental chemical dependency. This sample reported over double the incidence of parental dependency than Sullivan found (1987a).

TABLE 6
CHEMICALLY DEPENDENT FAMILY MEMBERS

Family Members	Frequency Reported	Percent
Father	6	35.3
Mother	4	23.5
Sibling	14	82.4
Grandparent	4	23.5
Spouse/Common-law	5	29.4
Child	2	11.8
Extended family member	7	41.2

Note - Subjects could name more than one family member.

Drinking habits in family of origin

The nurses were requested to recall how the drinking of alcohol in the family home was regarded during their youth. Fifteen (68.2%) said that there was average social drinking, 5 (22.7%) cited heavy drinking was commonplace, and 2 (9.1%) said that alcohol was not allowed in the home. The incidence of both average and heavy drinking is similar to that found by Sullivan (1987a).

Family history of depressive illness

The majority of recovering nurses, 18 (81.8%) reported a depressive illness in at least one family member. Eleven (61.1%) reported maternal depression, but only one respondent (5.6%) cited that a father had experienced a depression. None of the nurses' parents had died from suicide. The incidence of family and maternal depression is higher than Sullivan reported (1987a), but the high incidence of maternal depression is consistent with studies which suggest there is a link between alcoholism and depression in close female relatives (Merikangas et al., 1983).

Parental absence

The majority of the nurses 18 (81.8%) responded that they had lived with both parents during the childhood years. This is identical to McMahon (1986).

Parental roles

Thirteen respondents (59.1%) reported that they had assumed parental roles in their childhood, related to some family dysfunction. Commonly the nurses related the family problems to be parental chemical abuse, family abuse, and chronic maternal illness (physical and emotional). In a few cases, the fathers had deserted the families. The high incidence of taking on parental roles during childhood is congruent with Sullivan (1987a).

Present Family

Significant others

The nurses who are married or living in a common-law relationship were asked if their partners were dependent upon chemicals. Five respondents (62.5%) indicated that their partners were also dependent. However, two of these partners are also recovering. This incidence of spousal chemical dependency is somewhat higher than that found by Sullivan (1987a).

Children

Ten recovering nurses (47.6%) have children, with the number of children ranging from one to five. The mean number of children is 2.6 with a standard deviation of 1.3. The proportion of recovering nurses with children is almost identical to that reported by Sullivan (1987a).

Description of Chemical Dependency

Interference with significant relationships

The recovering nurses were asked if their chemical dependency had ever interfered with marital or other significant relationships. The majority, 15 (68.2%) stated that there had been interference in their relationships because of chemicals. These nurses most often mentioned that their chemical dependency

had caused a relationship to break apart, a total communication breakdown, or fighting.

Impact on nursing performance

The nurses were asked if their chemical dependency had ever interfered with their nursing responsibilities. Almost all of the nurses, 21 (95.5%) declared that there had been interference with their nursing performance. Several nurses reported numerous effects on their nursing performance. Table 7 outlines specific effects on performance. Similar high proportions of nurses citing interference with nursing performance have been reported by Sullivan, Bissell and Leffler (in press), and Sullivan (1987a).

Impact on job

Nine nurses (40.9%) indicated that their chemical dependency resulted in threats to their nursing jobs or that they had actually lost nursing jobs. This finding, while low, is similar to that reported by Sullivan (1987a).

TABLE 7
SPECIFIC EFFECTS OF CHEMICAL DEPENDENCY
ON NURSING PERFORMANCE

Effect	Frequency Reported	Percent
Unwell while at work	18	85.7
Absenteeism/lateness	15	71.4
Decreased attention to patients' conditions	12	57.1
Irritability with others	12	57.1
Utilized stock and/or patients' medication	8	38.1
Preoccupied/craving for drugs/alcohol	7	33.3
Poor relationships with colleagues	7	33.3
Others complained about work and/or attendance	7	33.3
Omissions/acts which could be considered negligent	4	19.0
Others	4	19.0

Note - Subjects could identify more than one effect.

Impact on nursing licence

The recovering nurses were asked if there had ever been any disciplinary action taken against their licence to practice nursing. The majority, 19 (86.4%) stated that no disciplinary action had ever been taken against their licence. The remaining three nurses (13.6%) reported receiving some disciplinary action, and this was evenly divided among the conditional, suspended, and revoked licence categories. Twenty-one (95.5%) reported that they currently have a full-status nursing licence from MARN. The proportion of the sample who cited disciplinary action was higher than the 3% reported by Bissell and Jones (1981), but much lower than the 36% found by Sullivan, Bissell, and Leffler (in press), and the 37% reported by Sullivan (1987a).

Setting worked in when began chemical abuse

The nurses were asked to recall in which settings they were employed when they first began to abuse chemicals. The nurses worked in a variety of settings. Nursing administration and nursing education were most frequently identified, each with 3 responses (14.3%). The remainder of the settings had only one or two respondents each. None of the nurses had been working in emergency or mental health settings when they began abusing chemicals. Table 8 provides a complete distribution of these

settings. The finding that not all chemically dependent nurses were hospital staff nurses is similar to McMahon (1986).

Relationship of setting to becoming chemically dependent

The nurses were asked to best describe how working in the aforementioned setting was related to their abuse of chemicals. Options were: (1) it did not affect my abuse of chemicals; (2) it was related to my starting to abuse chemicals; (3) I already abused and sought out this setting for easy access; or (4) other. Thirteen nurses (59.1%) stated that the setting had no effect on their abuse of chemicals. Nine nurses (40.9%) did say that the setting they previously mentioned was related to their starting chemical abuse. Not one of the respondents sought out the setting for easy access to chemicals. This contrasts with Sullivan, Bissell, and Leffler (in press), who reported that 50% of their sample sought out a work setting for easier access.

TABLE 8
DISTRIBUTION OF RESPONDENTS ACCORDING TO SETTING
WORKED IN WHEN BEGAN CHEMICAL ABUSE

Setting	Number	Percent
Administration	3	13.6
Nursing Education	3	13.6
Gerontology	2	9.1
Intensive Care	2	9.1
Pediatrics	2	9.1
Community Health	2	9.1
O.R./Recovery	1	4.5
Surgery	1	4.5
Obstetrics	1	4.5
Oncology	1	4.5
Medicine	1	4.5
Other	3	13.6
TOTAL	22	100.0

The nine nurses who stated that the setting and their chemical abuse were related were also requested to elaborate on this relationship. One of the three nurses who worked in administration stated there was a relationship, but chose not to elaborate. Two of the three nurse educators elaborated on the stress of clinical teaching, especially when the nurse was not an expert in that area. They also mentioned the competition between nursing faculty.

One nurse who worked in intensive care related the shift work to chemical abuse, as did a nurse who worked in dialysis. An obstetrical nurse related the exhaustion of working twelve hour shifts to chemical abuse. All three nurses mentioned the relationship of problems sleeping to chemical abuse.

An operating room nurse linked the stress in that setting to beginning chemical abuse. An oncology nurse related beginning chemical abuse to the stressful transition from nursing student to staff nurse, and a nurse who worked in the military related beginning chemical abuse to the military lifestyle where alcohol use was encouraged.

None of the nurses who worked in gerontology, pediatrics, community health, surgery or medicine stated that these settings were related to beginning chemical abuse.

Primary cause of becoming chemically dependent

The respondents were asked to choose what they considered to be the main reason they started abusing chemicals. A variety of responses were chosen, as noted in Table 9. The reason most often chosen was that chemicals were taken to reduce "emotional pain". Four nurses (19%) chose that category. This was followed by three nurses (14.3%) who chose "to reduce physical pain", and the same proportion indicated that "I started abusing chemicals at a young age and was unaware of the dangers." Few nurses began abusing chemicals solely for recreational purposes or for sleep problems created by shift work, and no one stated that they abused chemicals only for increasing their energy level.

Even though the nurses were to choose only one reason, 5 (23.8%) indicated more than one reason. Four out of these 5 (80%) chose the identical combination "to reduce emotional pain and to relax".

Some of these findings differ from Sullivan (1987a). In her study, the majority of respondents cited "to relax" as the reason for starting chemical abuse. In both studies, few first abused chemicals strictly for sleep or recreational purposes.

TABLE 9
DISTRIBUTION OF RESPONDENTS ACCORDING TO
PRIMARY CAUSE OF CHEMICAL DEPENDENCY

Cause	Number	Percent
Emotional Pain	4	19.0
Physical Pain	3	14.3
Young and Unaware	3	14.3
Recreational Abuse	2	9.5
Shifts and Not Sleeping	2	9.5
To Relax	2	9.5
Increase Energy	.	.
Multiple	5	23.8
TOTAL	21	100.0

Note - one did not respond.

Age began chemical abuse

The respondents were requested to provide their age when they initially began abusing chemicals. The ages varied from age ten to forty-five. A number of subjects reported that they began chemical abuse at a very young age. The mean age was 24.0. Table 10 provides a distribution of respondents according to ages chemical abuse began. The mean age is similar to that reported by Sullivan, Bissell, and Leffler (in press).

TABLE 10
DISTRIBUTION OF RESPONDENTS
ACCORDING TO AGE CHEMICAL ABUSE BEGAN

Age Began Chemical Abuse	Number	Percent
10	1	5.0
11	1	5.0
13	1	5.0
16	2	10.0
17	2	10.0
19	1	5.0
20	1	5.0
23	2	10.0
25	1	5.0
26	1	5.0
28	1	5.0
31	2	10.0
35	2	10.0
40	1	5.0
45	1	5.0
TOTAL	20	100.0

Note - two did not respond. Mean 24.0.

Recreational chemical abuse

The recovering nurses were asked whether they had abused chemicals, other than alcohol, recreationally (for fun and socializing), both prior to and during their nursing education programs. Six nurses (28.6%) stated that they had abused chemicals recreationally prior to their nursing programs. An equal proportion abused chemicals recreationally during their nursing education programs. The nurses who abused recreationally prior to nursing school were not always the same nurses that abused recreationally during school. The finding of a moderate incidence of recreational chemical abuse before and during nursing education programs supports Sullivan, Bissell, and Leffler (in press) and McAuliffe (1984).

Chemical dependency education

The respondents were asked if they had been taught about the disease process of chemical dependency in their nursing education programs. Ten nurses (47.6%) stated that they had received information on the topic, while 11 (52.4%) responded to the negative. Other studies have found even greater proportions of nurses who had not been taught about the disease process (Brennan, 1983; Stephenson, 1987).

The individuals who had received information were further requested to elaborate on the adequacy of the content taught. Eight of these ten nurses (80%) believed that the content was not adequately covered. They mentioned the following concerns: content only covered end-stage alcoholism and not early signs; taught that chemical dependency is just a symptom of another psychiatric problem; taught in psychiatric nursing theory and never alluded to by other teachers; little mention of chemicals other than alcohol; risks for health professionals never mentioned; and received only one or two hours in three years of nursing education. These findings are consistent to that reported by Brennan (1983).

Professional stress

The recovering nurses were asked to describe their perception of the stress level in nursing. Twelve nurses (57.1%) stated that nursing was "extremely stressful", while 7 (33.3%) thought the level to be "fairly stressful". Only 2 (9.5%) thought the stress level was average, and none considered nursing to be a low stress profession. These findings are almost identical to Sullivan's (1987a).

The nurses were further requested to rank some potential stressors in nursing in the order of importance to them.

Excessive workload was named by 14 nurses (63.6%) as the greatest cause of stress in nursing. This finding is consistent with Sullivan's (1987a). Table 11 provides a description of how the nurses perceived professional stressors.

TABLE 11
DISTRIBUTION OF RESPONDENTS ACCORDING TO
GREATEST CAUSE OF STRESS IN NURSING

Greatest Cause of Stress	Number	Percent
Excessive Workload	14	63.6
Rotating Shifts	3	13.6
Relationships with Supervisors and/or Physicians	2	9.1
Dealing with Illness/Death	.	.
Rotating Assignments/Units	.	.
Other Stressors	3	13.6
TOTAL	22	100.0

Stress of nursing and chemical dependency

The nurses were asked if they believed that the stress of nursing contributed to their problems with chemicals. Over half the respondents (13; 59.1%) said that it had, while 9 (40.9%) said the stress of nursing did not contribute to their chemical dependency. This finding is identical to that reported by Sullivan (1987a).

The 13 nurses who responded affirmatively to this question were further requested to state their career stage at the time they experienced this stress. The majority (7; 53.8%) were either in a nursing education program or their first nursing job. Six (46.2%) said that the stress occurred in a later job. The finding that most of the nurses experienced untoward stress early in their careers is similar to Murphy and Connell (1987).

Chemicals abused

The chemicals which the recovering nurses abused are shown in Table 12. Alcohol was most commonly abused, with 18 nurses (81.8%) indicating its abuse. This was followed by anti-anxiety drugs, with 11 nurses (50%) indicating their abuse. The finding that alcohol was most commonly abused supports other similar research (Brennan, 1983; Stephenson, 1987; Sullivan, Bissell, & Leffler, in press; Sullivan, 1987a).

The nurses were asked to indicate all categories of

chemicals which they had abused, and from this it was determined that polydrug abuse was a common characteristic. Fifteen nurses (68.2%) had abused two or more chemicals. Polydrug abuse has been reported in other studies (Brennan, 1983; Sullivan, Bissell & Leffler, in press; Sullivan, 1987a; Talmadge-Reed, 1982). As well, 7 nurses (31.8%) indicated that they had abused illegal, recreational or street drugs such as cannabis, cocaine, heroin, magic mushrooms, and speed. Sullivan (1987a) found a similar proportion who abused illegal drugs.

TABLE 12
CHEMICALS ABUSED

Chemical	Frequency Reported	Percent
Alcohol	18	81.8
Anti-Anxiety drugs	11	50.0
Narcotics	8	36.4
Sedatives/Hypnotics	8	36.4
Stimulants	5	22.7
Cannabis	5	22.7
Cocaine	5	22.7
Anaesthetic Gases	2	9.1
Other Chemicals	2	9.1

Note - subjects could name all categories abused.

Chemical of choice

The nurses were also requested to choose the chemical which they most preferred for abuse. The majority (12; 54.5%) indicated that alcohol was the preferred chemical. This was followed by 5 (22.7%) who stated they preferred abusing narcotic drugs. Two nurses were unable to choose a preferred chemical, and indicated they preferred abusing polydrugs. The distribution of the nurses' chemical of choice is presented in Table 13. Alcohol and narcotics as the primary drugs of choice have been reported in other similar studies (Sullivan, Bissell, & Leffler, in press; Sullivan, 1987a; Stephenson, 1987).

TABLE 13
DISTRIBUTION OF RESPONDENTS
ACCORDING TO CHEMICAL OF CHOICE

Chemical of Choice	Number	Percent
Alcohol	12	54.5
Narcotics	5	22.7
Sedatives/Hypnotics	2	9.1
Anti-Anxiety drugs	1	4.5
Polydrugs	2	9.1
TOTAL	22	100.0

Routes for self-administering chemicals

The nurses were requested to indicate the routes which they had commonly used for self-administration of chemicals. All of the subjects utilized the oral route. This was followed by smoking drugs (6; 27.3%); the intramuscular route (5; 22.7%); and inhalation (5; 22.7%). Only two nurses (9.1%) used the intravenous route (mainlining). The finding that more nurses used the intramuscular route than the intravenous route is consistent with Pagliaro (1987).

Source of prescription drugs

The 20 nurses who had abused prescription drugs were requested to indicate how/where they had obtained such drugs. Half of these nurses (10; 50.0%) related that they had asked a physician for a prescription. This source was followed by taking prescription drugs from the work setting and/or diverting patients' medications (8; 40.0%). The finding that most of the nurses had obtained prescription drugs from physicians is different to other nursing studies that found the nurses most often took them from work and/or diverted drugs (Crosby, 1985; McMahon 1986; Sullivan, 1987a). The source of prescription drugs is presented in Table 14.

TABLE 14
SOURCE OF PRESCRIPTION DRUGS

Source	Frequency Reported	Percent
Asked physician for Rx	10	50.0
Took from work and/or diverted from patients	8	40.0
Took from friends/relatives	6	30.0
Feigned an illness	3	15.0
Street scene	3	15.0
Illegal Rx	2	10.0

Note - subjects could name all sources.

Description of Recovery

Period of chemical abuse

The recovering nurses were asked how long they had been abusing chemicals prior to obtaining help for their illness. The results indicate that the nurses abused chemicals for a period just under one year up to twenty years. The mean number of years of chemical abuse was 9.5. McMahon (1986) reported a similar finding.

Reasons for obtaining help

Respondents were asked what factors contributed to obtaining help for their illness. Most respondents named more than one reason. Nine nurses (40.9%) indicated that seeking help had been an independent decision. Only 6 subjects (27.3%) stated they had been urged by an employer to seek help. The factors contributing to the nurses obtaining help are presented in Table 15. The proportion of nurses who sought help on their own was similar to that found in Sullivan's study (1987a).

Other help-seeking behaviour

The recovering nurses were asked if they had ever sought help for emotional problems prior to the realization that they were chemically dependent. Ten nurses (47.6%) stated that they had visited a psychiatrist or psychologist, and had been treated for symptoms of a depressive illness. Several had been prescribed anti-depressant medications. Many of the nurses stated that they had been able to hide their chemical abuse behavior, or that it was never assessed by the therapist to be a problem. The high proportion of nurses who sought help for emotional problems prior to being treated for chemical dependency is consistent with that found in Sullivan's (1987a) study.

TABLE 15
FACTORS CONTRIBUTING TO OBTAINING HELP
WITH CHEMICAL DEPENDENCY

Factor	Frequency Reported	Percent
Sought help on own	9	40.9
Deteriorating Physical and/or Emotional Health	9	40.9
Employer Urged Me	6	27.3
Threatened with Loss of Job	4	18.2
Colleagues/ Friends Confronted Me	3	13.6
Significant Other Threatened to Leave	3	13.6
Suicide Attempt and/or Overdose	1	4.5
Other reasons	4	18.2

Note - more than one factor was reported by several subjects.

Abstinence from chemicals

The number of months drug-free varied from 6 to 192 months, with a mean of 52.7 months. This is almost identical to Sullivan, Bissell, and Leffler (in press).

Professional treatment

The majority of the recovering nurses (20; 90.9%) indicate they have received professional treatment for chemical dependency. The number of occasions the nurses received professional care for their illness varied from one to ten, with a mean of 1.9. The majority (13; 72.2%) have undergone only one treatment for their illness. The finding that most of the nurses have received professional help and only undergone one treatment is consistent with Sullivan (1987a).

Type of treatment for chemical dependency

The respondents reported receiving a variety of types of professional treatment. The nurses were asked to identify all types of treatment, and several have received more than one type. Slightly more nurses (9; 45.0%) have undergone inpatient treatment. Fewer nurses have been treated as outpatients (8; 40.0%) and residential half-way (8; 40.0%). Private therapy was reported least often (7; 35.0%). The proportion of nurses who received inpatient treatment is similar to that found by Sullivan (1987a).

Participation in recovery groups

The majority of nurses (17; 81%) said that they regularly participate in chemical dependency recovery groups. The remainder participate infrequently. Regular participation in recovery groups supports Sullivan's (1987a) finding.

Types of recovery groups

The nurses were asked to indicate all types of recovery groups in which they have been participating. The majority (18; 81.8%) stated AA groups. Fewer nurses (12; 55.0%) stated that they have been participating in a Nurses At Risk (NAR) support group. Participation in Narcotics Anonymous (NA) and Adult Children of Alcoholics (ACOA) was reported least often. These findings are consistent with that of Sullivan (1987a). The type of recovery group participation is noted in Table 16.

Relapse

The incidence of relapse (at least one episode of chemical abuse) in this group of recovering nurses was 45.5% ($n = 10$). Twelve nurses (54.5%) have remained free from mood-altering chemicals since beginning recovery. The mean number of relapses was 1.7 with a standard deviation of 1.1. A common precipitating event which the nurses related to relapse was "socializing with

TABLE 16
TYPE OF RECOVERY GROUP PARTICIPATION

Type of Group	Frequency Reported	Percent
AA	18	81.8
NAR Support Group	12	55.0
Narcotics Anonymous	4	18.2
Adult Children of Alcoholics	3	13.7
Other Groups	3	13.7

Note - subjects reported all groups

friends and began abusing chemicals recreationally". Four nurses indicated that at the time of the survey they were actively struggling between abstinence and relapse.

The finding that the majority of recovering nurses have not relapsed is consistent with Sullivan's (1987a) findings.

Advice to chemically dependent nursing colleague

The recovering nurses were requested to share one piece of advice with a hypothetical chemically dependent colleague. The nurses overwhelmingly shared their belief that "there is help and hope", and "get help now".

Sharing with the nursing profession

The respondents were asked what they would like the profession of nursing to know about chemical dependence. Subjects replied with a wide variety of comments. The majority stressed the need for educating nursing students, practicing nurses, and administrators about the illness. Many felt that education would help the profession begin to treat chemical dependence as an illness, and not as a moral sin. The nurses wrote that their colleagues' lack of information about early symptoms of chemical dependence, and the attitude that those with the illness are morally weak, impeded them from getting help earlier.

Many shared advice to other nurses regarding the importance of "taking care of our own needs, not just patients' needs", and setting limits on what nurses can reasonably do in one shift.

Several subjects warned that chemical dependence is more common among nurses than the profession would like to believe,

and that it's very easy for nurses to become dependent on chemicals.

The advice given to the profession is strikingly similar to that reported in other studies (Bissell & Jones, 1981; Brennan, 1983; Stammer, 1988).

RESEARCH QUESTION TWO

FACTORS ASSOCIATED WITH CHEMICAL DEPENDENCE

IN MANITOBA NURSES

Age

Informants' age was compared with all other study variables using Fisher's exact test ($p < .05$). The age categories are as follows: 35 and under, 36 to 45, and 46 and over.

Subjects in the 36 to 45 age category significantly more often reported having a mother or father who abused chemicals than subjects in either of the other age categories ($p = .0433$). As well, the same group of subjects reported a positive family history of chemical dependency significantly more often than the other age categories ($p = .0418$).

A difference between subject's age and how drinking was regarded in the family during childhood was also noted. All of the nurses age 35 and under reported average social drinking, while two nurses in the 46 and over category were the only subjects who reported that drinking alcohol was not ever allowed. The nurses in the 36 to 45 category significantly more often reported that heavy drinking was commonplace, compared to nurses in the other two categories ($p = .0113$).

As noted in Table 17, all subjects in the 35 and under age category have experienced a depressive illness, compared to subjects in the other age categories. This difference was not found to be statistically significant ($p = 0.118$).

TABLE 17
THE ASSOCIATION BETWEEN RECOVERING NURSES' AGE
AND THE EXPERIENCE OF DEPRESSION

Age	Yes	No	Total
35 and under	5	0	5
36 to 45	4	5	9
46 and over	4	4	8
TOTAL	13	9	22

$p > .05$

A difference between respondents' age and job loss or threat to a job because of chemical dependency was noted. Those nurses in the 46 and over age category significantly more often were threatened or lost a nursing job because of chemical dependency than nurses in either of the other categories ($p = .0417$). The significant findings in chemical dependence based on age in this study are different from Sullivan (1987a), who reported no differences in chemical dependency were found based on age.

The youngest age category of subjects stated that they abused chemicals other than alcohol recreationally prior to their nursing education programs, more often than did nurses in the other age categories ($p = .0484$). They also reported that recreational chemical abuse was the start of their dependency on chemicals ($p = .0476$). This finding is similar to McAuliffe (1984).

The 35 and under respondents more often abused narcotics than did subjects in the other age categories, but this difference was not found to be statistically significant ($p = 0.106$). A similar association was also noted between the youngest subjects and cocaine and cannabis abuse, but again, the relationship was not statistically significant ($p = 0.144$). This age category of nurses significantly more often reported using inhalation as a method of self-administering their chemicals than

did subjects in the other age categories ($p = .0478$). The finding that the younger nurses more often reported narcotic dependency is consistent with Sullivan, Bissell, and Leffler (in press). The association between the subjects' age and narcotic abuse is presented in Table 18.

TABLE 18
THE ASSOCIATION BETWEEN RECOVERING NURSES' AGE
AND NARCOTIC ABUSE

Age	Yes	No	Total
35 and under	4	1	5
36 to 45	2	7	9
46 and over	2	6	8
TOTAL	8	14	22

$p > .05$

Alcohol was found to be the most preferred chemical by the middle and older age categories of nurses, compared to the youngest category, but this difference was not found to be significant ($p = .121$). The finding that alcohol was the preferred chemical of those nurses age 36 and over is similar to Sullivan, Bissell, and Leffler (in press). The association

between the nurses' age and alcohol as the preferred chemical is presented in Table 19.

TABLE 19
THE ASSOCIATION BETWEEN RECOVERING NURSES' AGE
AND ALCOHOL AS PREFERRED CHEMICAL

Age	Yes	No	Total
35 and under	1	4	5
36 to 45	5	4	9
46 and over	6	2	8
TOTAL	12	10	22

$p > .05$

Family History

Family histories were compared to determine associations among family chemical dependency, role reversal, and sexual problems. Fisher's exact test was utilized ($p < .05$). No association was found between any family member's chemical dependency and the informant's likelihood that she had assumed parental roles in childhood ($p = 0.593$). Nor was the nurse more likely to have experienced sexual trauma as a child or sexual

problems as an adult if a parent or other family member was dependent upon chemicals ($p = 0.429$). Both of these findings are the same as Sullivan's (1987a).

No association was found between the experience of incest as a child and the likelihood of reporting a homosexual preference as an adult ($p = 0.371$). This finding conflicts with Sullivan (1987a), who reported a significant association between those two events, and recommended it be further studied.

No association was found between any family member's chemical dependency and the subject's likelihood that she had formed a marital or common-law relationship with someone who was also dependent ($p = 0.426$). In fact, the opposite was noted. Those with a family history of chemical dependency most often reported that they had not formed a relationship with a chemically dependent individual. This finding conflicts with research which has found that females who grew up in chemically dependent families frequently marry a dependent spouse (Wilsnack, Wilsnack, & Klassen, 1984).

Academic Achievement

Academic achievement was compared to chemical abuse and job performance, using Fisher's exact test. Those who reported high academic achievement were significantly less likely to have begun

chemical abuse at a young age, or to have sought help for their illness due to job threats, than those with lower levels of academic achievement ($p = .0430$). This finding concurs with Sullivan (1987a).

No association was found between academic achievement and beginning chemical abuse recreationally ($p = 1.00$). This differs from Sullivan's finding that there was a significant association between lower academic achievement and beginning chemical abuse recreationally (1987a).

Interference with Nursing Performance

Interference with nursing performance due to chemical dependency was compared to threats to job and/or job loss, disciplinary action, and other consequences. Fisher's exact test was again utilized ($p < .05$). Of the 21 respondents who reported that chemical dependency had interfered with their nursing performance, the majority also reported that they had never been threatened with job loss and/or lost a job due to this problem. Thus, no significant association was found between these two variables ($p = .409$). This differs from Sullivan (1987a), who reported a significant association between interference with nursing performance and job threats and/or loss of job.

Similarly, no association was found between nurses who reported that chemical dependency had interfered with their nursing performance, and disciplinary action against their licence to practice ($p = 1.00$). This is similar to Sullivan, Bissell, and Leffler (in press), but differs from Sullivan (1987a), who found a significant association between these two factors.

Additional comparisons of impaired nursing performance and consequences experienced by the nurse were tested. Taking chemicals from the work setting (stock and/or diversion), was compared to threats to job and/or job loss. No association was found between these two variables ($p = 0.637$). Likewise, no association was found between taking chemicals from the work setting and disciplinary action against a nurse's licence ($p = 1.00$). These findings differ from Sullivan (1987a), who found a significant association between taking drugs from the work setting and both threats to job and/or job loss, and licence disciplinary action.

Those who reported acts of negligent patient care were compared with reports of threats to job and/or job loss. There was no association found between these two factors ($p = 0.253$), and similarly, no association was found between negligent care and disciplinary action ($p = .0797$). These findings differ

somewhat from Sullivan (1987a) who reported a significant association between negligent acts and job loss, but no association between negligence and licensure discipline.

Prescription forgery as a means to obtaining chemicals was compared with job loss and disciplinary action. No associations were found among any of these variables ($p > .05$). This is similar to Sullivan's (1987a) findings.

The types of chemicals abused were compared with both job loss and licence disciplinary action. No associations were found between any chemical abused and job loss or disciplinary action ($p > .05$). This finding conflicts with other research that found a significant association between narcotic abuse and licence action (Sullivan, Bissell, & Leffler, in press).

RESEARCH QUESTION THREE

FACTORS ASSOCIATED WITH THE RECOVERY OF CHEMICALLY

DEPENDENT MANITOBA NURSES

The incidence of relapse (at least one episode of chemical abuse) in this group of recovering nurses was 45.5% ($n = 10$). Thus, 12 nurses have remained abstinent from chemicals since they began recovery.

Nurses who relapsed were compared with nurses who did not, in order to determine if any variables were significantly different for the relapsed group. No significant differences in familial, professional, or chemical dependency variables were found using Fisher's exact test ($p > .05$). This finding contrasts with Sullivan (1987a), who reported that relapse was more frequent among nurses who: were threatened and/or lost jobs, abused narcotics, had received disciplinary action against their licence, had received more than one treatment for chemical dependency, and were infrequent attenders at recovery groups.

Informants' age was compared with recovery variables using Fisher's exact test. Subjects in the 36 to 45 and 46 and over age categories significantly more often participated regularly in all types of chemical dependency recovery groups than did subjects in the 35 and under category ($p = .0115$).

Respondents in the youngest age category significantly more often reported participating in Narcotics Anonymous (NA) than did subjects in the other two age categories ($p = .0335$). It was also found that subjects in the 46 and over age category participated in a Nurses at Risk support group significantly more often than either the middle or youngest age categories ($p = .0360$). These findings are different than Sullivan (1987a), who reported no significant differences in recovery based on age.

RESEARCH QUESTION FOUR

COMPARISONS OF THE CHARACTERISTICS OF RECOVERING CHEMICALLYDEPENDENT MANITOBA NURSES TO OTHER FINDINGS

In order to determine whether the characteristics of recovering chemically dependent Manitoba nurses are unique, or similar to previous findings, the 95% confidence interval for proportion test was utilized with all variables. Table 20 summarizes the statistical findings.

Summary

The purpose of this chapter was to present the results of the study according to the research questions which were asked. A discussion of these findings is presented in the final chapter.

TABLE 20
COMPARISON OF THE CHARACTERISTICS OF RECOVERING
CHEMICALLY DEPENDENT MANITOBA NURSES TO OTHER FINDINGS

Characteristic	Source of Comparison	Statistical Findings in Manitoba Nurses
<u>Demographic</u>		
No males	Sullivan (1987a)	Different
First born in family	Sullivan	No difference
36 years of age and older	Sullivan	Different (older)
Descendants of the British Isles	N/A	-----
Irish background	Brennan (1983)	No difference
Not presently married or common-law	Sullivan	No difference
Been divorced or separated	Sullivan	Different (less)
<u>Academic</u>		
Advanced preparation	Brennan	No difference
Academic achievement	Sullivan	No difference
<u>Employment</u>		
Currently employed in nursing	Sullivan	No difference
Employed in nursing more than 5 years	Sullivan	No difference
Worked rotating shifts	McMahon (1986)	Different
<u>Health</u>		
Recent health problems	Sullivan	No difference
History of depressive illness	Sullivan	No difference
Suicide attempts	Brennan	No difference
Eating disorders	N/A	-----
<u>Sexual</u>		
Sexual trauma	Sullivan	No difference
Sexual molestation as a child	Sullivan	Different (more)
Homosexual preference	Sullivan	No difference

TABLE 20
COMPARISON OF THE CHARACTERISTICS OF RECOVERING
CHEMICALLY DEPENDENT MANITOBA NURSES TO OTHER FINDINGS

Characteristic	Source of Comparison	Statistical Findings in Manitoba Nurses
<u>Family History</u>		
Chemically dependent family member	Sullivan	No difference
Parental dependence on chemicals	Sullivan	Different (more)
Average social drinking in family of origin	Sullivan	No difference
Depression in family of origin	Sullivan	Different (more)
Maternal depression	Sullivan	Different (more)
Lived with both parents growing up	McMahon	No difference
Assumed parental roles in childhood	Sullivan	No difference
<u>Present Family</u>		
Significant other dependent on chemicals	Sullivan	Different (more)
Have children	Sullivan	No difference
<u>Chemical Dependency</u>		
Interfered with significant relationships	N/A	-----
Interfered with nursing performance	Sullivan	No difference
Threats to job and/or lost job	Sullivan	No difference
Disciplinary action against nursing licence	Sullivan	Different (less)
Setting worked had no effect on becoming dependent	N/A	-----
Did not seek out settings for easy access to drugs	Sullivan/Bissell/Leffler (in press)	Different

TABLE 20
COMPARISON OF THE CHARACTERISTICS OF RECOVERING
CHEMICALLY DEPENDENT MANITOBA NURSES TO OTHER FINDINGS

Characteristic	Source of Comparison	Statistical Findings in Manitoba Nurses
<u>Chemical Dependency</u> (cont'd)		
Emotional pain primary cause of dependency	Sullivan	Different (more)
"To relax" as a cause of dependency	Sullivan	Different (less)
Mean age of 24 when began abusing	Sullivan/Bissell/Leffler	No difference
Recreational abuse prior to nursing program	Sullivan/Bissell/Leffler	No difference
Recreational abuse during nursing program	Sullivan/Bissell/Leffler	No difference
Not taught about disease process of chemical dependency	Brennan	Different (less)
Perceive stress level in nursing to be extremely high	Sullivan	No difference
Greatest stress is excessive workload	Sullivan	No difference
Nursing stress contributed to problem with chemicals	Sullivan	No difference
Alcohol is preferred chemical	Sullivan	No difference
Narcotics are second drugs of choice	Sullivan	No difference
Polydrug abuse	Sullivan	No difference
Have abused street drugs	Sullivan	No difference
Physician was main source of prescription drugs	Sullivan	Different (more)
Took stock drugs and/or diverted	Sullivan	Different (less)

TABLE 20
COMPARISON OF THE CHARACTERISTICS OF RECOVERING
CHEMICALLY DEPENDENT MANITOBA NURSES TO OTHER FINDINGS

Characteristic	Source of Comparison	Statistical Findings in Manitoba Nurses
<u>Recovery</u>		
Mean of 9.5 years of chemical abuse	McMahon	No difference
Made independent decision to obtain help	Sullivan	No difference
Sought help for emotional problems prior	Sullivan	No difference
Mean of 52.7 months of abstinence	Sullivan/Bissell/Leffler	No difference
Received professional treatment	Sullivan	No difference
Received only one treatment	Sullivan	No difference
Inpatient chemical dependency treatment	Sullivan	No difference
Regular participation in recovery groups	Sullivan	No difference
Attend nurses' support group	Sullivan	No difference
Have not relapsed	Sullivan	No difference

Different: $p < .05$

Not Different: $p > .05$

95% confidence interval for proportion test

CHAPTER V

SUMMARY, DISCUSSION AND RECOMMENDATIONS

This final chapter is presented as follows: a summary of the research problem; an overview of the research method; a summary and discussion of the findings; implications for the nursing profession; study conclusions; and recommendations for further research.

The Research Problem

Chemical dependency is a health problem that can have a profound effect on the workplace, especially when it occurs in the health care professions. The literature notes that nurses are a high risk population, with estimates of the incidence of the disease among nurses ranging from 6 - 8% (ANA, 1987), to 10 - 20% (Curtin, 1987). However, no matter what the incidence, the consequences are significant.

Over the past decade, the nursing profession has begun efforts to assist its chemically dependent members. The majority of American state nurses' associations and three Canadian associations, including Manitoba, have established peer assistance programs. Still, little is known about nurses who become dependent upon chemicals, especially outside of the United

States. In Manitoba, there were no empirical data whatsoever.

There have been multiple suggestions as to the origin, risk factors and characteristics of susceptible nurses. Characteristics of the profession itself have also been implicated as contributing to the potential for chemical dependency. Assumptions are plentiful. However, the research effort with chemically dependent nurses has been minimal, and there has not been a concerted effort to identify common characteristics and risk factors.

It is believed that education, prevention and treatment strategies for chemical dependency in the nursing profession hinges on first understanding the demographic characteristics and risk factors that contribute to the illness. The purpose, therefore, of this study, was to provide information about the characteristics of recovering chemically dependent Manitoba nurses, and to identify variables associated with both chemical dependency and recovery.

The Method

The personal, familial and professional characteristics of recovering chemically dependent nurses in the province of Manitoba were assessed through the use of a mailed survey. The population for this study was 31 chemically dependent nurses who

had been referred to the provincial peer assistance program, Nurses At Risk. Approval for the investigation was obtained from the University of Manitoba School of Nursing Ethics Committee, and both the Executive and Board of the Manitoba Association of Registered Nurses (MARN).

An adapted version of the Sullivan Survey of Chemical Dependency in Nursing was mailed in January, 1990, to the 31 nurses, and two weeks later, a reminder letter was sent to all of these nurses. The investigator was not involved with the addressing and mailing of the questionnaire. There were 22 questionnaires (71%) returned.

Descriptive statistics, Fisher's exact test, and the 95% confidence interval for proportion test were utilized to assess the characteristics and associations. Probability was set at .05.

Summary and Discussion of the Findings

The recovering nurses are a heterogeneous group. However, the data indicate that the recovering chemically dependent nurse in Manitoba is more likely to be female than male, Caucasian, over age 35, and not presently in a marital or common-law relationship.

The absence of men in the sample was surprising, especially since males have a higher incidence of chemical dependency within the general population (Goodwin, 1979), and because similar studies have found an over-representation of males among recovering nurses (Sullivan, Bissell, & Leffler, in press; Sullivan, 1987a; Talmadge-Reed, 1982). The lack of males in the sample is however, consistent with the incidence of men in the Manitoba nursing population. It could also be that no men received a questionnaire from Nurses At Risk, or none returned the questionnaire.

It is not known why the sample would be older than that reported by Sullivan (1987a). The age of the sample is consistent with the age distribution of Manitoba nurses, but older than Canadian nurses generally, where 57% are less than 40 years of age (Statistics Canada, 1988). There may be some unique features of Manitoba which contribute toward an older nursing population. It is a conservative province, with very little inward migration from other provinces, and young people often leave the province. Traditionally, nursing programs in Manitoba have educated more nurses than were required, and new graduates often leave the province for jobs elsewhere.

The association between subjects in the 36 to 45 age category and family history of chemical dependency, parental

chemical dependence, and heavy drinking in the family during childhood was an interesting finding. These subjects belong to the post-World War II baby boom generation, meaning that their families most likely were subject to the stressors associated with the depression and war years, as well as post-war changes. Perhaps families belonging to this cohort are at increased risk for chemical dependency related to these factors. It is known that World War II initiated changes in women's drinking habits (Mendelson & Mello, 1985).

The finding that the oldest subjects (46 and over) more often were threatened with a job loss or actually lost a job because of their illness is notable, especially because the oldest nurses more often cited that their preferred chemical was alcohol. Other studies have reported that alcohol dependency usually leads to fewer professional repercussions for nurses because it is legal and more difficult to document than narcotic abuse (Sullivan, Bissell, & Leffler, in press). One would have expected that, similar to Sullivan et al., the youngest nurses (under 36) would have reported more problems with jobs because of their higher abuse of narcotics. It may be, however, that the older nurses lost jobs because their employers didn't have the Nurses At Risk program for referral earlier in these nurses' careers. The program has only been in existence since 1986. As

well, until recently, chemical dependency was perceived as a moral problem rather than an illness which can be treated. Thus, the older nurses may have lost jobs as punishment rather than receiving help.

The finding that the middle and older age categories of subjects preferred alcohol, and that the youngest nurses more often participated in recreational drug abuse was expected. The choice of chemicals throughout society has changed, and the new generation of nurses are likely no different in their chemical abuse behaviour than their cohorts. As well, the consistency of the finding of the abuse of narcotics by the younger nurses both in this study and in Sullivan, Bissell, and Leffler (in press), is important. Perhaps recreational drug abuse puts a nurse at increased risk for narcotic abuse.

As expected, the majority of the nurses are not presently in a relationship, either marital or common-law. The majority also stated that there had been interference in significant relationships because of chemicals. Similarly, a substantial proportion of the nurses have been divorced or separated. Although the proportion of nurses in this study who have been divorced or separated is lower than reported by Sullivan (1987a), it is consistent with studies of chemically dependent females (Wilsnack, Wilsnack, & Klassen, 1984). Perhaps the rate of

divorce and separation is lower in this sample than in Sullivan's because this sample is slightly older, and divorce rates generally were lower in the past.

Past studies would also suggest that chemically dependent females often have a chemically dependent spouse (Wilsnack, Wilsnack, & Klassen, 1984). This finding was similar in the present study. Among the married or common-law subjects, the majority have a chemically dependent partner, or a partner who is also in recovery. The high incidence of familial chemical dependency, and the aforementioned study, also suggest that there would be an association between family chemical dependency and the likelihood of forming a relationship with a dependent partner. It was therefore notable that no association was found between these two events in the present study. Those nurses with a family history of dependency most often reported that they had not entered a relationship with a chemically dependent individual. This finding does not lend support to the sociocultural explanation that those with a family history of alcoholism are at higher risk for chemical dependency problems, including forming relationships with dependent partners, because of behaviors learned within a dysfunctional family system. Thus, for the nurses in this sample, forming a relationship with a chemically dependent partner appears to be related to a factor

other than a family history of the illness. Other studies of chemically dependent nurses have not tested the association between family chemical dependency and forming a relationship with a dependent partner.

Nurses with an Irish background were slightly over-represented in the study. It is accepted that certain ethnic and cultural customs appear to put individuals at risk for developing chemical dependency (Donovan, 1986). As well, those belonging to an ethnic group share genes. The Irish culture has been found to have a high rate of alcoholism (Vaillant, 1983). It may be that the nurses in this study with an Irish heritage were placed at increased risk for developing chemical dependency.

The finding that over one-third of the nurses in this sample, and Sullivan's (1987a), are first born children, was interesting. A large number in both of these samples are adult children of alcoholics, and recent research with adult children of alcoholics in nursing, found that these nurses are more often first born, as compared to adult children of non-alcoholics (Dean & Edwards, 1989).

The subjects were academic high achievers and have advanced educational preparation. It may be that nurses who push themselves and work hard are at increased risk for developing chemical dependency.

The finding that those who reported higher academic achievement were less likely to have begun chemical abuse at a young age, or to have sought help for their illness due to job threats, is an interesting one. It is probably not relevant as a useful risk factor for this group.

It is not surprising that the majority of the sample are presently employed in nursing, since few reported job loss or disciplinary action against their licence. Dunkin (1983) states that 85% of recovering nurses do return to the profession. Years of nursing practice varied from less than five to over twenty, thus no particular length of experience for these nurses appears to be relevant to chemical dependency.

Considering past studies (Sullivan, 1987a), and the physiological and psychological impact that chemicals have upon most body systems (Naegle, 1988a), it is not unusual that the majority of the nurses reported recent health problems. Factors identified in the literature as being associated with both female and nurses' chemical dependence were found in the sample, including depressive illness (Sullivan, 1987a), suicide attempts (Bissell & Jones, 1981), multiple sexual problems (Sullivan, 1987a), and bulimia (Flood, 1989). It is not known why this sample had a much higher incidence of sexual molestation than Sullivan (1987a) reported.

It is notable that no association was found between incest and homosexuality, especially since it was an unexpected and significant finding for Sullivan (1987a). Both studies, however, found similar proportions of the two events.

The familial aspects of alcoholism would suggest that chemically dependent nurses would often have alcoholic family members. This was reported by the nurses. Over one-half of the recovering nurses cited a chemically dependent parent. This finding makes these nurses members of the adult children of alcoholics population, and gives strong support to the role of genetics and family environment in the development of alcoholism. It is not known why this sample reports a higher incidence of parental dependence than Sullivan indicated (1987a).

Additionally, it is notable that the nurses reported a very high incidence of familial and maternal depressive illness. This finding supports studies which have suggested that there is some link between alcoholism and depression in close female relatives (Schuckit, 1986). Familial depression may have been a factor in the development of chemical dependency in this sample of nurses. It cannot, however, be determined if this link is genetic, or else related to events which may have taken place in a dysfunctional family environment. Perhaps both played a role.

As expected by both the reported parental chemical dependence and maternal depression, as well as studies of others in the helping professions (Avery, 1989; Black, 1981; Sullivan, 1987a), the recovering nurses were often required to reverse roles and assume parental roles in childhood. It was notable, however, that Sullivan (1987a) and the present study did not find an association between any family member's chemical dependency and the subject's likelihood of reversing roles and taking on parental roles early in life. In her later study (1987b), Sullivan did find that chemically dependent nurses more often experienced role reversal than nondependent nurses, but this still had no association to parental dependence. Perhaps, as some writers have suggested (Forrest, 1989), role reversal may be a generalized symptom of family system dysfunction, rather than being solely associated with chemical dependency.

It was noteworthy to find that both in this study and in Sullivan's (1987a), the majority of nurses reported that average social drinking was more common in their families during childhood than heavy drinking. Their families were not modelling heavy drinking, and this finding does not lend support to the social learning theory of alcoholism. It would therefore seem that drinking behavior within a child's family environment only partially explains the subsequent development of chemical

dependency in that child.

Responses concerning the impact of chemical dependency on the nurses' performance revealed that almost all believed their performance was negatively affected, even to the point of negligence. However, few actually had a job threatened or lost a job, and fewer still had disciplinary action taken against their nursing licence. Thus, in contrast to what Sullivan reported (1987a), there was no association found between self-perceived interference with nursing performance and job loss or disciplinary action. It could be that Manitoba nurses and employers, compared to Sullivan's sample, are still not as cognizant of the chemical dependency problem in nursing, nor of how to assess the problem in an ill nurse. Perhaps those concerned deny that a nurse has a problem with chemicals, or perhaps all the ill nurses are being referred to Nurses At Risk for assistance, thereby reducing job loss and disciplinary action.

As expected, no clear pattern was found between any particular clinical setting and the start of chemical abuse behavior. Although small, the figures are interesting, and perhaps indicative of a consistent incidence of chemical dependency throughout all nursing environments. This finding differs from studies which have suggested a link between critical

care and nurses' chemical dependency (McMahon, 1986; Talmadge-Reed, 1982).

In light of Sullivan, Bissell and Leffler's (in press) finding that one-half of their sample had sought out a work setting for easier access to drugs, it was surprising that none of the nurses in the present study had done likewise. Perhaps, because in this sample, the primary chemical of choice was alcohol, which is easily available, the nurses had no reason to want easier access to other chemicals.

Consistent with the findings of Hutchinson, (1986) and Sullivan (1987a), the nurses in this sample most often began abusing chemicals therapeutically, as a form of self-medication for emotional and physical pain, or to assist with relaxation. Recreational drug abuse did take place, before, during and after nursing education programs, but few cited this as their prime reason for becoming dependent.

It appears as though occupational stress, in particular, excessive workload, may have been one contributing factor to problems with chemicals for over one-half of the sample. And considering other findings (Haack, 1988; Murphy & Connell, 1987), it is also not surprising that stress was most often experienced during a nursing education program or in the first nursing job. For students, the magnitude of a nursing program may be

overwhelming. Students are often overwhelmed by clinical work, and the demands of preparation. Technical skills must be learned, extensive reading assignments are common, and care plans must be written. Considerable energy is spent on meeting the expectations of others. Often students lack time for self care. For new graduates in their first nursing job, the stress is similar. Practice may differ greatly from what the novice was taught to expect, and administrators often expect an unrealistic performance (Haack, 1988).

From this study, it cannot be determined what occupational conditions create the perception of excessive workload. It could be the volume of work assigned, time constraints, or perhaps certain characteristics of some nurses are related. For example, over one-half of this sample are adult children of alcoholics. Previous studies suggest that this population tends toward overachievement (Avery, 1989), disregard of personal needs, putting others first, the need to control, and difficulty separating self from work (Dean & Edwards, 1989). Such traits may contribute toward the perception of stress in adult children of alcoholics.

The findings that alcohol and narcotics were the primary and secondary chemicals of choice, that polydrug abuse was common, and that one-third of the sample had abused illegal street drugs,

were expected. Such findings are in line with similar studies (Brennan, 1983; Sullivan, Bissell & Leffler, in press; Sullivan, 1987). Likewise, it was not a surprise, considering studies with chemically dependent females, (Eccles, 1989) that one-half of those subjects who abused prescription drugs had obtained their prescriptions from physicians. The reasons why theft of stock medications and/or diversion of patient medications appears to be less common as a source of prescription chemicals for this sample than in similar studies were not apparent. Perhaps it is more difficult to steal or divert medications in Manitoba than in some American locations. The proportion who were involved in this activity is, however, still substantial.

One would have expected, as reported by Sullivan (1987a), that abuse of narcotics, stealing stock drugs and/or diverting patient medications, would all have been associated with both job loss and disciplinary action for the sample. However, this was not the case. Again, it may be that because the chemical of choice was alcohol, the nurses were less inclined to steal and/or divert, and therefore less likely to experience professional repercussions. It is probably easier to discover and document theft and/or diversion of hospital drugs, especially controlled narcotics, than alcohol abuse. As Sullivan, Bissell and Leffler explain "theft and diversion of narcotics leave a paper trail

that may facilitate discovery" (in press, p. 15). For this same reason, those nurses who abuse street drugs such as cocaine, may also not draw the same attention to themselves.

Recovery experiences reported suggest that most nurses in the sample had abused chemicals for several years prior to obtaining help, and that many had sought help for emotional problems prior to their chemical dependency treatment. It is notable that a high proportion of nurses in this sample and in Sullivan's (1987a), stated they sought help on their own. It seems to conflict with the common view that external confrontation is usually needed to break through the denial of chemically dependent individuals. Perhaps other factors pushed the nurses to seek help.

The majority have not relapsed, and participate regularly in recovery support groups. Relapse, when it occurred, was perceived by those nurses to be linked to socializing and recreational drug abuse.

It is unfortunate that this study did not support Sullivan's (1987a) findings regarding differences between the nurses who relapsed and those who did not. It would have been helpful for Nurses At Risk and recovering Manitoba nurses to be aware of factors related to relapse. The lack of significant differences between these two groups in the present study may be due to the

small sample size.

It is not known why the youngest subjects (35 and under) participated less regularly in all recovery groups, nor why those nurses 46 and over participated more often in a Nurses At Risk support group. Perhaps such groups are not meeting the needs of younger recovering nurses.

Profile of Recovering Manitoba Nurses

In summary, the majority of characteristics of the recovering Manitoba nurses are similar to those found in American studies. However, some characteristics are unique to the Manitoba sample. These are as follows: there were no males, the nurses are slightly older, less often divorced or separated, and worked rotating shifts. Compared with other studies, Manitoba nurses experienced eating disorders, have higher incidences of sexual molestation during childhood, parental dependence, depression in family of origin, maternal depression, and a significant other who is also dependent.

Compared with Sullivan's (1987a) sample, the recovering Manitoba nurses have experienced less disciplinary action against their nursing licences, believe that a clinical setting had no effect on becoming dependent, and did not seek out a setting for easy drug access. They perceived emotional pain either alone, or

in combination with the need to relax, to be the cause of their problems with drugs. More of them obtained prescription drugs from physicians rather than through theft of stock drugs and/or diversion. There were no recovery characteristics unique to the Manitoba sample.

Theoretically, the findings from this study would support a biopsychosocial interpretation of the etiology of chemical dependency. The research questions were broad enough to consider multiple biological, psychological, and sociocultural risk factors which may have contributed toward the development of chemical dependency in this sample of recovering nurses. Certain individual, familial, sociocultural, and environmental characteristics were found. Although the relationship between these characteristics cannot be proposed, nor can they be said to be causal, their many facets support the possibility that chemical dependency is a multicausal disease.

Conceptually, some of the findings from this study do appear to support Donovan's (1986) biopsychosocial model of alcoholism, where several different factors may interact and lead to the illness. For example, potential primary risk factors for this sample of recovering Manitoba nurses may have been a positive family history of dependency, and an Irish ethnic background. Mediating conditions might have been a dysfunctional family

system during childhood; a family history of depression; experiencing multiple sexual difficulties, in particular, molestation during childhood; being a high achiever; self-medication behavior for emotional pain or to induce relaxation; and the perception of having an excessive workload in a nursing education program or the first nursing job. It is also possible that other unmeasured factors may account for chemical dependency in these nurses.

As cited previously, Donovan's model acknowledges research-supported factors, but also provides for their dynamic, flexible, and varying importance. Specific individuals and groups may show a variety of combinations of contributing factors, and Donovan explains that, with research, the model can be expanded, particularly in the category of environmental variables. Therefore, Figure 2 shows how the factors found important in both this study and Sullivan's (1987a), could be fitted into Donovan's model to add further specificity.

DONOVAN'S MODEL OF ALCOHOLISM (1986)

Adapted to include findings from Sullivan (1987a)
and Tipliski (1990).

Primary Risk Factors

A. Hereditary Factors →

1. Positive family history
2. Male sex
3. Familial depression
4. First born

B. Personality Factors? →

1. Antisocial characteristics
2. Borderline characteristics

Note: Neither study broad enough
to consider 'B' factors

C. Sociocultural Factors →

1. Ethnic or cultural group (Irish)

Mediating Conditions

D. Personality Factors?

1. Antisocial characteristics
2. Borderline characteristics
3. Adult Child of Alcoholic
Characteristics

E. Environmental Variables

1. Family interactional
patterns eg. role reversal
2. Maternal depression
3. Multiple sexual problems
4. Self-medicate therapeutically
5. Significant other chemically
dependent
6. Workload perceived to be
greatest cause of stress
7. ?

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FIGURE 2

Implications for the Nursing Profession

Within the limitations of the sample, some of the findings of this study are relevant to chemically dependent nurses, non-chemically dependent nurses, nurse educators, and administrators.

Exposed obliquely in this study is the inability of many nurses to perceive chemical dependency as a medical illness. It is not unreasonable to expect nurses to be able to provide accurate nursing diagnoses of behaviours indicative of nursing practice impaired by chemical abuse. In spite of almost every nurse in the sample relating that their nursing care was affected by their illness, this was usually not acted upon by their colleagues or administrators. When a nurse develops chemical dependency, the most powerful means of minimizing the consequences is the quick, supportive response of colleagues and administrators. This response is dependent upon the ability to recognize early symptoms of the illness. Colleagues and administrators who lack information to assess the illness, or ignore or deny that there is a problem are not being helpful. Early identification and referral for help are imperative.

The study indicated the respondents' perception of an overall lack of attention being given to chemical dependency education in nursing education programs and continuing education. This perception is supported by the literature (ANA, 1987; Jack,

1987; Murphy, 1989). Chemical dependency is a serious health problem generally, and more specifically, among health care professionals. Educational programs should be developed for students, nursing graduates, and administrators, which will enable them to assess and intervene with both chemically dependent patients and colleagues. Educational programs need to include the characteristics of the chemically dependent nurse. It is positive that some schools of nursing in Winnipeg have recently incorporated information about the chemically dependent nurse into their programs.

It is clear that stress management instruction is needed within the curriculum of nursing education and in continuing education. Perceived stress must be addressed preventatively, for in some cases, stress has contributed to the development of chemical dependency. Little can be done about stressors such as excessive workload, but coping strategies can be strengthened so that stress can be managed constructively. Short courses on stress management could be offered to nursing students by faculty, and professional nursing associations could organize similar workshops for practising nurses. Perceived occupational stressors must be recognized by educators and administrators, and where possible, modifications made to reduce the stress factor. Extended internships or preceptorships might be one method for

easing the role transition from student to graduate nurse.

Nursing is often criticized for not nurturing our own (Meissner, 1986). The profession is known to be overly critical of the nursing student and new graduate, and such individuals often feel pressured to prove themselves (Madden, 1989). Students and graduate nurses alike, need to be taught the value of self-care activities, and the hazard of taking care of others without taking care of themselves. Nursing students and new graduates require support from experienced nurses. As well, role modelling by faculty and staff nurses who are practising self-care and coping effectively with the stresses involved in nursing, is important for students and beginning practitioners.

Over one-half of the nurses in the study are members of the adult children of alcoholics (ACOA) population. This is a signal for prevention and intervention. Students and nurses who belong to the ACOA population may be at increased risk for developing chemical dependency. They should be encouraged to join support groups in order to resolve issues of growing up in a dysfunctional family. There are many ACOA support groups available, and such groups may even be feasible within a school of nursing. For similar reasons, it would seem that all children identified as belonging to a family disabled by chemicals, depressive illness, or some other dysfunction, could benefit from

primary prevention strategies earlier in life.

For the most part, the sample began abusing chemicals for therapeutic reasons. However, some of the younger nurses abused chemicals recreationally, and abused illegal street drugs such as cocaine. Nurses who habitually self-medicate, even therapeutically, and nurses who abuse drugs recreationally, should be aware that such behaviors may contribute to chemical dependency. Furthermore, nurses who are abusing street drugs may not be assessed as having a problem as quickly as those who are taking prescription drugs from a health care setting. Thus, these nurses and their patients may be subject to a different kind of harm than in the past.

A substantial number of subjects obtained their prescription drugs through theft and/or diversion from patients. This finding has implications for increased scrutiny of controlled-substance records, as well as educating all nurses about the signs of drug theft and diversion. Easy access is a risk factor in the work environment that can be modified.

Conclusions

Numerous findings in this study do parallel the findings that have been reported in recent American studies of the recovering nurse, thus adding further support to the data base

which is emerging. The study has generated some information about the association between chemical dependency variables and some Manitoba nurses. The study, however, does not provide knowledge about the causality of these relationships.

However limited this work may be, it represents a much needed contribution to the limited information on chemical dependency in nursing in Manitoba. The problem in Manitoba has been to some degree, quantified. Further reliability would be added if certain design problems can be solved with this difficult-to access population.

Conclusions are limited by the exploratory nature of this study. The findings can be applied only to the sample of this study. Generalizations cannot be made to any other recovering chemically dependent nurses due to the sampling procedure and the survey design of the study.

Recommendations for Further Research

Based on the data analysis, limitations, and conclusions, the following recommendations are made for further research.

1. The study be replicated using a larger sample in another Canadian province to determine whether characteristics found in this study are unique to this sample and province, or are part of a national/international trend.

2. Non-chemically dependent Manitoba nurses be compared with this sample to determine differences. Many of the characteristics identified in this sample may also be present in non-chemically dependent nurses. Risk factors specific to chemically dependent nurses need to be identified.
3. Recovering Manitoba nurses should be targeted for a more in-depth investigation. For example, through the use of interviews, a longitudinal study could be undertaken to identify variables associated with recovery and relapse.
4. There is a need for the development and evaluation of programs designed for education, prevention, and early identification of chemical dependency in nursing. Prevention programs should focus upon reducing exposure to risk factors and modifying the factors that are already present.

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Appendices

APPENDIX A

Sullivan Survey of Chemical Dependency in Nursing (Adapted)

CONFIDENTIAL

**Sullivan Survey of Chemical Dependency
in Nursing**

This questionnaire is designed to provide a profile of recovering chemically dependent nurses. All information you provide is anonymous. Please provide the information requested by circling the number corresponding to the appropriate item, or filling in the blank. If you are unable to respond to a question, feel free to omit it and continue on.

Demographic Characteristics

1. Your sex:

1 Female

2 Male

2. Your age:

1 under 21

2 22 to 25

3 26 to 30

4 31 to 35

5 36 to 40

6 41 to 45

7 46 to 50

8 over 50

3. Your race:

1 Caucasian

2 Black

3 Aboriginal Canadian

4 Asian

5 Hispanic

6 other (specify) _____

4. What is your ethnic/cultural background?

Academic Background

5. What was your first nursing diploma/degree?

1 L.P.N.

2 R.N.

3 R.P.N.

4 B.N.

6. When did you first receive your first nursing diploma/degree?

1 1960 or before

2 1961 to 1965

3 1966 to 1970

4 1971 to 1975

5 1976 to 1980

6 1981 to 1985

7 1986 or later

7. If you can recall, what was your approximate class standing in your first nursing program?

1 upper 10%

2 upper 25%

3 upper 50%

4 lower 50%

8 Your educational background. Circle all that apply:

1 L.P.N.

2 R.N.

3 R.P.N.

4 B.N.

5 Baccalaureate degree in
another discipline

6 M.N.

7 Master's in another discipline

8 Doctorate in any discipline

9 Specialty certification (specify) _____

9. If you can recall, what was your approximate grade/grade point average from all your post-secondary work, including nursing?

1 between 3.5 and 4.0 (A- to A)

4 between 2.0 and 2.49 (C- to C)

2 between 3.0 and 3.49 (B to B+)

5 below 2.0

3 between 2.5 and 2.99 (C+ to B-)

10. Have you ever recieved any academic awards from any school attended or from any professional organizations (including high school, nursing school, university, scholarships, etc.)?

1 yes

2 no

11. If yes, explain briefly:

Work History

12. How many years (total) have you been employed as a nurse?

1 never

4 6 to 10 years

2 less than 1 year

5 11 to 20 years

3 2 to 5 years

6 more than 20 years

13. Are you employed in nursing at present?

1 yes

2 no

14. Please complete a brief employment history for the past 5 years:

Date (year)	Type of Agency (do not name)	Position/ Job Title	Reason for Leaving
----------------	---------------------------------	------------------------	--------------------

Medical History (includes physical as well as emotional health)

15. Have you been hospitalized or been in emergency or an outpatient setting within the last 5 years?

1 yes

2 no

If yes, expliain briefly as follows:

Date (year)	Chief Complaint	Diagnosis	Cause (if trauma)	Present Status of Problem
----------------	--------------------	-----------	----------------------	------------------------------

16. Have you visited a physician for reasons other than routine examinations during the past 5 years?

1 yes

2 no

If yes, explain briefly as follows:

Date (year)	Chief Complaint	Diagnosis	Cause (if trauma)	Present Status of Problem

17. Would you say you have ever experienced an eating disorder?

1 yes

2 no

18. If yes, please circle what applies:

 anorexia nervosa

 addictive overeating

 bulimia (binge eating and purging)

 other (specify) _____

Family Background

19. Is your mother alive?

1 yes

2 no

20. If no, did she die from:

alcohol abuse 1 yes 2 no

drug abuse 1 yes 2 no

suicide 1 yes 2 no

21. Is your father still alive?

1 yes

2 no

22. If no, did he die from:

alcohol abuse 1 yes 2 no

drug abuse 1 yes 2 no

suicide 1 yes 2 no

23. In your opinion, is there anyone in your family who consumes excess alcohol or is taking excess amounts of drugs (prescribed or otherwise) ?

1 yes

2 no

24. If yes, circle all that apply:

1 father

2 mother

3 brother/sister

4 grandparent

5 aunt/uncle/cousin

6 spouse/significant other

7 child

8 other (specify) _____

25. Has anyone in your family suffered from or been treated for depression?

1 yes

2 no

26. If yes, circle all that apply:

- | | |
|-------------------------|-----------------------------------|
| <u>1</u> father | <u>5</u> aunt/uncle/cousin |
| <u>2</u> mother | <u>6</u> spouse/significant other |
| <u>3</u> brother/sister | <u>7</u> child |
| <u>4</u> grandparent | <u>8</u> other (specify) _____ |

27. Have you ever suffered from or been treated for depression?

- | | |
|--------------|-------------|
| <u>1</u> yes | <u>2</u> no |
|--------------|-------------|

28. Have you ever attempted to take your own life?

- | | |
|--------------|-------------|
| <u>1</u> yes | <u>2</u> no |
|--------------|-------------|

If yes, how many times? _____

29. Did you live with both parents for the majority of your childhood?

- | | |
|--------------|-------------|
| <u>1</u> yes | <u>2</u> no |
|--------------|-------------|

30. What is your birth order?

- | | |
|-----------------|-------------------|
| <u>1</u> oldest | <u>3</u> youngest |
| <u>2</u> middle | <u>4</u> only |

31. Were there any family problems during your childhood that caused you to assume parental roles early in life?

- | | |
|--------------|-------------|
| <u>1</u> yes | <u>2</u> no |
|--------------|-------------|

32. If yes, briefly explain the problem and your role: _____

33. Do feel that there have been one or more events in your life which were particularly stressful to your sexual self (identity/functioning)?

- | | |
|--------------|-------------|
| <u>1</u> yes | <u>2</u> no |
|--------------|-------------|

34. If yes, circle all that apply and approximate age at time of event:

- | | |
|---|-----------|
| <u>1</u> sexual molestation | age _____ |
| <u>2</u> incest | age _____ |
| <u>3</u> awareness of homosexual preference | age _____ |
| <u>4</u> miscarriage | age _____ |
| <u>5</u> abortion(s) | age _____ |
| <u>6</u> unplanned pregnancy (s) | age _____ |
| <u>7</u> sexual dysfunction | age _____ |
| <u>8</u> illness/surgery that affected body image | age _____ |
| <u>9</u> other (specify) _____ | age _____ |

35. How was the drinking of alcohol regarded in your family when you were growing up?

- | |
|--|
| <u>1</u> moderate/average drinking on social occasions |
| <u>2</u> heavy drinking was commonplace |
| <u>3</u> no drinking was allowed |

Your Present Family

36. What is your current area of residence?

1 rural

2 urban

37. Are you presently married or living with someone as if you were married?

1 yes

2 no

38. If no, are you presently:

1 single (never married)

3 separated

2 divorced

4 widowed

39. Have you ever been widowed, divorced, or separated?

1 yes

2 no

If yes, how many times each: widowed _____

divorced _____

separated _____

40. If you are married or living with someone, is s/he dependent on alcohol or drugs?

1 yes

2 no

41. If yes, is s/he recovering?

1 yes

2 no

42. Do you have children?

1 yes

2 no

If yes, how many? _____ Their ages? _____

Nursing

43. How would you describe the stress level generally for people in the nursing profession?

1 extremely stressful

3 average stress

2 fairly stressful

4 low stress

44. Please rank the stressful aspects of nursing in order of their importance to you. Mark 1 for the highest stress producer and so on to 6 as the lowest.

___ (1) excessive workload

___ (2) dealing with illness and death

___ (3) relationships with supervisors and/or physicians

___ (4) rotating shifts

___ (5) rotating assignments/units

___ (6) other (specify)

45. In your nursing jobs, have you worked the majority of the time:
- | | |
|------------------------|--------------------------|
| <u>1</u> day shift | <u>3</u> night shift |
| <u>2</u> evening shift | <u>4</u> rotating shifts |

Chemical Dependency

46. Do you consider that you are or ever have been dependent/addicted to alcohol or drugs?
- | | |
|--------------|-------------|
| <u>1</u> yes | <u>2</u> no |
|--------------|-------------|

If yes, please answer the following questions:

47. In your opinion, has your drinking and/or drug abuse ever interfered with your job as a nurse?
- | | |
|--------------|---------------------------------------|
| <u>1</u> yes | <u>3</u> don't know |
| <u>2</u> no | <u>4</u> not employed as a nurse then |

48. If yes, in what way? Circle all that apply:

- | |
|--|
| <u>1</u> absenteeism or lateness |
| <u>2</u> felt unwell while at work |
| <u>3</u> irritability |
| <u>4</u> preoccupation with drugs/alcohol |
| <u>5</u> poor relationships with co-workers and/or supervisors |
| <u>6</u> reduced attention to job and/or patients' conditions, responses, concerns |
| <u>7</u> others complained about my work and/or attendance |
| <u>8</u> utilized stock/patient medication for own use |
| <u>9</u> omissions and/or acts which could be considered negligent |
| <u>10</u> other (specify) _____ |

49. Did you ever lose a job or were you ever threatened with lose of a job related to drug or alcohol abuse?
- | | |
|--------------|-------------|
| <u>1</u> yes | <u>2</u> no |
|--------------|-------------|

50. What is the current status of your nursing license?

- | | |
|----------------------|--------------------------------|
| <u>1</u> full status | <u>4</u> revoked |
| <u>2</u> conditional | <u>5</u> other (specify) _____ |
| <u>3</u> suspended | |

51. Has your nursing license ever been:

- | | |
|----------------------|------------------------|
| <u>1</u> conditional | <u>3</u> revoked |
| <u>2</u> suspended | <u>4</u> none of these |

52. In which of the following settings were you working when you **FIRST** began abusing alcohol and/or drugs?

Circle only one:

- | | |
|--------------------------------|---------------------------------|
| <u>1</u> Administration | <u>8</u> O.R. Recovery Room |
| <u>2</u> Emergency | <u>9</u> Pediatrics |
| <u>3</u> Gerontology | <u>10</u> Psychiatry |
| <u>4</u> Intensive Care | <u>11</u> Public Health |
| <u>5</u> Medicine | <u>12</u> School of Nursing |
| <u>6</u> OB/Gynecology/Nursery | <u>13</u> Surgery |
| <u>7</u> Oncology | <u>14</u> Other (specify) _____ |

53. Circle the one that best describes how working in this setting was related to your abuse of drugs/alcohol:
- 1 it did not affect my abuse of drugs/alcohol
 - 2 it was related to my starting to abuse drugs/alcohol (elaborate) _____
 - _____
 - 3 I already abused drugs and sought out this setting for easier access
 - 4 other (specify) _____
 - _____
54. What do you consider to be the primary cause of the start of your dependency problem? Circle only one:
- 1 I took drugs/alcohol at a young age and didn't understand the danger
 - 2 I took drugs/alcohol to help me sleep when working different shifts
 - 3 I took drugs/alcohol for physical pain
 - 4 I tried drugs/alcohol just to see what it was like
 - 5 I used drugs/alcohol to relax/decrease stress
 - 6 I used drugs/alcohol to help give me energy/reduce fatigue
 - 7 I used drugs/alcohol for emotional pain (eg. depression)
 - 8 I used drugs recreationally: for fun/socializing with friends
 - 9 other (explain) _____
55. Do you believe that the stress of nursing may have had any bearing on your abuse of alcohol/drugs?
- 1 yes
 - 2 no
56. If yes, what was your career stage at that time?
- 1 a nursing student
 - 2 in my first nursing job
 - 3 in a later nursing job
57. What was your age when you first began abusing alcohol/drugs
- _____ years of age
58. Did you use drugs (other than alcohol) recreationally (for fun/socializing) prior to nursing school?
- 1 yes
 - 2 no
- During nursing school?
- 1 yes
 - 2 no
59. What chemicals have you abused? Circle all that apply:
- 1 alcohol
 - 2 narcotics
 - 3 sedatives/hypnotics
 - 4 tranquilizers
 - 5 stimulants
 - 6 anaesthetic gases
 - 7 cannabis drugs
 - 8 cocaine
 - 9 others (specify) _____
60. Which of the above was your chemical of choice or most preferred? _____

61. Which of the methods of self-administering chemicals did you use? Circle all that apply:

- 1 oral
- 2 I.M.
- 3 I.V.

- 4 smoke
- 5 inhalation
- 6 other (specify) _____

62. If you abused prescription drugs, where/how did you obtain them? Circle all that apply:

- 1 took from worksite
- 2 asked a physician for Rx
- 3 illegal prescription

- 4 relatives or friends
- 5 feigned illness in order to obtain
- 6 street scene
- 7 other (specify) _____

63. Approximately how long were you abusing chemicals before obtaining help _____

64. Did your drinking or drug abuse interfere with any marital relationships?

- 1 yes
- 2 no

If yes, please elaborate: _____

65. What caused you to obtain help with your chemical dependency problem? Circle all that apply:

- 1 urging by employer to get help
- 2 threatened with loss of job
- 3 spouse/significant other threatened to leave
- 4 friends/colleagues confronted me
- 5 overdose or suicide attempt put me into medical system
- 6 chose to get help on my own
- 7 deteriorating physical/emotional health
- 8 other (specify) _____

66. Did you seek help for emotional problems prior to realizing you had an alcohol/drug problem?

- 1 yes
- 2 no

67. If yes, please explain briefly what happened: _____

Recovery

68. Are you presently free of all mood-altering chemicals?

1 yes

2 no

If yes, how long have you been free? _____

69. Have you ever recieved professional treatment for chemical dependency?

1 yes

2 no

If yes, how many times? _____

70. If yes, what type of treatment? Circle all that apply:

1 in patient

4 private therapy/counselling

2 residential/half-way

5 other (specify) _____

3 outpatient

71. Which of the following recovery group (s) have you participated in? Circle all that apply:

1 A.A.

4 family involvement in Al Anon, Al Ateen

2 Narcotics Anonymous

5 Adult Childern of Alcoholics

3 Nurses Support Group

6 other (Specify) _____

72. Would you say your participation in the above group (s) has been:

1 regular

2 infrequent

73. Have you relapsed since you began your initial recovery?

1 yes

2 no

If yes, how many times? ____

74. If yes, please briefly describe the circumstances/precipitating event surrounding any relapse(s) and the length of the relapse :

75. While in your nursing education program(s) were you taught about the disease process of alcoholism/addiction?

1 yes

2 no

76. Was the above content covered adequately?

1 yes

2 no (elaborate) _____

77. What one piece of advice would you give to a nursing colleague who has a problem with chemicals? _____

78. What one thing would you like to share with colleagues regarding chemical dependency in the nursing profession? _____

79. How well do you think the needs of chemically dependent nurses are being met by the existing services in Manitoba?

1 not well met 2 somewhat met 3 very well met

80. What else is needed? _____

81. Were you ever referred or self-referred to Nurses at Risk?

 1 yes 2 no

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This study would not have been possible without your help. A stamped envelope has been provided for you to mail this questionnaire back to me.

Thank you

APPENDIX B

Sullivan Survey of Chemical Dependency in Nursing (Original)

1. Your sex? 1) ☐ male 2) ☐ female
2. Your age?
1) ☐ under 21 2) ☐ 22 to 25 3) ☐ 26 to 30 4) ☐ 31 to 35
5) ☐ 36 to 40 6) ☐ 41 to 45 7) ☐ 46 to 50 8) ☐ over 50
3. What was your first nursing degree?
1) ☐ diploma 2) ☐ associate 3) ☐ baccalaureate 4) ☐ master's
4. When did you receive your first nursing degree?
1) ☐ 1960 or before 2) ☐ 1961-65 3) ☐ 1966-70 4) ☐ 1971-75 5) ☐ 1976-80 6) ☐ 1981-83
5. If you can recall, what was your approximate grade average in your first nursing program?
1) ☐ between 3.5 and 4.0 (A- to A)
2) ☐ between 3.0 and 3.49 (B to B+)
3) ☐ between 2.5 and 2.99 (C+ to B-)
4) ☐ between 2.0 and 2.49 (C- to C)
5) ☐ below 2.0
6. What is your highest educational preparation?
1) ☐ diploma
2) ☐ associate degree
3) ☐ baccalaureate degree in nursing
4) ☐ baccalaureate in other discipline
5) ☐ master's in nursing
6) ☐ master's in other discipline
7) ☐ doctorate in nursing or other discipline
7. If you can recall, what was your approximate grade average from all college work you have taken, including nursing?
1) ☐ between 3.5 and 4.0 (A- to A)
2) ☐ between 3.0 and 3.49 (B to B+)
3) ☐ between 2.5 and 2.99 (C+ to B-)
4) ☐ between 2.0 and 2.49 (C- to C)
5) ☐ below 2.0
8. If you can recall, what was your approximate class standing in your first nursing program?
1) ☐ upper 10% 2) ☐ upper 25% 3) ☐ upper 50% 4) ☐ lower 50%
9. Have you ever received any academic awards in any school attended (including high school, nursing school, and college), such as honorary society, honors grades, scholarship based on academic performance, etc.?
1) ☐ yes 2) ☐ no

- 1) ☐ never 2) ☐ less than 1 year 3) ☐ 2 to 5 years
 4) ☐ 6 to 10 years 5) ☐ 11 to 20 years 6) ☐ more than 20 years

12. Are you employed in nursing at the present time? 1) ☐ yes 2) ☐ no
 13. If yes, are you employed full or part time? 1) ☐ full time 2) ☐ part time
 14. Please complete an employment history for the past 5 years.

Dates (yrs)	Full or Part Time	Type of institution/agency (i.e., hospital nursing home, temporary agency, etc.)	Job Title(s) (list all jobs at that place of employment)	Length of employment	Reason for leaving
----------------	----------------------	--	--	-------------------------	--------------------------

15. For all periods of time in the last 5 years not employed, please give reason (for example, school, health, pregnancy):
 Date: Reason:

Please answer the following questions regarding your medical history:

16. Have you been hospitalized (other than for alcohol/drug treatment) or been seen in an emergency room or outpatient facility within the past 5 years? 1) ☐ yes 2) ☐ no
 Please explain each incident as follows:
- | Date (mo./yr.) | Chief Complaint | Diagnosis | Cause (if trauma) | Length of stay | Present status
of condition |
|----------------|-----------------|-----------|-------------------|----------------|--------------------------------|
|----------------|-----------------|-----------|-------------------|----------------|--------------------------------|

17. Have you been seen by a physician for reasons other than routine examinations during the past 5 years? 1) ☐ yes 2) ☐ no Please explain as follows:

Date of first visit (mo./yr.)	Chief Complaint	Diagnosis	Cause (if trauma)	Length of stay	Present status of condition
----------------------------------	-----------------	-----------	-------------------	----------------	--------------------------------

Please answer the following questions regarding your family history:

19. Are both your parents alive?

1) ☐ yes 2) ☐ no

20. If no, did either die from:

alcohol abuse 1) ☐ yes 2) ☐ no drug abuse 1) ☐ yes 2) ☐ no suicide 1) ☐ yes 2) ☐

21. In your personal opinion, is there anyone in your family who over imbibes or is taking excessive amounts of tranquilizers, pain medications, etc.? 1) ☐ yes 2) ☐ no

22. If yes, who? (Check all that apply)

1) ☐ father 2) ☐ mother 3) ☐ brother, sister 4) ☐ grandparent 5) ☐ aunt, uncle, cousin
6) ☐ spouse 7) ☐ child 8) ☐ other. Explain: _____

23. Has anyone in your family suffered from or been treated for depression?

1) ☐ yes 2) ☐ no

24. If yes, who? (Check all that apply)

1) ☐ father 2) ☐ mother 3) ☐ brother, sister 4) ☐ grandparent 5) ☐ aunt, uncle, cousin
6) ☐ spouse 7) ☐ child 8) ☐ other. Explain: _____

25. Have you ever suffered from or been treated for depression?

1) ☐ yes 2) ☐ no

26. Did you live with both parents during the majority of your childhood?

1) ☐ yes 2) ☐ no

27. Do you live with either or both parents now?

1) ☐ yes 2) ☐ no

28. What is your sibling rank? _____

29. Were there any family problems during your childhood that caused you to assume parental roles early in life?

1) ☐ yes 2) ☐ no

30. If yes, please explain the problem and your role:

31. Do you feel there have been one or more events in your life which were particularly stressful to your sexual identity:

1) ☐ yes 2) ☐ no

- 2) ☐ incest age ☐
3) ☐ awareness of homosexual preference age ☐
4) ☐ miscarriage(s) age ☐
5) ☐ abortion(s) age ☐
6) ☐ pregnant out-of-wedlock age ☐
7) ☐ sexual dysfunction age ☐

Briefly identify nature of such: _____

- 8) ☐ illness or surgery which affected body image or life goals age ☐
Briefly identify nature of such: _____

33. How was drinking regarded in your family?

- 1) ☐ moderate drinking on social occasions 2) ☐ heavy drinking and drunkenness was commonplace
3) ☐ no drinking was allowed

34. How would you describe your family's socioeconomic status?

- 1) ☐ lower class 2) ☐ lower middle class 3) ☐ middle class 4) ☐ upper middle class
5) ☐ upper class

35. As a child, what was your area of residence?

- 1) ☐ rural 2) ☐ urban 3) ☐ suburban

36. Were your father or mother college graduates?

- 1) ☐ father was 2) ☐ mother was 3) ☐ both were 4) ☐ neither were

37. What was/is your father's occupation? _____

38. What was/is your mother's occupation? _____

Please answer the following questions regarding your present family:

39. How would you describe your present socioeconomic status?

- 1) ☐ lower class 2) ☐ lower middle class 3) ☐ middle class 4) ☐ upper middle class
5) ☐ upper class

40. What is your current area of residence?

- 1) ☐ rural 2) ☐ urban 3) ☐ suburban

41. Are you married or living with someone as if you were married at the present time?

- 1) ☐ yes 2) ☐ no

42. If no, are you:

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

1) ☐ yes 2) ☐ no

44. If yes, how many times each?

1) widowed ☐ 2) divorced ☐ 3) separated ☐

45. If you are married or living with someone, how long have you been so?

1) ☐ less than 6 months 2) ☐ 7 to 12 months 3) ☐ 1 to 5 years

4) ☐ 6 to 10 years 5) ☐ more than 10 years

46. If you are married/living with someone, is he/she an alcoholic or chemical dependent?

1) ☐ yes 2) ☐ no

47. If yes, is he/she:

1) ☐ recovering 2) ☐ actively using alcohol or drugs

48. Are you pregnant or suspect pregnancy at this time?

1) ☐ yes 2) ☐ no

49. Do you have children?

1) ☐ yes 2) ☐ no

50. If yes, please answer the following questions:

How many children do you have? What are their ages?

Do any or all of your children live with you at the present time? 1) ☐ yes 2) ☐ no

51. If any or all of your children do not live with you, why not? (Check all that apply)

1) ☐ they are grown

2) ☐ they are in college

3) ☐ I do not have custody

4) ☐ they live with their father, grandparents, or other relatives

5) ☐ they live with friends

6) ☐ I don't know where they are

52. How would you describe the stress level for people in the nursing profession?
1) ☐ extremely stressful 2) ☐ fairly stressful 3) ☐ average stress levels 4) ☐ low stress
53. Would you rank the stressful aspects of nursing in order of their importance?
(1 is the highest stress producer and 6, the lowest)
1) ☐ excessive workload
2) ☐ dealing with illness and death
3) ☐ relationships with supervisors and physicians
4) ☐ rotating shifts
5) ☐ rotating assignments/units
6) ☐ other. Explain: _____
54. Which of the following statements most closely describes your opinion of nursing? (Check only one)
1) ☐ nursing is a matter of adaptation and coping
2) ☐ nursing compares with other professions, such as teaching or social work
3) ☐ most nurses can survive if they balance their lives with outside interests
4) ☐ I am not surprised that so many nurses "burn out"
55. In your nursing jobs, have you worked the majority of the time?
1) ☐ day shift 2) ☐ evening shift 3) ☐ night shift 4) ☐ rotating shifts
56. In your nursing jobs, what days of the week have you worked the majority of the time?
1) ☐ weekdays 2) ☐ weekdays, some weekends 3) ☐ mostly weekends
57. Do you consider that you are or ever have been addicted to alcohol or drugs?
1) ☐ yes 2) ☐ no

If yes, please answer the following questions:

58. What is the current status of your nursing license?
1) ☐ full status 2) ☐ pending investigation or hearing 3) ☐ revoked
4) ☐ suspended 5) ☐ probation 6) ☐ other
59. Has your nursing license ever been:
1) ☐ suspended 2) ☐ revoked 3) ☐ probated 4) ☐ none of the above
60. Has your drinking and/or drug use ever interfered with your job?
1) ☐ yes 2) ☐ no 3) ☐ don't know 4) ☐ not employed at the time

- 1) ☐ absenteeism/tardiness
- 2) ☐ irritability
- 3) ☐ preoccupation with drugs/alcohol
- 4) ☐ poor relationship with co-workers and/or supervisors
- 5) ☐ reduced attentiveness to job and/or patients' conditions, responses or complaints
- 6) ☐ others complained about my work and/or attendance
- 7) ☐ utilized patient medication for own use
- 8) ☐ omissions and/or acts which could constitute negligence
- 9) ☐ other. Explain: _____

62. Did you ever lose a job or were you ever threatened with loss of a job due to your alcohol or drug use?
1) ☐ yes 2) ☐ no

63. Have you ever received professional treatment for alcoholism or drug dependency?
1) ☐ yes 2) ☐ no

64. If yes, what type of treatment? (Check all that apply)
1) ☐ inpatient 2) ☐ outpatient 3) ☐ therapist or counselor 4) ☐ other.
Explain: _____

65. If you have received treatment for alcoholism or drug dependency, how many times?
1) ☐ once 2) ☐ separate treatments (or treatment series) 3) ☐ 3 or more treatments (or treatment series)

66. Do you attend meetings of Alcoholics Anonymous or Narcotics Anonymous?
1) ☐ at least 4 times a week
2) ☐ 2 to 3 times a week
3) ☐ once a week
4) ☐ 2 to 4 times a month
5) ☐ about once a month
6) ☐ several times a year
7) ☐ in the past but not know
8) ☐ never attended

67. Have you ever been or are you a member in any group that aids recovery from drugs or alcohol abuse?
1) ☐ yes 2) ☐ no

68. If yes, what is it? _____

69. Do any members of your family attend Al Anon family groups (Al Anon, Alateen)?
1) ☐ yes 2) ☐ no

1) ☐ yes 2) ☐ no Explain:

1. Has your drinking or drug use interfered with your relationship with your child/children or with your ability to care for your child/children?

1) ☐ yes 2) ☐ no Explain:

2. What drugs did you take excessively? (Check all that apply)

1) ☐ alcohol 2) ☐ narcotics 3) ☐ barbiturates 4) ☐ tranquilizers
5) ☐ amphetamines 6) ☐ marijuana 7) ☐ cocaine 8) ☐ other drugs

3. How long have you been free of all mood-altering chemicals? _____

4. Have you relapsed since you began recovery?

1) ☐ yes 2) ☐ no

5. If yes, how many times? _____

6. What caused you to seek help with your problem with alcohol or drug use? (Check all that apply)

1) ☐ threatened loss of job
2) ☐ family and/or spouse threatened to leave
3) ☐ overdose or suicide attempt put me in the hospital/physician's care
4) ☐ chose to get help on my own
5) ☐ friend confronted me
6) ☐ deteriorating physical health
7) ☐ other. Explain: _____

7. What do you consider to be the primary cause of the start of your dependency problem? (check only one)

1) ☐ I started drinking at a young age
2) ☐ I took sleeping pills to help me sleep when working rotating shifts
3) ☐ I took narcotics for physical pain
4) ☐ I tried drugs to see what it was like
5) ☐ I tried alcohol/drugs with a friend(s)
6) ☐ I used alcohol/drugs to relax
7) ☐ other. Explain: _____

8. Do you believe that the stress of nursing may have any bearing on your overuse of drugs and/or alcohol?

1) ☐ yes 2) ☐ no

9. If yes, were you:

1) ☐ a nursing student 2) ☐ on first nursing job 3) ☐ on later nursing job

- 2) ☐ asked physician for prescription
 - 3) ☐ forged prescription
 - 4) ☐ got them from friend or relative
 - 5) ☐ other. Explain: _____
-

81. Did you take "street drugs"?

- 1) ☐ yes 2) ☐ no

82. Did you seek help for emotional or psychological problems prior to learning you had an alcohol/drug problem?

- 1) ☐ yes 2) ☐ no

83. If yes, explain briefly what happened. (Include all incidents in which you sought help.)

84. What advice would you give to a friend who had a drug/drinking problem?

85. What would you like to tell your nursing colleagues regarding drug dependency?

APPENDIX C

Cover Letter From Investigator

CONFIDENTIAL

October, 1989

Dear Colleague.

It is unfortunate that this letter cannot be more personal. but because of my commitment to preserving your anonymity as a nurse associated with Nurses At Risk. I do not know your name. I am a graduate nursing student at the University of Manitoba. and for my thesis I am doing a study to investigate common characteristics and risk factors associated with recovering chemically dependent Manitoba nurses. If you are an R.N. or R.P.N. and you consider yourself to be chemically dependent and now in recovery for at least 6 months. were referred through NAR since 1986 and received some type of treatment. you are eligible for this study. I would appreciate your help with this by completing the enclosed questionnaire.

I have chosen to study this topic because there is a serious lack of Canadian information on chemical dependency in the nursing profession. Although the study will not benefit you directly, the information you contribute to this survey will help provide other Manitoba nurses with some insight into this illness as it relates to our profession in this province. Thus far. this questionnaire has only been used for American studies of recovering nurses. It is therefore my hope that you will help by taking 35 minutes to circle or write in what best reflects your experience and return the form in the enclosed stamped envelope. I am aware that some of the questions are sensitive in nature, but they are important to the purpose of the study.

I assure you that the information you provide on this form is anonymous and it will remain confidential. Your name and address is not requested and there are no codes. In fact. to ensure anonymity, I do not have access to Nurses At Risk names. Therefore. those who received this package by mail had it hand-addressed by the Chair of NAR.

Your completion and return of the questionnaire will imply your consent for your data to be included in the research and possible publication. It will be impossible to attribute the responses to any one nurse. as the data will be grouped. Participation in this survey is voluntary and you may choose not to participate.

Because it is not possible to thank-you personally, here is a book mark for caring enough to help with this important study. If you have questions about this study, please feel free to call me at : (H), identifying yourself only as "a nurse".

Sincerely,

Veryl Tipliski. R.N.. R.P.N.. B.N.

P.S. If you wish a summary of the overall results. please forward a written request to the Chair of the Nurses At Risk Committee.

APPENDIX D

Cover Letter From Nurses at Risk

CONFIDENTIAL

Nurses At Risk
c/o 647 Broadway Ave.
Winnipeg, Manitoba
R3C 0X2
October, 1989

Dear Nurse,

I wish to inform you of the contents of this package. We have received a request from Veryl Tipliski, a graduate nursing student at the University of Manitoba, to conduct a survey of recovering nurses in Manitoba. This is an independent study, and therefore, whether you chose to participate or not, your relationship with Nurses At Risk will not be affected.

I would also like to emphasize that Ms. Tipliski does not have access to Nurses At Risk names. Confidentiality has been maintained. Thus, to those of you who received this package by mail, I addressed and mailed them myself.

I believe that the results of this study will give us some valuable information about the problem in Manitoba.

Sincerely,

Sandi Mitchell,
Chair

APPENDIX E

Reminder Letter From Nurses at Risk

CONFIDENTIAL

Nurses at Risk
c/o 647 Broadway Ave.
Winnipeg, Manitoba
R3C 0X2
November, 1989

Hello again,

You will recall having received a questionnaire regarding recovering nurses. Your input will improve the value of the findings. If you have not already done so, it would be appreciated if you could mail your questionnaire back to the investigator. Thanks once more for your help.

Sincerely,

Sandi Mitchell, Chair, for
Veryl Tipliski

APPENDIX F

Thank-You Bookmark

APPENDIX F

Sample of thank-you bookmark included with each questionnaire



Note: This design was chosen as teddy bears are symbols of caring (Bialosky, 1980). The bookmark is thanking the nurses for caring enough to help with the study.

APPENDIX G

Permission Letter #1 From Dr. E. Sullivan

APPENDIX

The University of Kansas Medical Center

Office of the Dean
School of Nursing

September 20, 1988

Veryl Tipliski, RN, RPN, BN
Instructor of Nursing
Room C615
Red River Community College
2055 Notre Dame Avenue
Winnipeg, Manitoba
Canada R3H 0J9

Dear Ms. Tipliski:

I am sorry to have taken so long to respond to your letter of August 8, and then to have received your letter of August 24. I recently moved from the University of Minnesota to the University of Kansas. I also have assumed the position of Dean of the School of Nursing, which has been exceedingly challenging. So, my research work has been put on hold, temporarily.

I am so pleased that you are interested in this topic. It is understudied in the U.S. and, as you state, nonexistent in Canada. I think it would be exciting to see the first study in Canada.

My first question is regarding an appropriate advisor for you there. Where are you getting your degree and is there a person familiar with alcohol and drug research there? You need at least one person on your committee who knows this work even if it's not in nursing.

Next, let me catch you up on where my work is to date. I have moved from surveys to interviews. Survey data is useful to identify broad issues for more intensive investigation and allows you to get more information. Both are needed and useful given the purpose of the research. If you have nurses in the peer assistance program and if you can get access to those subjects (and protect them adequately with anonymity), I would suggest interviews. As a master's thesis, I would recommend that you stick with the impaired nurse sample. Again, this depends on the purpose.

Your interviews (or surveys) should be structured carefully, delineating the variables that you want to study. Stress may be a component. I wouldn't rule it out and I am still working with it. I currently am using Kaplan's model of the interactive effect of social support, stress, and self-concept. I don't know yet if it will hold true or not. I have articles coming out in the Journal of Interpersonal Violence and in the International Journal of Addictions. The latter will be more useful; the former is on the sexual problems and trauma of impaired nurses and elaborates the study you have. I

have enclosed a list of references that could be useful to you. The tools I am currently using are referenced there as well. LaGodna and Sabritt are at the University of Kentucky, College of Nursing, CON/HSLC 418, Lexington, KY 40536-0232.

I also have published a book on the topic called, Chemical Dependency in Nursing: The Deadly Diversion. It is available from Addison-Wesley Publishing Company, 390 Bridge Parkway, Redwood City, CA 94065. It is not research, per se, but I think you will find it helpful. I also have enclosed a copyrighted copy of my survey. You have my permission to use it provided you credit my authorship.

I wish you luck with your project. Please keep me informed of your progress and let me know if I can help, although my time is very limited right now. Keep in touch.

Sincerely,

Eleanor J. Sullivan, PhD, RN
Dean

Enc.
EJS/sf

APPENDIX H

Permission Letter #2 From Dr. E. Sullivan

APPENDIX

The University of Kansas Medical Center

Office of the Dean
School of Nursing

July 7, 1989

Veryl Tipliski, RN, RPN, BN

Dear Ms. Tipliski:

I was pleased to see that your study is progressing and that my information has been helpful to you. I will try to answer some of your questions.

First, you ask about my questionnaire. As a descriptive survey instrument it was not appropriate for me to do reliability testing. It was meant as an instrument to be used to simply gather the descriptive data we need to develop instruments in the future that would be more precise. This is especially true since most of the information is patient history type of data. We were not testing any specific variable. And, yes, we certainly did do our data analysis on the computer.

In this particular study, we asked that subjects be in recovery for one year. That is because we were attempting to determine some experiences of a person in early recovery. It certainly is not necessary to require any period of recovery because most of the historical data will have occurred before recovery begins. I think an advantage that you have and, also what I am hoping to do myself, is that you will want to follow subjects over a period of time. The historical data will, of course, not change but the experiences during the recovery period would be very valuable to learn. I think you could take someone who is in full treatment and collect at least part of the data, particularly the historical part.

Regarding your sample, I suggest that your present population is probably appropriate especially for a master's thesis. You may be interested in something far more comprehensive if you pursue doctoral study and expand your work in that way. If you use both the peer assistance program nurses and AA/NA you will substantially change your sample selection and, thus, the interpretation of the results. At this point in the study of impaired nurses, I think it is more important to have a more homogenous sample population.

I certainly do appreciate the confidentiality issue that your peer assistance committee is raising with you. I do believe that if they distribute the questionnaires and there is no way for you to know their names, I see no reason why that would be a problem. It is not only confidential, it is completely anonymous. The only thing I can suggest is that you or someone on the committee write the cover letter (or have it go out over their signature) assuring them that no researcher had access to their names and they are mailing it out themselves. I think you certainly could use the snowballing technique. It is not a matter of ethics so much as a matter of skewing your sample selection. However, it is how I have gotten subjects for studies so far and the

rationale is simply that these are very vulnerable subjects both personally and professionally and that unusual methods must be used to acquire them. The same is true of people doing AIDS research today. I do understand that people would not want you to interview subjects; however, in my experience subjects have been very willing to participate and, in fact, the interviews have almost seemed therapeutic. It seems to be very helpful for them to have "told their story" to someone so that they hope it will be helpful to others. I think your work will be much easier if you work with mail surveys in any case.

I think there is no problem if you add questions. You can simply state that in your report once you add it. It is an interesting question about eating disorders. My questionnaire was woefully inadequate in determining clinical areas of practice. Furthermore, I had so many subjects that I have never been able to tease that out adequately. The other problem I found was that people had jumped around from so many areas by the time they went into treatment that there was not a clear pattern of clinical practice. I have had just as much difficulty in subsequent work. The only thing you might ask was what area were they working in immediately preceding treatment but again they may have deteriorated and moved. You could maybe look at what clinical area they are in now once they began recovery or maybe the last and first job out of recovery. I do not know. I certainly could not get anything useful out of the information but you certainly can try again.

I agree that you should ask if they were abusing recreational drugs prior to entering nursing school. Our next study, that I mention to you would be in the International Journal of Addictions, has not yet been published (no wonder you have not been able to find it). In that we ask when they first used the drug of choice. Unfortunately, we did not ask if it was therapeutic or recreational use. That is kind of tricky because nurses have often taken therapeutic drugs for recreational use but if you can figure out a way to ask that question, it would not hurt to put it in.

I would not worry about the number of subjects. I agree that if you have twenty-five subjects, you will have plenty to work from on this particular study for your thesis and it would be very interesting to compare Canadian and American results.

Thank you so much for the nice compliment on our book. I am so pleased when I hear that it is useful. I certainly would love to meet you some time and I would be honored to autograph your copy. There is a conference on nursing impairment coming up in Chicago, December 9th and 10th, presented by the National Nurses Society on Addiction and it follows their annual meeting. I will be presenting the closing keynote and talking about the future. I am sure there will be plenty of other good speakers.

You sound like a very interested and committed person. I will definitely look forward to meeting you and am so pleased that you are pursuing this study.

Sincerely,

Eleanor J. Sullivan, R.N., Ph.D.
Dean and Professor

EJS:jss

APPENDIX I

Letter From Dr. J. Donovan



November 9, 1988

Ms. Veryl Tipliski, RN
Red River Community College
2055 Notre Dam Avenue
Winnipeg, Manitoba
Canada R3H0J9

Dear Ms. Tipliski,

Many apologies for not having answered your interesting note sooner. I agree with you that personality or stress theories do not capture the alcoholism question.

It is appropriate to use my model in your research. It is very important to include questions about any kind of substance abuse or learning disability in the blood relatives of your subjects. The model can probably be used for other types of chemical dependence. Yes you can call it Donovan's model. The difference between my model and Vaillant's is that he dismisses personality variables entirely which I do not. I have done some further writing on this but I don't have anything which I can send to you at this point.

I would love to see your questionnaire and some of your results and hope that you'll share them with me.

Sincerely yours,

James M. Donovan, Ph.D