MANAGERIAL WOMEN: SUBSTANCE USE, STRESS, SUPPORT SYSTEMS, AND INSTRUMENTALITY

by

RACHEL MARGUERITE CORMIER

B.A., Simon Fraser University, 1986

Ll.B., University of British Columbia, 1973

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Department of Counselling Psychology

The University of British Columbia
Vancouver, Canada

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ABSTRACT

This study is concerned with variables that might influence substance use by women in non-traditional managerial occupations; a group at risk as a consequence of stressful and isolated work circumstances. The study examined the relationship between substance use and stress (daily hassles), perceived social support and work support, family history of alcohol abuse, friends' drinking behaviour and sex-role style.

The Substance Use and Significant Others Scale was developed to measure use of alcohol, prescription drugs, illegal drugs, nicotine, and food, as well as the alcohol-using history of the family of origin and the drinking behaviour of current friends. The validity of this instrument was supported through a pilot study involving 113 male clients and 61 female clients from a drug and alcohol out-patient counselling centre and from the Aurora Treatment Centre, and 59 female managers from non-traditional occupations. A one-way multivariate analysis of variance with the five substances, family history of alcohol use and friends' drinking behaviour as dependent measures indicated a significant multivariate group effect. Post hoc analysis, using Scheffé's tests, comparing managers and female drug and alcohol clients, indicated significant group differences for the measures of alcohol, smoking, prescription drugs, illegal drugs, and family background of alcohol abuse. Comparison of the managers group with male drug and alcohol clients indicated group differences for the five substances, the family history, and for current friends' drinking behaviour. Internal consistency analysis in the pilot study led to the removal of the item on eating in the calculations of substance use.

Participants for the study were volunteers involved in a longitudinal study

on stress and coping. Eighty women from managerial non-traditionnal occupations in the Greater Vancouver area completed two questionnaire packets containing several instruments. Those of interest to this study were the Hassles Scale, the Social Support Scale, the Work Relationship Index, the Bem Sex Role Inventory and the new Substance Use and Significant Others Scale. Data on sex-role style and social support were collected one month prior to data on daily hassles, work support, substance use and significant others. A stepwise multiple regression analysis was conducted with substance use as the criterion variable. The regression equation reached signifance, $\underline{F}(3,76) = 6.84$, $\underline{p}<.01$, and accounted for 21% of the variance in substance use. Family history of alcohol abuse, hassles, and friends' drinking behaviour were positively related to substance use. Implications for further research and for counselling are discussed. The findings contribute to the knowledge about the relationship between daily stress, social and work support, family and friends' drinking behaviour, sex-role style, and substance use in managerial women.

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DEDICATION

To all women who are breaking new ground in their personal and professional lives, and particularly to those dealing with the challenges of addiction.

INTRODUCTION

The presence of women at the managerial level is a relatively recent employment phenomenon. This emerging role for women creates new challenges and complications for them and for their male peers (Henning & Jardim, 1977; Johnson, 1982). On a daily basis, women at this level face circumstances for which they have few role models and fewer guidelines. In areas of non-traditional female employment, they are in essence pioneers. Several authors have made reference to the special problems and pressures faced by managerial women which are unique to their circumstances (Davidson & Cooper, 1986; Henning & Jardim, 1979; Rayburn, 1986). These include the stress associated with the role of the "token woman", the lack of role models, and the sense of isolation. Davidson and Cooper (1986) found that women in management, in comparison to male managers, experienced higher levels of pressure and manifested more reaction because of the combination of stressors in the work, home/social, and individual arenas. Managerial women often do not have a peer network to facilitate understanding of the role norms at this level of employment and thus tend to be isolated (Nieva & Gutek, 1981).

The personal isolation, combined with pressures arising from the position itself and from a combination of roles, may be associated with a reliance on substances as a way of dealing with, or escaping from, levels of stress for which female managers may lack adequate coping resources. In her study of male and female alcoholics, women experiencing psychiatric and emotional problems, and a female control group, Beckman (1978) concluded that the special stress and conflicts faced by women in managerial positions may place them at risk for alcoholism. Johnson (1982) found that employment for women seemed to

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be related to heavier drinking and drinking problems and that the relationship between being employed and excessive alcohol use is even stronger for women at middle and higher socio-economic status levels than it is for those at lower levels. Johnson also found that non-traditionally employed women who drink tend to be heavier drinkers and are considerably more likely to be problem drinkers. These higher rates could also be due to attempted conformity to a new and different set of peer drinking norms. Through entering male-dominated areas, women will be pressured to conform to the behavioural codes of male co-workers, resulting in an increase in alcohol consumption (Fraser, 1981; Johnson, 1982).

Studies of the use and abuse of substances have frequently examined alcohol use, drug addiction, or the abuse of nicotine or food separately with much of the research to date focusing on alcohol and illegal drugs. In recent years there has been an increased interest in examining the dynamics that are common to a variety of compulsive behaviours (Filstead, Parrella, & Ebbitt, 1988; Levison, Gerstein, & Maloff, 1983; Marlatt & Gordon, 1985; Sinnett, Judd, & Olson, 1983; Zweben, 1987). For example, binge eating or eating disorders have been linked to alcoholism and substance abuse (Eckert, Solomon, Goldberg, & Halmi, 1979; Hatsukami, Owen, Pyle, & Mitchell, 1982; Pyle, Mitchell, & Eckert, 1981). Carroll, Malloy, Roscioli, Pindjak, and Clifford (1982) found drug dependents, alcoholics, and dual abusers to display similar psychological profiles on the Tennessee Self Concept Scale (Fitts, 1965).

The social learning model of addiction (Peele, 1985) postulates that the individual choice of a particular substance is an artificial distinction created largely by its social acceptability or unacceptability. Differing patterns of substance use may reflect socially acceptable or common gender behaviours.

Alcohol, for example, plays a larger part in common male activities, while prescription use results from the more frequent reliance on doctors by women (Biener, 1987). There is also considerable evidence that women, more than men, are affected by the substance-using behaviour of friends and of the family of origin (Beckman, 1976; Binion, 1982; Chetwynd & Pearson, 1983; Fraser, 1973).

As addicted women have been found to be multi-substance dependent (Beckman, 1976; Celentano & McQueen, 1984; Chetwynd & Pearson, 1983; Sandmaier, 1980), this study will examine the relationship of several substances (i.e., alcohol, prescription drugs, illegal drugs, nicotine, and food) treated as a single concept of substance use, with several relevant personality traits and environmental circumstances of managerial women.

Research has validated the role that social support plays in buffering the individual from the effects of stress (Billings & Moos, 1982; Holahan & Moos, 1981; Holubowycz, 1983; Husaini, Neff, Newbrough, & Moore, 1982). Theorists from a wide variety of fields have suggested the importance of social support for individual well being (Caplan, 1979; DeLongis, 1984; Erickson, 1975; Schilit, 1984). There is also considerable evidence of the special importance of social networks and social support in the lives of women (DeLongis, 1984; Schilit, 1984). Sex-role style, as it may affect the appraisal of what is stressful and what coping choices are made, is another relevant factor in an examination of the stressors and coping strategies.

Research on addiction and women has frequently been conducted on groups in treatment centres (Beckman, 1976; Hornik, 1977). This study examined whether high stress and the lack of social and work support is associated with greater substance use, prior to the substance use reaching levels where treatment

is required. In addition, the relationship between substance use and family history of alcohol abuse, friends' drinking behaviour, and sex-role style were examined. Should a relationship be found among substance use, social isolation and stress, future direction for addiction prevention and treatment for women might more profitably be directed at social networking, interpersonal skills and stress management.

LITERATURE REVIEW

This study is concerned with variables which might influence substance use by women in non-traditional managerial occupations; a group at risk as a consequence of stressful and isolated work circumstances. Many of the social and economic characteristics of women employed in non-traditional areas differ from their male peers and from women employed in other, more traditional, occupations. Compared to other employed women, they tend to have achieved higher levels of education, to have higher employment rates and greater income (Marshall, 1987). Yet their income is considerably below that of men in their same fields. Average earnings of women, in 1980, were approximately 77% of men with similar experience and employed at similar levels (Marshall, 1987). Yet, managerial level women face work-related stresses to which they are no more immune than men have been (Hornik, 1977).

Although there is a new level of freedom to pursue personal choices, there continues to be confusion and turbulence as women make a variety of tentative role commitments in order to arrive at a satisfying role blend (Henning & Jardim, 1977). Women choosing a time consuming and demanding career path may experience stress resulting from the traditional view of women. Traditionally, women were viewed primarily as homemakers, or involved in occupations that emphasize expression of nurturing and supportive tendencies (Long, 1989).

While women, more than men, may rely on the presence and support of significant others (DeLongis, 1984; Schilit, 1984), for many the decision to pursue a career has meant limited marital and parental options (Marshall, 1987). Women in non-traditional occupations are more likely than other women to have never married or, if married, to have had fewer or no children (Marshall, 1987).

Women committed to family life or to parenthood must balance family demands and responsibilities with those of employment in a way that has rarely been expected of men (Henning & Jardim, 1977). There is also more role discontinuity for women than for men as they adjust their role structure to their changing needs (Frieze, Parsons, Johnson, Ruble, & Zellman, 1978; Morrissey, 1986). Gray (1983) found that married professional women today are more committed to their careers than they have been in the past and this requires a balancing of family needs and career demands. "Most often stress in women does not involve the job per se but the interface of their job and family or personal responsibilities, their sense of rejection, isolation, and the need for social networks to affirm them in their non-traditional or non-accepting job situations" (Rayburn, 1986, p. 239). Functioning and advancing in this male-dominated environment appears to be associated with a particular sex-role style and coping strategies which relate to efficiency and success (Jagacinski, 1987; Long, 1989).

The following sections contain the theoretical framework within which this study is conceptualized, with a review of the constructs of interest to this study. Substance use and stress are discussed first with reference to the special kinds of stressors managerial women might experience. Work and social support are explored as resources which may moderate the level of stress experienced. Significant others, in the form of family history of alcohol use and current friends' drinking behaviour, are considered as further dimensions of the background and social environment of these women. Sex-role style is examined for the effect it might have on the appraisal of what is stressful and on choices for coping.

THEORETICAL FRAMEWORK FOR ADDICTION

Many of the studies on addiction have focused on one substance, frequently alcohol or heroin. The circumstances and conditions surrounding that particular drug use were examined with a view, primarily, to understanding how it could be treated (Peele, 1985). As research in addiction grew, increasing discrepancies were observed in the narrowly defined cause-and-effect explanations. There was growing evidence of great variability in levels of addictive behaviour and in the kinds of drugs relied upon by individuals in different situations and life experiences. Queries developed as to why a given personality developed a need for a specific kind of drug, and why others with comparable personalities did not become wedded to the same substances. The case for the association of addiction with certain social groups and particular lifestyles became obvious (Peele, 1985).

The social learning theory of addiction changes the focus of investigation from the individual to the social milieu and in essence says that as society changes its ideas about what constitutes addiction and what is potentially dangerous, the kind of drugs which are "abused" changes. At various times in history, opinions about and the legal status of different addictive substances have varied. Restrictions on certain substances are usually justified on scientific grounds, that is, the inherent harmfulness of the targeted substance. As an example, Peele (1985) makes reference to the extensive and common use of an opiate derivative (laudanum) by women prior to opium being legislated illegal in the early 1900's (Harrison Act, 1914). As the social opinion changed about opium, it became a rarity. It is not the illegality as such that generates a decline in use so much as the general belief about the potential harm. A recent vivid example of a change in social acceptability can be seen in the use of

nicotine. Even five years ago, the current "no smoking" restrictions in many public buildings and airplanes would have been inconceivable. Yet nicotine, with its accompaniment of thousands of chemicals in an ordinary cigarette, remains legal, (in spite of recent restrictions on its use in public places). Similarly extensive alcohol use, also still legal, is more toxic than the heavy (antiseptic) administration of a narcotic, which is illegal (Peele, 1985).

From the social learning theory has emerged a model that regards substance use as an adaptive coping response when an individual fails to achieve levels of self-reliance, competence, social acceptance and self-confidence. These form the basic social expectations of the individual in a particular circumstance (Alexander, 1986). The substance is "adaptive", even where it may exacerbate underlying problems, in the sense that it provides some cushion or protection from what might be overwhelming or unbearable circumstances. People develop a dependence on some substance with the ensuing likelihood of addiction when circumstances in their lives become excessively stressful and they lack alternative resources for dealing with them (Abrams & Niaura, 1987). In this model, addiction has been defined as a situation in which a person disregards health, personal well-being and social propriety in order to continue a behaviour (Alexander, Peele, Hadaway, Morse, Brodsky, & Beyerstein, 1985).

In recent years the social learning theory of addiction has broadened to include substances other than narcotics and has become more accepting of a range of psychological functions (Alexander, 1986; Peele, 1985). Peele, the main proponent of the social learning theory, maintains that unless we measure the range of addictive possibilities (i.e., to different substances as well as to certain behaviours or even to people), we cannot evaluate the extent to which the

person is in fact addicted. Peale states that in this broader approach to addiction and its treatment, it is crucial to consider relationships to other people, to work and to the environment as essential elements in maintaining balance in healthy behaviours.

The social learning theory leads to several possible explanations for the development of addiction in some persons and not in others. Hatsukami et al. (1982) found evidence of a similarity of personality type between groups addicted to different substances. A comparison of 52 bulimic women and 120 women in treatment for drug and alcohol addiction found similar mean MMPI profiles and pre-dominant code-types. The profile revealed individuals who demonstrated social withdrawal and who experienced, among other characteristics, repeated problems with interpersonal relationships. In another study, part of a larger project which examined the presence and severity of psychiatric disorders in bulimics, 35 bulimic women (mean age 30 years) were compared with 35 age-matched healthy controls. Findings showed that alcoholism and drug dependency occurred significantly more frequently in bulimics and in their close relatives than in controls (Bulik, 1987). These findings suggest that addictive propencity is an underlying tendency which can manifest in different forms in the same individual and in families.

Another direction for this theory has been the exploration of the connection between personality traits and the development of different levels of addiction. In a longitudinal case study (over 37 years), 100 individuals were followed from adolescence to adulthood and personality characteristics were charted at each stage of the study. For one report (Jones, 1971), individuals were classified into five amount-frequency categories: problem drinkers, heavy drinkers, moderate

drinkers, light drinkers, and non-drinkers or abstainers. For each category of drinkers, some distinctive personality syndromes were observed to be present in early adolescence and to continue into adulthood. As an example, heavy drinkers were self-assured in an upper middle-class social setting. As adolescents this group had the highest ratings on social skills, poise, expressiveness and interest in the opposite sex.

Another theoretical focus is the exploration of certain high-risk experiences or situations which might precipitate addictive behaviour. This situational approach was the focus of a study of 54 hospitalized individuals who demonstrated alcohol and other drug abuse and binge eating (Filstead et al., 1988). Patients completed a standard battery of psychosocial questionnaires. A 100-question alcohol and drug abuse questionnaire was modified to create an instrument that applied to eating as well. Correlations among the 8 subscale scores were performed for each version of the two addiction tests separately. These indicated acceptable interscale correlations (ranging from .50 to .93 for the drinking/drug use version and from .40 to .88 for the binge eating version) but between-test correlations were significant for only four out of eight subscales on emotional states: negative emotional states, positive emotional states, testing personal control and interpersonal conflict. While these four subscales indicated some similarity in the triggering emotions, a hierarchical analysis revealed different ranking of the four for the different forms of addiction. The same emotional states were involved but their rank of importance as precipitating agents differed for each different form of addiction. Filstead et al. conclude that although the potential risk for engaging in either drinking or drug use or overeating may be similar, the interaction of the substance type and the risk context may determine the salience of the

particular problem behaviour as a situational response.

Along similar lines of exploring high risk circumstances, a study of 32 university students who were registered in a weight control class examined periods of the day when there appears to be a particular difficulty restraining from a destructive habit (Sinnett et al., 1983). They found that most deviations from diet occurred between 7 and 10 p.m. which matched a temporal curve of occasional heroin use by addicts in treatment, their most common time being between 6 and 10 p.m. This later time of the day seemed to be a period when resolve weakened or the need for relief sharpened, indicating a high risk time of day. This temporal frame coincides with the end of the usual workday, a time when employed women might be inclined to relax or reward themselves after a hard day's work.

In summary, while a convincing argument can be entertained for the broad approach of the social learning theory of addiction, there remains considerable ambiguity as to which factors, or which combinations of factors, are relevant. Substances other than narcotics are seen as potential expressions of addiction and social factors create the environmental background in the development of addiction. Some studies have examined particular combinations of personality traits, emotional states, and high risk situational or temporal frames (Hatsukami et al., 1982; Bulik, 1987; Filstead et al., 1988; Sinnett et al., 1983). A difficulty in comparing these studies and drawing conclusions from them is that many of them were conducted on addicted populations in treatment. While research on populations in treatment provides some indication of the presence of particular circumstances in conjunction with addiction, there is no evidence regarding whether the characteristics or circumstances under study preceeded the

addictive behaviour or resulted from it.

No studies have addressed the particular characteristics and circumstances of women in non-traditional managerial positions in relation to substance use. Associated with non-traditional managerial women are particular work and personal stresses, accompanied by isolation, and affected by sex-role style. These women face new combinations of challenges which are potentially stressful. Isolated from female peers, they may be particularly reliant on supportive others, both from the social and work environments. Sex-role style may affect both how much stress they experience and how they choose to deal with it. In accordance with the social learning theory, these are factors included in this study. Substances likely to be salient to women in management are the relatively socially acceptable substances of alcohol, prescription drugs, some illegal drugs, nicotine, and food.

THEORETICAL FRAMEWORK FOR STRESS AND COPING

The conceptualization of stress and coping in this study follows Lazarus and Folkman (1984) who views stress as a complex interaction between the environment and the person. They define stress as a person-environment interaction that involves a situation appraised by the person as taxing or exceeding resources and endangering well-being. Stress does not exist as a separate, independent entity but is essentially related to the individual's perception and personality. The appraisal of a potential stressor is a two-stage process of assessing the nature of the threat and of determining the coping strategy of choice. It is an interaction of personal and situational factors. Attitudes about the stressor will affect not only whether it is viewed as a threat but also the

degree to which it is experienced as taxing. Beliefs about coping resources influence how the individual will cope with what is perceived as stressful.

Lazarus and Folkman (1984) describe coping as the effort required to manage the stressful situation, as well as the emotions it engenders, regardless of how effective or ineffective the effort might be. They conceptualize coping as dynamic, bi-directional and reciprocal; a constantly changing process happening as the interface of the person-environment relationship varies. Lazarus and Folkman (1984) postulate two general forms of coping: problem-focused and emotion-focused. When conditions appear amenable to change, problem-focused coping is more likely adopted. It includes direct action aimed at eliminating or altering the harmful situation or its consequences. When there has been an appraisal that nothing can be done to modify perceived threats, emotion-focused coping is likely to be adopted. It involves several types of behaviours and/or thought processes aimed at regulating the emotional response. The ways people actually cope depend on the resources available to them and the constraints that inhibit use of these resources in the context of the specific stressor.

Lazarus and Folkman (1984) found that both forms of coping are used in different combinations in virtually every stressful encounter. We can thus assume that when faced with a stressful situation, managerial women will use both problem-focused coping and emotion-focused coping to alter the intensity of the threat. Emotion-focused coping includes strategies such as avoidance, cognitive reappraisal, distancing, minimization, positive comparisons, selective attention, seeing positive value from negative events, or just wishful thinking. Emotion-coping such as avoidance or wishful thinking may be manifested in the use of whatever substance is available and preferred, be it alcohol, prescription

drugs, illegal drugs, nicotine, or food as a form of distraction or emotional regulation.

SUBSTANCE USE AND STRESS

Repeated studies have associated the use of alcohol with stress reduction and have identified alcohol use as a coping strategy (Hull & Young, 1983; Marlatt, 1976; Pearlin & Radabaugh, 1976; Polich & Orvis, 1979). In a review of the literature examining alcohol and its connection with stress, Marlatt (1976) indicates that the findings, with both social drinkers and with alcoholics, are wide-ranging and contradictory. He theorizes however that the probability of drinking increases as a function of stress, lack of personal control, inadequacy of coping responses, plus personal expectations about the effectiveness of alcohol (Marlatt, 1976). This was the finding in the Pearlin and Radabaugh (1976) report which was part of a larger investigation into the social origins of personal stress in an urbanized area of Chicago. Both male and female subjects were included in the sampling of 2,300 persons, with a preponderance of women because women typically head more households. (Actual numbers of women were not reported). Stress was measured by economic strain and, for the purpose of this analysis, the drinking measurement was limited to only two statements: "A drink helps me to forget my worries" and "A drink helps cheer me up when I am in a bad mood." These are clearly examples of avoidance or wishful thinking emotion-focused forms of coping. In Chi square tests, three levels of anxiety (low, moderate, and intense) were significantly related to three levels of disposition to use alcohol to relieve distress (strong, weak, and minimal), $\underline{X}^2$ (4, $\underline{N} = 1671) = 24.4$, $\underline{p} < .001$. Yet there was not a greater disposition to use alcohol when anxiety

was intense, as opposed to low. Further analysis revealed that the disposition to use alcohol to relieve distress was significant only for individuals who possessed a very low sense of mastery over their environment, i.e., a sense of an inability to control events or to change outcomes. The substance-using response therefore appears to have two components: the belief about the benefits of alcohol plus a feeling of helplessness or powerlessness with regard to whatever is the exterior stressor.

Beliefs and attitudes toward alcohol were the focus of two other extensive studies. In a study involving 120 female alcoholics, 120 male alcoholics, 119 non-alcoholic women ("normal" controls) and 118 non-alcoholic women in treatment for psychiatric and emotinal problems (treatment controls), between the ages of 20 and 59, Beckman (1980) tested the hypotheses that in comparison with non-alcoholic women, female (and male) alcoholics perceive more positive psychological consequences of drinking. The instrument administered covered antecedents and effects of drinking (selected primarily from past literature); subjects' feelings before, during and after drinking; and the perceived effects of drinking "a little", or "a lot". Two scales of social desirability, the Eysenck Lie Scale (Eysenck & Eysenck, 1968) and the Bem Sex Role Inventory Social Desirability Scale (Bem, 1974), indicated an unlikelihood of response bias by alcoholics.

In general the findings indicate that female alcoholics, compared with both normal controls and treatment controls, seemed especially likely to believe that drinking more frequently made them feel more adequate, built self-confidence, relieved anxiety, reduced worries and loneliness, and increased feelings of power and control. Beckman concludes that female alcoholics are most likely of all four

groups to use drinking for escapist reasons, i.e., emotion-focused coping. Beckman's study, provides compelling conclusions of the susceptibility of women to avoidance coping, at least once a substance abuse level has been reached. Moreover, Beckman found not only that the negative feelings were antecedents to drinking behaviour, but also that alcoholics, both men and women, experience more negative affect than do non-alcoholics generally.

Interestingly, this finding of the entrenchment of emotion-focused coping among an addicted group appears comparable with the findings of the stability of emotion-focused coping found by Folkman, Lazarus, Gruen, and DeLongis (1986) working with a middle class group of married couples living in the community. In examining 85 married couples in the Contra Costa County, Calif., Folkman et al. found that emotion-focused coping are the most stable strategies, indicating that this coping form is independent of situations and perhaps related to the influence of a generally stable personality style. This suggests that persons who use emotion-focused coping may do so regardless of situations. Should substance use be the chosen form of such coping, there would then be an on-going propensity to substance use.

Addressing more directly this issue of drinking to cope, and using a causal model, Cooper, Russell, and George (1988) studied 119 male and female alcoholics and a comparison group of 948 social drinkers (57% female). The hypothesis tested was that expectancies and general coping skills will make significant independent contributions to the prediction of drinking to cope and, further, that expectancies will moderate the relationship between general coping skills and drinking to cope. These authors administered a battery of measures regarding drinking status according to the DSM-III criteria, (17 symptoms were tapped,

e.g., needing a drink before breakfast, having trouble on the job or at school because of drinking, having the shakes), drinking quantities and frequencies, expectations regarding alcohol, the Drinking to Cope Scale (Polich & Orvis, 1979), and three general coping skills measures. Coping responses were related directly to a recently experienced stressful event or situation. Correlational analyses indicated that alcohol-related variables (alcohol consumption, problem drinking status, drinking to cope, and positive alcohol expectations) were significantly positively inter-correlated. The range (.20 < r < .45) indicated that conceptually distinct but related constructs were tapped. In a factor analysis, two distinct domains of coping behaviours were represented. "Anger in", "anger out", "avoidance", and "anger reflect" loaded on Factor 1; and "active cognitive coping", "active behaviour coping", and "active coping style" loaded on Factor 2. The two factors appear to reflect the major domains of coping identified by Lazarus and Folkman (1984) as emotion-focused and problem-focused coping, respectively. The hierarchial multiple regression analyses were estimated twice: once using the emotion-focused coping index and then using the problem-focused coping index. Three equations were calculated: first, regressing drinking to cope; second, alcohol consumption; and finally, drinking status. This analytic strategy is similar to path analysis with variables postulated as effects being regressed simultaneously on all variables postulated as causes. In this conservative analysis, only non-overlapping variance is attributed to each factor. In the analysis, the greater number of younger male problem drinkers was compensated for by controlling for sex and for age.

In predicting drinking to cope, Cooper et al. (1988) found that individuals who use avoidant styles of emotion-focused coping and who suppress their anger

are more likely to drink to cope only if they also have high expectations about the effectiveness of alcohol. Furthermore, for individuals low in positive expectations about alcohol, neither anger suppression, nor avoidance coping were significantly predictive of drinking to cope. Similarly problem-focused coping strategies did not predict drinking to cope.

Since it is the expectations about the effects of alcohol which significantly predict drinking (accounting for nearly 25% of the variance in the self-reported use of alcohol to cope), Cooper et al. (1988) speculate that as individuals rely on alcohol to suppress feelings, psychological dependence on alcohol develops. This well documented and carefully analysed study provides compelling evidence of the importance of beliefs in the development of alcohol reliance. In addition, individuals who hold strong positive expectations and who drink to cope not only drink more but are also more likely to experience problems as a result of their drinking. As dependence increases it may promote continued drinking despite the experience of negative consequences indicative of abuse levels. Incongruence between expectations and results will increase both the level of stress experienced and the inadequacy of the chosen coping strategies.

A particular situational characteristic of managerial women is role overload or role conflict; characteristics which have been identified as factors in female addiction (Beckman & Amaro, 1984; Johnson, 1982). Role stresses include inter-role conflict, which occurs when a person is in two roles with conflicting expectations at the same time (i.e., the employed mother); and conflict where there is discrepancy in the behaviour called for by cultural or interpersonal expectations and those required by a person's work position (i.e., as in the traditionally yielding woman who finds herself in a position in which she

exercises authority over others; Johnson, 1982). In a secondary analysis of data from a national survey involving 1016 men and 1141 women aged over 18 years, Johnson (1982) found employment for women to be associated with both heavier drinking and with drinking problems. Further, the proportion of out-of-role (non-traditionally employed) women who drank tended to be heavier drinkers and to be considerably more likely to be problem drinkers than the proportion in-role women (Z = 2.29, p <.01; two-tailed Z test for independent proportions). Potentially then, the managerial woman in a non-traditional occupation may be at risk to substance abuse (Cohen, 1981).

In summary, there is evidence that in a stressful situation beliefs about the positive effects of alcohol (a basic form of wishful thinking or avoidance emotion-focused coping) are pre-requisites to the development of substance reliance (Cooper et al., 1988). This propensity to alcohol use appears to be most prevalent when combined with a low sense of mastery over the environment (Pearlin & Radabaugh, 1976), and generally a negative affect (Beckman, 1980). As reliance increases, so does the likelihood of additional problems resulting from the substance use (i.e., missed responsiblities due to forgetfulness or illness, poor concentration, low performance). Such additional problems would add to the level of stress being experienced (Cooper et al., 1988). Johnson's (1982) findings indicate that women in non-traditional occupations are particularly susceptible to resorting to substance use when stressed. Furthermore, Folkman et al. (1986) suggested that emotion-focused coping, when it is an established form of coping, is independent of situations and is likely to be the more common pattern of behaviour on an on-going basis. Hence, it is expected that as the level of stress increases, some managerial women will be more likely to resort to substance use,

an emotion-focused coping strategy; and as substance use increases, stress levels will increase in a self-perpetuating manner.

While the above-noted studies clearly establish the connection between stress, emotional coping and substance reliance, none of these included an examination of social support or sex-role style. The question which emerges is whether the likelihood of substance reliance is modified by the presence and use of social and work supports or by a particular sex-role style.

SOCIAL SUPPORT AND STRESS

A considerable body of literature addresses the concept of social support and its association with stress (for review see Turner, 1983). Much of the research attention has addressed the concept of social support as a buffer or a mediator of the effects of life stress. Social support is particularly significant when the subjective sense of being supported is assessed rather than a quantitative assessment of the number of the potential sources of support which might be available to the individual (Turner, 1983). Strong social support has been recognized to have a contributing effect on the maintenance of well being (DeLongis, 1984), to have a significant buffering effect on the occurrence of depression (Husaini et al., 1982), and to be a mitigating factor in the development of illness (Schilit, 1984). However social support is not always necessarily a positive influence. Many researchers have noted that support may actually be negative in terms of an individual's overall best interests (Caplan, 1979; Kahn & Antonnuci, 1980). Lazarus and Folkman (1984) cite a series of both positive and negative effects of social support in the areas of prevention, coping, and recovery from illness. Activation of the support includes expectations

of reciprocity, or may encourage dependency which may be welcomed as short term relief but undesirable in the long run (Tucker, 1982).

A distinction must also be made between general social support and work related support. Different types of relationships provide different types of social provisions which are not entirely inter-changeable (LaRocco, House, & French, 1980; Schilit, 1984). Studies that applied social support hypothesis directly to the work place found that, for men, non-work related social support did not protect against the effect of job stress or job-related strain (Bromet, Dew, Parkinson, & Schulberg, 1988; LaRocco et al., 1980). Job stress and job strain were primarily affected by co-worker sources of support. Fennel, Rodin, and Kantor (1981), in a study involving both men and women, observed that supervisor and peer support buffered job-related stress.

Other studies have found that the effects of social support are more pronounced among women than among men (Turner, 1983). Using the Hassles Scale (Kanner, Coyne, Schaefer, & Lazarus, 1981), DeLongis (1984) in her study of 75 well-educated, high income couples, found that wives reported significantly more hassles with family and friends than their husbands did. She concluded that this may reflect their greater involvement with such relationships.

Substance use and social support.   Social isolation is a prominent feature of substance dependency in women (Fraser, 1981; Holubowycz, 1983; Reed, 1985) and it has been identified as an antecedent to alcoholism (Beckman, 1980; Scida & Vannicelli, 1979). Argerion and Paulino (1976) identify female impaired drivers as "isolated individuals" and Gomberg (1974) found alcoholics generally to be distrustful and unable to form healthy relationships. Schilit (1984) found female alcoholics to have had less childhood support and to have less current support

than the non-alcoholic comparison group. In a study of 90 successfully treated alcoholic women and 90 unsuccessfully treated ones, Thomas (1971) found that successful treatment was characterized, among other things, by changes in social groups and improved social relationships with family, friends and people in general. Similar results were found in a follow-up of 93 18- to 63-year-old alcoholic women after treatment (Macdonald, 1987). Primary supportive relationships were significant predictors of successful treatment outcomes.

Research involving both men and women participating in a heroin addiction treatment program, examined the extent to which the subjective sense of the unavailability of social relations is related to the use of potentially dysfunctional coping strategies such as substance use. Results of three sets of measures of social support, coping style and depression were analyzed (Tucker, 1982). A series of t tests and Chi square tests of association indicated that persons under stress and without the perception of being socially supported tend to engage in activities that either do not contribute to problem resolution or that create other stressors, even if social support is in fact available. Tucker indicates that activation of the available system is probably controlled by a number of factors. For example a sense that support will be of assistance or helpful would probably affect whether or not social support is activated. The data also demonstrated that the use of alcohol and other drugs as coping mechanisms is situation-specific, i.e., used only under specific social conditions. This research indicated that the pattern of relations between variables was quite distinct for women and men and support the proposition that women are driven by social considerations more than men are. However as both the measures of social support and of coping were quite limited it may be that men also use negative

strategies in the absence of support but these were not tapped. Further, it is important to consider that this research was conducted on an addicted population in treatment and there is no foundation for assuming that the behaviour of persons in treatment is necessarily comparable to that of normally functioning and employed persons.

Evidence does indicate that social support is particularly relevant to female employment as women are more strongly affected by work conditions than men are and cannot buffer their dissatisfactions as well (Verbrugge, 1982a). A 6-week study focused on health and employment satisfaction, and based on daily health records of 243 men and 346 women sampled from the general population, revealed that women, more than men, tended to use drugs for chronic problems on a daily basis regardless of whether or not they were satisfied with their work; moreover, when dissatisfied, women experienced greater stress and increased their use of nicotine and alcohol (Verbrugge, 1982b). However it is worth noting that results from multiple regression indicated that gender differences could be accounted for by other stronger variables related to health and socio-demographics (Verbrugge, 1982b). Thus, it is not the fact of being a woman which leads to substance reliance so much as the factors in a working woman's life. The woman, more than her male counterpart, faces stressors and circumstances which are associated with avoidance coping in the form of substance abuse. Thus any factors, such as social support, which might mitigate her stress are particularly vital to her (Holubowycz, 1983).

Evidence that women may value social relations on the job more than men do (Nieva & Gutek, 1981) is particularly critical to women in non-traditional work settings. Even more than her male counterparts, she may be sensitive to

the presence of supportive others to deal with work demands (Rayburn, 1986). To date there is no evidence regarding the support requirements of women in managerial positions. The female manager in non-traditional settings continues to be an anomaly in her work context and her special circumstances may give rise to different results from those found among employees engaged in what has been traditional work for the respective genders. However, in view of the research indicating women's greater reliance on social support and greater susceptibility to work stressors, it is expected that managerial women who feel unsupported will experience greater stress and will be more likely to resort to substance use.

Substance use and significant others.   For purposes of this study, "significant others" is used to designate the family of origin and close current friendships. Family history of alcohol use or abuse and friends' drinking behaviour provide further insights into the background and social environment of the participants in this study. An environmental factor of influence in female addiction, for example, is the occurrence of alcohol abuse in the family of origin (Estep, 1987). Female alcoholics, more than male alcoholics, tend to come from homes where there has already been a history of alcoholism (Beckman, 1976; Chetwynd & Pearson, 1983; Fraser, 1973; Hornik, 1977). However an unexpected marked similarity between women problem drinkers and women abstainers was observed by Jones (1971). Both these groups of women were described as self-defeating, vulnerable, pessimistic, withdrawn, guilty, somatized, and projected feelings. They were less productive, more dependent; and emotional inadequacies were suggested in their fluctuating moods, anxiety, irritability and in their inability to relax. The female abstainers, more than male abstainers, appeared marked by early unfavorable family situations where one parent drank

excessively. The suggestion was made that their abstinence was a reaction to childhood circumstances rather than an integrated pattern of negation and overcontrol.

Based on the above studies, it appears that there will be greater likelihood of substance use if managerial women come from an alcohol abusing family of origin. However the Jones (1971) report indicates that there may be confounding factors in the relationship between family history and current behaviour which might express itself as abstinence from the substance.

The evidence as to the effect of the behaviour of close friends is more consistent. Parker (1972) found female heavier drinkers, and particularly spree drinkers, to have heavy drinking friends. Binion (1982) found initial drug use for female heroin users to be closely related to inter-personal affiliative issues and noted that on-going use led to seeking an addict peer group. However, in working with a treatment group of dually addicted women (alcohol and prescriptions) and a control group of a community sample, Estep (1987) found that about half of each of the two groups had companions who used prescription depressants. Interview data indicated that women often obtained and/or shared their drugs with their companions. There was no indication as to whether the level of use by the companions of the control group was at abuse levels. Nevertheless, in the current study it is expected that an indication the friends are heavy drinkers will be associated with higher substance use by our respondents.

SEX-ROLE STYLE AND STRESS

"Sex-role style" refers to an individual's general approach to life. An assertive, pro-active style has been named "masculine"; it may also be referred to as "instrumental". A more yielding, inter-dependent style has been associated with "femininity"; some researchers refer to it as "expressive" (Broverman, Vogel, Broverman, Clarkson, & Rosenkrantz, 1972). Bem (1981a) found that perceptions of, and responses to, stressful situations are affected by sex-role orientation. An instrumental sex-role style, which is more task oriented and suggests rationality and competence (Broverman et al., 1972), may lend itself more easily to an occupation which has not traditionally been performed by women (Long, 1989), and thereby mediate the stress expressed in that position. In the Lazarus and Folkman (1984) framework, sex-role style affects not only the manner of coping, i.e., the combination of problem-focused and emotion-focused coping undertaken, but it affects what is appraised as stressful and the manner in which resources are evaluated and utilized. For example, an assertive pro-active person may enjoy the challenge of a situation which might be viewed as threatening by a more yielding inter-dependent person. Bem (1975) concluded that sex-typed individuals are uncomfortable performing cross-sex tasks as these are incongruent with their basic sex-role style.

As women moved into the workplace and adopted new non-traditional lifestyles, early studies on alcoholism indicated that an increased likelihood of addiction development (Beckman, 1978; Morrissey, 1986). This is so particularly for the non-traditionally employed woman (Johnson, 1982). However examining stress and coping among employed women from both traditional and non-traditional occupations, using the Bem Sex Role Inventory (BSRI; Bem,

1981b), Long (1989) found that greater problem-focused coping was associated with greater instrumentality for both kinds of occupations. Similarly, Jagacinski (1987), using the Personal Attributes Questionnaire (PAQ; Spence & Helmreich, 1978) with both male and female engineers, found that those who scored high on instrumentality indicated higher levels of performance and greater satisfaction with their work. Terborg (1977) also found women in non-traditional occupations to possess more effective coping strategies. Accordingly, there is evidence to indicate that instrumentality is associated with more problem-focused coping, high levels of performance and greater satisfaction with work. It may therefore mediate the effect of the stress experienced.

Addressing the effect of sex-role style in the utilization of social support, Burda, Vaux, and Schill (1984) sampled 133 college students and examined several measures of social support. Subjects were classified into feminine, masculine, androgynous, and undifferentiated. Feminine and androgynous individuals (both high on feminine characteristics) reported more global support than the other two orientations. They also scored higher on emotional support and perceptions of support from family. This indicates that those with high feminine sex-role style either experience more social support or are more likely to utilize what is available to them. Accordingly, the greater problem-focused coping of the high instrumentality might be off-set by a decreased use of available social support. The Long (1989) and Jagacinski (1987) studies indicate that women who are more highly instrumental in sex-role style may experience less tendency for avoidance coping (substance use) yet they may also be more self-reliant and hence less inclined to use available support systems. Evidence available to date does not permit prediction of the direction of effect of an instrumental sex-role

style, but it is expected that instrumentality is related to substance use.

SUMMARY

In summary, the social learning model of addiction indicates that environmental circumstances are relevant to the examination of addictive behaviour and that addiction encompasses more than what has traditionally been regarded as narcotics. Yet addiction research to date has frequently been conducted on treatment centre populations, thus limiting the generalizability of the findings for normally functioning groups. Women in managerial, non-traditional occupations experience the usual stress that such positions entail as well as the additional daily stress of balancing many demands on their time and attention. The stress and coping model of Lazarus and Folkman, indicates that one form of coping, particularly emotion-focused coping in the form of avoidance or wishful thinking, can manifest as substance use. Managerial stress levels may be factors leading to substance use with the resulting risk of reliance leading to abuse. Studies have linked various personality traits (i.e., low sense of mastery, negative affect, and positive beliefs about alcohol) with substance use but none have examined how these might be modified by work or social support or by a sex-role style of instrumentality. Social support and work support are resources which might mitigate the effect of the stress experienced. It remains unclear exactly what effect an instrumental sex-role style may have on substance use and the utilization of available social and work support resources.

STATEMENT OF THE PROBLEM

The question emerges as to whether managerial women in non-traditional occupations are at risk of developing addictive reliance on a substance as a way of dealing with stress if they feel unsupported by their social or work-related environment. Furthermore, it is expected that subjects who come from a home where alcohol was abused or who currently have friends who are substance abusers will be more likely to be at risk of substance abuse. The sex-role style, instrumentality, because of its relation to efficacy in managerial employment, may lower the overall stress level and thereby moderate substance use (i.e., it is expected that higher instrumentality will be associated with lower stress and thus lower substance use) or high instrumentality may be associated with less activation of the available social support and thereby inhibit use of this potential coping resource. Alcohol, prescription drugs, illegal drugs, nicotine, and food are considered relevant substances and are assessed as to degree of use, from non-use to abuse.

HYPOTHESES

It is hypothesized that (either singly or in combination) there will be a significant linear relationship between the criterion, substance use, and the predictors, stress, social support, work support, family history of alcohol abuse, friends' drinking behaviour, and instrumentality. From previous research, it would be expected that greater substance use would be associated with greater stress, lack of social support and work support, greater family history of alcohol abuse, greater level of friends' drinking. The direction of the effect of the variable, instrumentality, is unclear. Daily stress will be measured by the Hassles Scale

(DeLongis, 1984); social support will be measured by the Social Support Scale (Kaplan, 1977); work support will be measured by the Work Relationship Index (Moos, 1981); and instrumentality will be measured by the Bem Sex Role Inventory (Bem, 1981b). Family history of alcohol abuse, friends' drinking patterns and substance use will be measured by the Substance Use and Significant Others Scale (SUSO) developed for this study.

METHOD

SUBJECTS

This study is part of a larger longitudinal research project ($\underline{n}=300$) testing a model of stress and coping strategies of managerial women in non-traditional occupations, under the principal investigator, B. Long. Volunteers were found through approaches to various women's organizations, through newspaper advertisements, and by word of mouth. Substantial demographic characteristics and many constructs were assessed in the larger study.

Managerial women have been defined as women who supervise or oversee two or more other persons. Non-traditional occupations have been established in accordance with the 1981 census of Statistics Canada and include occupations in which women make up less than 35% of the workforce, with one exception, managers in the social science field. Excluded were the fields of education, nursing and social work as well as a number of other positions such as postal managers, personnel officers, medical supervisors, and some social service positions. (See Table 1 for occupational classifications). All but nine participants indicated that their colleagues are predominately male. The nature of these responses did not indicate whether the participants were referring to their immediate working environment or to the overall organization, which may have been national in scope with operations in several locations.

The participants for this study consist of 80 women who were interviewed for their 6-month follow-up interviews during the months of June, July, and August, 1989. Ninety participants began the study but in the course of the interviews 10 dropped out due to various causes, e.g., pregnancy, travel outside

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the country, and vacations. A comparison of the demographics of the women who dropped out and those who remained, indicated no substantial differences in age distribution, income levels, caretaking responsibilities or other relevant demographics. (See Table 2).

SAMPLE CHARACTERISTICS

Respondents ranged in age from 25 years to 63 years, ($\underline{M} = 39$ years, $\underline{SD} = 7.4$). Fifty-seven percent were married, 18% were single, and 25% were divorced or widowed. Forty-three percent have children and of these, 89% have at least one child still living at home. Job levels ranged from lower or entry level (approximately 23%) management to executive positions (approximately 22%), with approximately 45% classifying themselves as middle management. Approximately 41% had high school or less education; about 59% had college or more formal education. Approximately 45% indicated they had received additional training. Approximately 24% earn $40,000 CDN per annum or less; 25% earn between $41,000 and $60,000; with the balance of 51% earning above that. (See Table 2 for demographics).

Table 1

Job Classifications According to 1981 Statistics Canada Census

for Managerial Women

		% Women in Workforce		% Managers	
Code	Classification	Canada	B. C.	(n=90)	(n=80)

1113	Managers: Administration	20.0	21.5	2	2
1119	Government Officials	29.3	30.5	1	4
1130	Managers/Senior Officials	9.4	12.1	2	10
1131	Managers: Natural Science	6.4	8.7	1	2
1132	Managers: Social Science	48.2	41.9	3	3
1133	Administrators: Teaching	24.3	21.8	10	8
1134	Program Coordinator	.0	.0	0	3
1135	Administrators: Finances	23.4	26.9	18	11
1136	Managers: Personnel				
	& Industrial Relations	27.7	28.7	6	10
1137	Managers: Sales & Adv.	21.1	21.4	10	9
1141	Managers: Purchasing	14.2	12.5	1	3
1142	Managers: Services	30.5	34.5	5	17
1147	Managers: Transport &				
	Communications	12.6	10.3	14	10
1149	Editor	38.9	39.3	5	0
1171	Accountants, Auditors	31.1	28.7	4	5

1173	Organization & Methods				
	Analysts	22.4	16.9	4	0
1179	Consultant; Advertising	38.1	33.9	3	3
3115	Veterinarian	17.2	?	1	0

PROCEDURE

Potential respondents were screened by telephone as to their non-traditional occupation and were first contacted through their initial interview where informed consents were signed (See Appendix A for Consent). Having indicated a willingness to participate in the study, the women were met by an assigned interviewer at a time and location convenient to the respondents. They were interviewed monthly, by the same interviewer, for a 6-month period and one year hence. Initially the interviewer remained with the respondent while she completed the battery of questionnaires involved in the longitudinal study. This was to ensure that the respondent was familiar with and understood the scoring instructions involved in the different questionaires. In subsequent months, frequently the set of questionnaires were left with the respondent and picked up the next month when the next set was dropped off. Data were collected in 2 sessions of approximately one hour's duration, about 3-6 weeks apart. Instrumentality and social support were assessed at the first session; stress, work support, substance use and significant others were assessed at the second interview. Instrumentality and social support are seen as more stable and enduring characteristics and the latter as more variable and related to a specific work stressor which was the focus of the second interview.

Table 2

Demographic Variables of Managerial Women

Variable	(n = 90) %	(n = 80) %
Age		
24 - 29	7.8	7.5
30 - 39	46.6	42.5
40 - 49	37.8	40.0
over 50	7.8	10.0
Marital Status		
Single	18.9	17.5
Married	58.9	57.5
Divorced or Widowed	22.2	25.0
Have Children		
No	59.6	57.5
Yes	40.4	42.5
Still at home (of yes)	88.9	88.8
Education		
High School or less	40.0	41.4
Some College	17.8	21.2
Some University	42.2	37.4
Extra Training		
Yes	43.3	45.0

No	56.7	55.0
Job Level		
Entry Management	20.0	22.5
Middle Management	45.6	45.0
Senior Management	22.2	21.2
Other	12.2	11.3
Time in Position		
Less than a year	18.2	19.0
1 - 2 years	25.0	26.6
3 - 5 years	30.5	29.1
over 5 years	26.1	25.3
Income Level		
$25,000 or less	3.5	5.1
$26,000 - 40,000	20.2	19.0
$41,000 - 60,000	25.8	25.3
$61,000 - 80,000	13.5	12.6
$81,000 - 100,000	15.7	15.2
$100,000 or over	21.3	22.8

INDEPENDENT MEASURES

The Hassles Scale (HAS; see Appendix B) developed by Kanner et al., (1981) and revised by DeLongis (1984) is a 117-item checklist in which respondents are instructed to indicate any occurrences which have "hassled" them in the past month and its severity. The list covers chronic concerns such as financial problems or unsatisfactory personal relationships and minor irritants such as traffic tie-ups or meal preparation. DeLongis reported a test-retest reliability correlation of .79 between adjacent months for frequency and .48 for severity. DeLongis conducted factor analysis with oblique rotation which yielded a conceptually meaningful set of 8 factors: future security, time pressures, work, household, health, inner concerns, financial responsibilities and environmental stress. Item loadings on each factor ranged from 4 to 11 items. Scale reliabilities were high, with alphas ranging from .79 to .91. Three items which might confound the substance use measure (dealing with smoking, alcohol and drug use) were eliminated for scoring purposes for this study. In DeLongis' factor analysis these 3 items had low loadings and did not emerge as part of any of the 8 identified subscales. An item referring to concerns over weight was left in as it does not necessarily imply food abuse (initially targetted in this study) and it loaded in the subscale dealing with health in the DeLongis analysis. Each reported occurrence is rated on a 3-point scale as to severity: "somewhat", "moderately" or "extremely". A cumulative severity score ranging from 0 to 342 was used; the higher the score, the greater the severity of stress. Internal consistency in this study was acceptable (Cronbach's standardized alpha = .94)

The Social Support Scale consists of nine descriptions of various levels of social support and was developed by Kaplan (1977) and revised and shortened by

Turner, Frankel, and Levin (1983) (see Appendix C). The instrument measures the subjective experience of social support, regardless of the nature and size of the network potentially available to the subject (Turner, 1983). Turner reported Cronbach's alpha coefficients ranging from .81 to .83 for internal consistency. Validity data are limited but Turner et al. tested the content domain against two other measures of social support. Although half of the alpha coefficients were below .70, they were clear and consistent (Turner et al., 1983). Correlations of the Revised Kaplan Scale with various single indices of social support range from .19 to .49. The instrument is designed with 5-point scale vignettes (ranging from no support, to moderate support, to always supported) that are distributed such that the high level (always supported) of the scale appears randomly on the right or on the left. Total scale scores were used ranging from 9 to 45; the higher the score, the stronger the element of feeling supported. Cronbach's alpha for this instrument in this study was r = .88.

Work support was measured using the Work Environment Scale (Moos, 1981; see Appendix D). This scale consists of 63 items which assess the nature of the work environment. The Work Relationship Index (WRI) was used as it depicts the relationship between co-workers and supervisors. WRI is based on the three subscales assessing involvement, cohesion, and supervisor support. The scale is scored by summing the three subscale scores (9 items each). Participants were instructed to indicate whether or not the statements, some positive and some negative, are true or false (scored 1 or 0) for their work environment. High internal consistency has been reported for the relationship dimension (alpha = .88; Billings & Moos, 1982) and is correlated with traditional measures of social support (Holahan & Moos, 1981). The construct validity of the WES has been supported by

a number of studies (Moos, 1981; Moos, Clayton, & Max, 1979). A composite score, the sum of the three scales, ranging from 0 to 27, was used; the higher the score, the greater the availability of work support. Internal consistency in this study was acceptable (Cronbach's standardized alpha = .91).

The Bem Sex Role Inventory (BSRI; Bem, 1981b; see Appendix E) measures the extent to which individuals identify themselves along traditional sex-typed roles. It has been argued that this scale measures socially desirable instrumental and expressive traits and is related to sex role preferences that call on instrumental or expressive capacities (Spence & Helmreich, 1981). Estimates of test-retest reliability have been found to range between .76 and .94 for these scales, whereas coefficient alpha estimates of internal consistency range from .75 to .90 (Bem, 1981b). Instrumentality and expressiveness scores from the BSRI have been shown to be uncorrelated (Bem, 1974). The BSRI consists of two 20-item scales, designated as instrumental and expressive respectively, and 20 neutral items. The 60 items are personality characteristics previously scaled as being desirable for men, women or for both (neutral). Participants were instructed to indicate on a 7-point scale the degree to which each characteristic was "true of you". For purposes of this study, the 20 items on instrumentality were summed for a total instrumental score ranging from 20 to 140; the higher the score, the greater the level of instrumentality. Internal consistency in this study was acceptable (Cronbach's standardized alpha = .82).

DEPENDENT MEASURE

The Substance Use and Significant Other Scale (SUSO; see Appendix F) was developed for this study using the Kaplan (1977) scale as a model. SUSO contains 7 vignettes with regard to which the participants are asked to identify which is most similar to their situation. The 5 substance measures include alcohol, prescription drugs, illegal drugs, nicotine, and food. One item is on family of origin and one is on friends' drinking behaviours. The substance scale was scored on a 5-point scale (ranging from no use, little use, at risk use, greater use, to abuse). Based on the data analysis of the pilot study, the item on eating was deleted from the scale and a total substance use score ranging between 1 to 20 (4 sets of vignettes) was used; the higher the score, the greater the substance use. The items on family of origin and significant friends were scored separately with a range of 1 to 5 for each. Cronbach's standardized alpha for 4 substances with 80 respondents was .37.

DATA ANALYSIS

Stepwise multiple regression (MR) was conducted to examine the linear relationship between substance use and daily hassles, perceived social support, perceived work support, history of family of origin alcohol abuse, and current friends' drinking behaviour. "Multiple regression analysis is a method for studying the effects and magnitude of more than one independent variable on one dependent variable using principles of correlation and regression" (Kerlinger, 1973, p. 605). Stepwise multiple regression analysis determines the correlations between each independent variable and the dependent variable after the effects of other variables in the model have been partialled out. Thus the independent variables are entered

into the regression equation according to their relative strength of association with the dependent variable. Such analysis provide measures of the variation in the dependent variable accounted for by the different independent variables, singly and in combination with each other (Kerlinger & Pedhazur, 1973). Significance was acceptable at $\underline{p}<.05$ level.

RESULTS

Means, standard deviations, and pairwise correlations are given for all variables in Table 3. Family history, hassles, and friends' behaviour are significantly positively correlated with substance use $(r = .30, r = .24$, and $r = .29$, respectively) but not with each other. Social support and instrumentality showed a significant positive correlation, $r = .32$, with each other and are negatively associated with substance use. Social support, work support, hassles, family history and friends' behaviour each showed little or low relationships (all $r = .30$) with each other.

The Substance Use and Significant Others Scale scores are similar to the results of women managers in the pilot study $(M = 9.4$; with 5 substances and $M = 7.1$; with 4 substances), and are lower than scores found among both the male and the female groups from the alcohol and drug counselling centre. The social support measure results are comparable to those found among HIV positive men $(M = 34.1; SD = 6.1)$ (Nicholson, 1989). The work support mean score was higher than that found among married female clerical workers $(M = 16.5; SD = 5.8)$ and single female clericals $(M = 14.8; SD = 6.9)$ (Kahn & Long, 1988). The measure on instrumentality found results similar to those of a sample of female junior and senior college undergraduates $(M = 100.8; SD = 15.18)$ (Fassinger, 1985). Comparisons of the results in the Hassles Scale must be done with consideration for the different alternatives for scoring this instrument and for the deletion of the three items for purposes of this study. The original longitudinal study of 294 managers, assessed one year earlier (Long & Kahn, 1989), reported a mean of 32.8 $(SD = 24)$ using summed severity scores; similar to this study. However using summed severity scores, Zika and Chamberlain (1987) in their work with 161

extramural students and a replication study with 120 community members reported means of 63.2 (SD = 32.4) and 66.7 (SD = 42.6), respectively, considerably higher than this study.

The stepwise multiple regression used to test the hypotheses was significant, $F_{(3,76)}$ = 6.84, $p < .01$, for three predictor variables, family history of alcohol abuse, hassles, and friends' drinking behaviour. An F-to-enter level of 3.0 was required for inclusion in the equation. These predictor variables together accounted for 21% of the variance in substance use (adjusted R = .40). Table 4 summarizes the findings. Family history of alcohol abuse entered the equation first and accounted for 9% of the variance. Hassles entered next, followed by friends' drinking behaviour. Results indicate that female managers who had a higher family history of alcohol abuse, who experienced greater hassles, and who had friends who drank heavily were more likely to substance use. No relationship was found with social support, work support, and instrumentality.

Table 3

Means, Standard Deviations, and Intercorrelations

of Measures for Women Managers (N = 80)

						Measure			
Measure	$\underline{M}$	$\underline{SD}$	1	2	3	4	5	6	7
1. Substance Use	7.4	2.6	--						
2. Family History	3.3	1.2	.30	--					
3. Hassles	31.4	25.1	.24	-.09	--				
4. Friends' Behav.	3.3	0.8	.29	.07	.15	--			
5. Social Support	35.0	5.9	-.19	-.12	-.11	-.06	--		
6. Work Support	20.0	6.2	.05	-.02	-.07	.06	.10	--	
7. Instrumentality	105.5	11.0	-.08	-.05	-.01	.15	.32	.10	--

$\underline{r}$ .05,80 = .22 $\underline{r}$ .01,80 = .29

Table 4

Multiple Regression Analysis on Substance Use in Women Managers
(N = 80)

Variable	R cumulative	R adjusted	R increase	F to enter	Standardized Regression Coefficient
Family History	.09	.08	.09	7.64	.30
Hassles	.16	.14	.07	6.60	.23
Friends Behaviour	.21	.18	.05	4.96	.23

$F(3,76) = 6.84$, $p<.01$

DISCUSSION

This study was concerned with the relationship between substance use and daily hassles, perceived social and work support, family history of alcohol abuse, friends' drinking behaviour, and an instrumental sex-role style of managerial women. Substance use was assessed with an instrument measuring alcohol, prescription drugs, illegal drugs, and nicotine consumption.

Findings from the regression analysis suggest that the largest proportion of the variance in the likelihood of substance use was having a family of origin where alcohol was abused. This is in agreement with the preponderance of addiction literature that indicates alcoholics, particularly female alcoholics, tend to come from homes where there has been a history of alcohol abuse (Beckman, 1976; Chetwynd & Pearson, 1983). This finding is in accordance with the social learning theory of addiction and indicates that the most powerful and influential social learning is that experienced in the family of origin. The significance of friends' behaviour, the third variable entered into the regression, is also in accordance with prior research that indicates women's substance using is strongly influenced by the behaviour of friends (Binion, 1982; Parker, 1972).

It is noteworthy that the mean level of substance use assessed among these managers by SUSO does not reach "at risk" levels and of the 80 participants only about 10% scored "at risk" or above levels. A further examination of these 8 women did not reveal anything different about them. They range in age between 28 and 38; 4 were single, 2 were married and the other 2 were divorced. Five of them had high school or less education and their job levels ranged from administrative assistant to middle management. A comparison of their social support scores with those for all the managers ($\underline{M}$ = 33.6; $\underline{SD}$ = 8.6 vs. $\underline{M}$ = 35.0; $\underline{SD}$

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5.9) and of their instrumentality scores with those for all the managers ($\underline{M}$ = 104.9; $\underline{SD}$ = 8.6 vs. $\underline{M}$ = 105.5; $\underline{SD}$ = 11.0) indicates no differences.

In spite of the small proportion of managers scoring at the higher levels on the SUSO scale, family history and friends' behaviour were both significant predictors of substance use. As a preventative measure it would be worthwhile to make this connection known, to expand awareness of the addictive potential for women coming from an alcohol-abusing background. This connection also argues for the involvement of significant friends and family in a treatment plan for substance abuse for women, in accordance with conclusions reached by Muchowski-Conley (1982). Should the friends and family members continue to be in the substance-abusing lifestyle, it may be necessary to suggest to women wishing to abstain to make a change in companions and/or to lessen contact with family members. In contrast, should the friends and family be in recovery themselves, they provide powerful role models for the woman wishing to make similar changes. Women who might be abstaining as a reaction against a substance-abusing family of origin, such as those found by Jones (1971), might be present among these female managers. An examination of the data found that 28% of the managers ($\underline{n}$ = 22) were assessed as abstainers from alcohol. Of these, 27% ($\underline{n}$ = 5) came from alcohol abusing families. However these are very small numbers and would require further research to support any statements.

Hassles explained the second largest proportion of variance in substance use. This is in accordance with the many studies which have associated substance use and stress (Hull & Young, 1983; Marlatt, 1976). The association between stress and substance use bears further examination. Increased stress might result from substance use increases (i.e., lower level of functioning and less effective coping) or

the increased stress might lead to emotion-focused coping such as avoidance.

The social support finding lends weight to several possible notions. It is negatively associated with substance use (r = -.19) as expected, indicating that as social support increased, substance use decreased. The lack of relationship between social support and work support endorses the need of measuring these two kinds of support separately as indicated by previous studies (LaRocco et al., 1980; Turner et al., 1983).

The lack of significance of social support argues against what is known in the addiction treatment field about the importance of the support of significant others. The long term success of Alcoholics Anonymous is strongly rooted in the power of the support of the fellowship. It may be that the constructs of support measured by the Kaplan scale (based on 3 sub-scales of love, esteem and network) (Turner et al., 1983) are not the same constructs in social support more relevant to substance abuse treatment. For example, relevant constructs for substance abuse treatment might be more along the lines of understanding, mutuality, and unconditional acceptance. The lack of a correlation between this social support construct (measured by the Kaplan scale) and the coping strategies of HIV+ men (Nicholson, 1989) supports the argument for the need for an examination of the relevant construct of social support in life-threatening situations. Recovering alcoholics frequently speak of their situations as a life-and-death matter. Alcoholics Anonymous literature encourages and endorses this line of thinking. The format of the Kaplan scale, with its vignettes, would lend itself nicely to the development of a scale measuring different constructs.

The moderate to low positive correlation (r = .32) between social support and instrumentality also merits attention. It argues against the suggestion that

instrumentality is associated with less experienced social support and it indicates that, at least for these non-traditional women, the instrumental sex-role style is not a factor which causes them to feel isolated or ostracized. In fact, this group of managers scores at the higher level on the social support scale ($\underline{M}$ = 35; potential range = 9-45). It is possible that a subjective sense of being supported is a factor in the instrumental sex-role style. Perhaps instrumentality, measured by the ability to be self-reliant, defending own beliefs, etc., on the Bem Sex-Role Scale, is founded on an underlying sense of being loved, esteemed and well supported.

CONCLUSIONS

To summarize, this study found that for women in managerial, non-traditional occupations a family history of alcohol abuse, daily hassles, and friends' drinking behaviour accounted for approximately 21% of the variance of substance use. After the three entries, the variables of social and work support and instrumentality were not significantly associated with substance use. In considering the study's results, a number of issues were raised and speculation was made regarding the relationships of the variables to each other and to substance use.

The results of this study are limited by the use of the new instrument, the SUSO Scale created for these purposes. While the pilot project provided some support for the discriminating powers of the SUSO scale, and internal consistency was increased by elimination of the item on eating, reliability is still quite low (Cronbach's alpha = .37). Greater reliability might be achieved by increasing the number of items for each of the remaining substances. The validity of assessing substance use on a continuum should also be further explored. The intervals between the vignettes should be examined closely to verify their equidistance.

Perhaps the lower end of the scale (which relates to abstinence or relatively light use) is not a meaningful predictor of potential abuse and should be disregarded as a measure of substance abuse. Yet, in spite of the relatively low scores among these managers, there was an association between the substances and the variables of family history and friends' drinking.

While this study proposed to study individuals "at risk" of developing substance abuse or addiction, the study is cross-sectional. Thus no indication is available regarding who might develop addiction problems at some time in the future, when they might do so and under which conditions. This study is not intended to be a source of information about the actual quantities which might be used by women managers. No objective quantitative criteria is established; in essence it is the participants' perception of the degree and the kind of substance use which is being measured. Further, no implication as to causality can be made as this study is correlational; substance use may cause lack of hassles or the converse may be true. The study is limited in generalizability to managerial women in non-traditional occupations.

The moderate degree of variance accounted for in this study may be related to the limitation of using the Hassles scale to assess stress while disregarding possible changes in stress levels. Although hassles severity was found to be associated with substance use, it is a change, particularly an increase, in levels of daily hassles which is particularly relevant in measuring stress (DeLongis, Folkman, & Lazarus, 1988). Different individuals can cope with different quantities of hassles and if these are a norm, they are not necessarily experienced as stressful (DeLongis, 1984). A stronger correlation between substance use and stress might be found in a longitudinal study which examined whether substance use and stress

covary.

It is possible that the moderate proportion of variance accounted for in this study is related to the lack of measuring underlying beliefs about the effects of substance use or about the controllability of environmental factors. Three studies (Beckman, 1980; Cooper et al., 1988; Pearlin & Radabough, 1976) indicated that beliefs about the positive effects of alcohol, a low sense of mastery over the environment and generally a negative affect were underlying variables which predict substance use. It is likely that this highly achieving non-traditional group of managers may have a very strong sense of self and of mastery over the environment together with a lack of illusions about the effect of substance use. According to the stress and coping theory of Lazarus and Folkman (1984), underlying beliefs also affect choice of coping strategies.

SUGGESTIONS FOR FURTHER RESEARCH

This study only begins to address the combined effect of the variables measured. It is an exploratory study dealing with areas largely overlooked in the past. On the basis of these data and knowledge of the study's limitations, several research directions are suggested:

1. It would be useful to verify the findings of the SUSO scale with more detailed objective quantitative measures of substance use, family history of alcohol (or other substance) use, and friends' substance using behaviour, and to increase the reliability of SUSO with a more extended version of the vignettes.

2. Longitudinal studies of changes in stress levels and substance use would provide further evidence of the connection between these two variables.

3. Longitudinal studies of children at risk for substance abuse (i.e., children from substance-abusing families) would more accurately determine where the propensity for substance abuse originates.

4. Studies addressing which aspects of social support are particularly relevant to substance abuse especially to women's addictive coping strategies would contribute to the development of knowledge in this area.

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APPENDIX B

HASSLES SCALE

Directions: Hassles are irritants that can range from minor annoyances to fairly major pressures, problems, or difficulties. They can occur few or many times.

Listed below are a number of ways in which a person can feel hassled. First, circle the hassles that have happened to you in the past month. Then look at the numbers on the right of the items you circled. Indicate by circling a 1, 2, or 3 how SEVERE each of the circled hassles has been for you in the past month. If a hassle did not occur last month do NOT circle it.

HASSLES

	SOMEWHAT SEVERE	MODERATELY SEVERE	EXTREMELY SEVERE
1. Misplacing or losing things	1	2	3
2. Troublesome neighbors	1	2	3
3. Social obligations	1	2	3
4. Inconsiderate smokers	1	2	3
5. Troubling thoughts about your future	1	2	3
6. Thoughts about death	1	2	3
7. Health of a family member	1	2	3
8. Not enough money for clothing	1	2	3
9. Not enough money for housing	1	2	3
10. Concerns about owing money	1	2	3
11. Concerns abut getting credit	1	2	3
12. Concerns about money for emergencies	1	2	3
13. Someone owes you money	1	2	3
14. Financial responsibility for someone who doesn't live with you	1	2	3
15. Cutting down on electricity, water, etc.	1	2	3
16. Smoking too much	1	2	3
17. Use of alcohol	1	2	3

	SOMEWHAT SEVERE	MODERATELY SEVERE	EXTREMELY SEVERE
18. Personal use of drugs	1	2	3
19. Too many responsibilities	1	2	3
20. Decisions about having children	1	2	3
21. Non-family members living in your house	1	2	3
22. Care for pet	1	2	3
23. Planning meals	1	2	3
24. Concerned about the meaning of life	1	2	3
25. Trouble relaxing	1	2	3
26. Trouble making decisions	1	2	3
27. Problems getting along with fellow workers	1	2	3
28. Customers or clients give you a hard time	1	2	3
29. Home maintenance (inside)	1	2	3
30. Concerns about job security	1	2	3
31. Concerns about retirement	1	2	3
32. Laid-off or out of work	1	2	3
33. Don't like current work duties	1	2	3
34. Don't like fellow workers	1	2	3
35. Not enough money for basic necessities	1	2	3
36. Not enough money for food	1	2	3
37. Too many interruptions	1	2	3
38. Unexpected company	1	2	3

	SOMEWHAT SEVERE	MODERATELY SEVERE	EXTREMELY SEVERE
39. Too much time on hands	1	2	3
40. Having to wait	1	2	3
41. Concerns about accidents	1	2	3
42. Being lonely	1	2	3
43. Not enough money for health care	1	2	3
44. Fear of confrontation	1	2	3
45. Financial security	1	2	3
46. Silly practical mistakes	1	2	3
47. Inability to express yourself	1	2	3
48. Physical illness	1	2	3
49. Side effects of medication	1	2	3
50. Concerns about medical treatment	1	2	3
51. Physical appearance	1	2	3
52. Fear of rejection	1	2	3
53. Difficulties with getting pregnant	1	2	3
54. Sexual problems that result from physical problems	1	2	3
55. Sexual problems other than those resulting from physical problems	1	2	3
56. Concerns about health in general	1	2	3
57. Not seeing enough people	1	2	3
58. Friends or relatives too far away	1	2	3
59. Preparing meals	1	2	3
60. Writing time	1	2	3
61. Auto maintenance	1	2	3

	SOMEWHAT SEVERE	MODERATELY SEVERE	EXTREMELY SEVERE
62. Filling out forms	1	2	3
63. Neighborhood deterioration	1	2	3
64. Financing children's education	1	2	3
65. Problems with employees	1	2	3
66. Problems on job due to being a woman or man	1	2	3
67. Declining physical abilities	1	2	3
68. Being exploited	1	2	3
69. Concerns about bodily functions	1	2	3
70. Rising prices of common goods	1	2	3
71. Not getting enough rest	1	2	3
72. Not getting enough sleep	1	2	3
73. Problems with aging parents	1	2	3
74. Problems with your children	1	2	3
75. Problems with persons younger than yourself	1	2	3
76. Problems with your lover	1	2	3
77. Difficulties seeing or hearing	1	2	3
78. Overloaded with family responsibilities	1	2	3
79. Too many things to do	1	2	3
80. Unchallenging work	1	2	3
81. Concerns about meeting high standards	1	2	3
82. Financial dealings with friends or acquaintances	1	2	3
83. Job dissatisfactions	1	2	3
84. Worries about decisions to change jobs	1	2	3

	SOMEWHAT SEVERE	MODERATELY SEVERE	EXTREMELY SEVERE
85. Trouble with reading, writing or spelling abilities	1	2	3
86. Too many meetings	1	2	3
87. Problems with divorce or separation	1	2	3
88. Trouble with arithmetic skills	1	2	3
89. Gossip	1	2	3
90. Legal problems	1	2	3
91. Concerns about weight	1	2	3
92. Not enough time to do the things you need to do	1	2	3
93. Television	1	2	3
94. Not enough personal energy	1	2	3
95. Concerns about inner conflicts	1	2	3
96. Feel conflicted over what to do	1	2	3
97. Regrets over past decisions	1	2	3
98. Menstrual (period) problems	1	2	3
99. The weather	1	2	3
100. Nightmares	1	2	3
101. Concerns about getting ahead	1	2	3
102. Hassles from boss or supervisor	1	2	3
103. Difficulties with friends	1	2	3
104. Not enough time for family	1	2	3
105. Transportation problems	1	2	3
106. Not enough money for transportation	1	2	3
107. Not enough money for entertainment and recreation	1	2	3

	SOMEWHAT SEVERE	MODERATELY SEVERE	EXTREMELY SEVERE
108. Shopping	1	2	3
109. Prejudice and discrimination from others	1	2	3
110. Property, investments or taxes	1	2	3
111. Not enough time for entertainment and recreation	1	2	3
112. Yardwork or outside home maintenance	1	2	3
113. Concerns about new events	1	2	3
114. Noise	1	2	3
115. Crime	1	2	3
116. Traffic	1	2	3
117. Pollution	1	2	3

118. HAVE WE MISSED ANY OF YOUR HASSLES?   IF SO WRITE THEM IN BELOW:

_____

APPENDIX C

SOCIAL SUPPORT SCALE

We would like to know your thoughts and feelings about yourself and the people who matter to you. After reading each set of descriptions please tell me which description best applies to you.

DEBBIE	LESLIE	ROBIN
People are devoted to Debbie and love her. They always support her, listen to her and sympathize with her. They care about her a lot.	People are usually fond of Leslie. They can be sympathetic, but do not always listen to her or support her.	People are not devoted to Robin. They do not support her, listen to her or sympathize with her. They do not care about her or love her.

.1 Check one.

☐	☐	☐	☐	☐
I'm like Debbie.	I'm halfway between Debbie and Leslie.	I'm like Leslie.	I'm halfway between Leslie and Robin.	I'm like Robin.

JANE	SONIA	VIKI
People rarely let Jane know that she is wanted. She does not really make a difference to them and they are rarely concerned about her. She does not matter to them.	People sometimes let Sonia know that she matters. Sometimes they think that she makes a difference to them.	People constantly let Viki know that she is wanted. She really makes a difference to them. They are concerned about her and she matters.

.2 Check one.

☐	☐	☐	☐	☐
I'm like Jane.	I'm halfway between Jane and Sonia.	I'm like Sonia.	I'm halfway between Sonia and Viki.	I'm like Viki.

MICHELLE

JILL

PAULA

People always think that Michelle is a friend. They like talking with her and spending a lot of time with her. She always has lots of people around. She is seldom alone.

Jill has friends and is a good person to be with, but she isn't always surrounded by people.

Paula is mostly alone. She rarely sees people or spends time with them. She is most often by herself.

.3 Check one.

☐   ☐   ☐   ☐   ☐

I'm like Michelle.

I'm halfway between Michelle and Jill.

I'm like Jill.

I'm halfway between Jill and Paula.

I'm like Paula.

JENNY

DELORES

SHELLEY

Jenny rarely has a close friend that she can count on. She does not know that they will always be there for her to lean on and she does not support them.

Delores sometimes has a close friend who is there for her and who she can count on.

Shelley always has a close friend that she can count on. She does not have to worry about whether they will be there for her to lean on. She give them the same support

.4 Check one.

☐   ☐   ☐   ☐   ☐

I'm like Jenny.

I'm halfway between Jenny and Delores.

I'm like Delores.

I'm halfway between Delores and Shelley.

I'm like Shelley

CARRIE   RHODA   SHARON

People believe that   Some people have   People rarely believe
Carrie will make the   confidence and faith   that Sharon will make
right decisions and   in Rhoda. Sometimes   the right decisions or
do the right things.   they think that she   do the right things.
They have confidence   will make the right   They hardly ever have
and faith in her.   decisions and do the   confidence in her.
                          right things.

.5 Check one.

I'm like   I'm halfway   I'm like   I'm halfway   I'm like
Carrie.   between   Rhoda.   between   Sharon.
                  Carrie and   Rhoda and
                  Rhoda.   Sharon.

ANNE   JULIE   MARY

Anne rarely spends   Julie sometimes   Mary is almost always
time with other   spends time with   with other people.
people.. When she   other people.   Whenever she wants to
wants to do things,   When she wants to do   do things, she knows
she hardly ever   things, sometimes   that one or another of
has anyone to do   there are other   her friends will be
things with her.   people around to   there to do things
                          do things with her.   with her.

.6 Check one.

I'm like   I'm halfway   I'm like   I'm halfway   I'm like
Anne.   between Anne   Julie.   between   Mary.
                  and Julie.   Julie and
                                                         Mary.

RUTH

Ruth knows that people care a lot about her. She has their attention and support.

GILLIAN

Gillian sometimes has people's attention and support. She sometimes feels that they care about her.

JEAN

Jean is uncertain that people care about her. She gets little attention or support.

.7 Check one.

☐   ☐   ☐   ☐   ☐

I'm like Ruth.

I'm halfway between Ruth and Gillian.

I'm like Gillian.

I'm halfway between Gillian and Jean.

I'm like Jean.

PHYLLIS

Phyllis is rarely admired and praised. There are very few people who think Phyllis is important and worthy.

MARTHA

Martha is sometimes admired and praised by some people. She is not always being reminded of her worth.

TINA

Tina is constantly being admired by people. They always praise her and think that she is important and worthy.

.8 Check one.

☐   ☐   ☐   ☐   ☐

I'm like Phyllis.

I'm halfway between Phyllis and Martha.

I'm like Martha.

I'm halfway between Martha and Tina.

I'm like Tina.

BETH

Beth does not have a lot of different people she can lean on. She does not belong to a group of people who know each other and who would help one another when needed.

FAYE

Faye sometimes has people she can lean on. She belongs to a group of people who sometimes help one another when needed.

KAREN

Karen knows that there are a lot of different people she can lean on. She belongs to a group of many people who know each other and who always help one another out when needed.

.9 Check one.

☐   ☐   ☐   ☐   ☐

I'm like Beth.

I'm halfway between Beth and Faye.

I'm like Faye.

I'm halfway between Faye and Karen.

I'm like Karen.

APPENDIX D

WORK ENVIRONMENT SCALE

The following statements are about the place in which you work. The statements are intended to apply to all work environments. However, some words may not be quite suitable for your work environment. For example, the term supervisor is meant to refer to the boss, manager, department head, or the person or persons to whom an employee reports. You are to decide which statements are true of your work environment and which are false (during the past month). If you think a statement is true or mostly true of your work environment, circle the letter T (true). If you think the statement is false, or mostly false, circle the letter F (false).

		TRUE	FALSE
1.	The work is really challenging.	T	F
2.	People go out of their way to help a new employee feel comfortable.	T	F
3.	Supervisors tend to talk down to employees.	T	F
4.	Few employees have any important responsibilities.	T	F
5.	There is constant pressure to keep working.	T	F
6.	Things are sometimes pretty disorganized.	T	F
7.	There's a strict emphasis on following policies and regulations.	T	F
8.	There's not much group spirit.	T	F
9.	The atmosphere is somewhat impersonal.	T	F
10.	Supervisors usually compliment an employee who does something well.	T	F
11.	Employees have a great deal of freedom to do as they like.	T	F
12.	There always seems to be an urgency about everything.	T	F
13.	Activities are well planned.	T	F
14.	People can wear wild looking clothing on the job if they want.	T	F
15.	A lot of people seem to be just putting in time.	T	F
16.	People take a personal interest in each other.	T	F
17.	Supervisors tend to discourage criticisms from employees.	T	F
18.	Employees are encouraged to make their own decisions.	T	F

19. People cannot afford to relax.   T   F

20. Rules and regulations are somewhat vague and ambiguous.   T   F

21. People are expected to follow set rules in doing their work.   T   F

22. People seem to take pride in the organization.   T   F

23. Employees rarely do things together after work.   T   F

24. Supervisors usually give full credit to ideas contributed by employees.   T   F

25. People can use their own initiative to do things.   T   F

26. Nobody works too hard.   T   F

27. The responsibilities of supervisors are clearly defined.   T   F

28. Supervisors keep a rather close watch on employees.   T   F

29. People put quite a lot of effort into what they do.   T   F

30. People are generally frank about how they feel.   T   F

31. Supervisors often criticize employees over minor things.   T   F

32. Supervisors encourage employees to rely on themselves when a problem arises.   T   F

33. There is no time pressure.   T   F

34. The details of assigned jobs are generally explained to employees.   T   F

35. Rules and regulations are pretty well enforced.   T   F

36. Few people ever volunteer.   T   F

37. Employees often eat lunch together.   T   F

38. Employees generally feel free to ask for a raise.   T   F

39. Employees generally do not try to be unique and different.   T   F

40. It is very hard to keep up with your work load.   T   F

41. Employees are often confused about exactly what they are supposed to do.   T   F

42. Supervisors are always checking on employees and supervise them very closely.   T   F

43. It is quite a lively place.   T   F

44. Employees who differ greatly from the others in the organization don't get on well.   T   F

45. Supervisors expect far too much from employees.   T   F

46. Employees are encouraged to learn things even if they are not directly related to the job.   T   F

47. You can take it easy and still get your work done.   T   F

48. Fringe benefits are fully explained to employees.   T   F

49. Supervisors do not often give in to employee pressure.   T   F

50. It's hard to get people to do any extra work.   T   F

51. Employees often talk to each other about their personal problems.   T   F

52. Employees discuss their personal problems with supervisors.   T   F

53. Employees function fairly independently of supervisors.   T   F

54. There are always deadlines to be set.   T   F

55. Rules and policies are constantly changing.   T   F

56. Employees are expected to conform rather strictly to the rules and customs.   T   F

57. The work is usually very interesting.   T   F

58. Often people make trouble by talking behind others' backs.   T   F

59. Supervisors really stand up for their people.   T   F

60. Supervisors meet with employees regularly to discuss their future work goals.   T   F

61. People often have to work overtime to get their work done   T   F

62. Supervisors encourage employees to be neat and tidy.   T   F

63. If an employee comes in late, s/he can make it up by staying late.   T   F

APPENDIX E

BEM SEX ROLE INVENTORY

We would like you to use the following characteristics in order to describe yourself. That is, indicate, on a scale from 1 to 7, how true of you these various characteristics are. Please do not leave any characteristics unmarked. Place appropriate number in box beside word.   / 78

1	2	3	4	5	6	7
Never or almost never	Usually not true	Sometimes but infrequently true	Occasionally true	Often true	Usually true	Always or almost always true

Self-reliant		Reliable		Warm	
Yielding		Analytical		Solemn	
Helpful		Sympathetic		Willing to take a stand	
Defends own beliefs		Jealous		Tender	
Cheerful		Has leadership abilities		Friendly	
Moody		Sensitive to the needs of others		Aggressive	
Independent		Truthful		Gullible	
Shy		Willing to take risks		Inefficient	
Conscientious		Understanding		Acts as a leader	
Athletic		Secretive		Childlike	
Affectionate		Makes decisions easily		Adaptable	
Theatrical		Compassionate		Individualistic	
Assertive		Sincere		Does not use harsh language	
Flatterable		Self-sufficient		Unsystematic	
Happy		Eager to soothe hurt feelings		Competitive	
Strong personality		Conceited		Loves children	
Loyal		Dominant		Tactful	
Unpredictable		Soft-spoken		Ambitious	
Forceful		Likeable		Gentle	
Feminine		Masculine		Conventional	

X   X   X

APPENDIX F

SUBSTANCE USE AND SIGNIFICANT OTHERS SCALE

We would like some indication of the ways you might choose to cope or help yourself to deal with a difficult situation. Which of the following BEST describes you TODAY?

1. SALLY

Sally rarely or never drinks any alcoholic beverages.

MARIE

Marie occasionally drinks, sometimes a lot, but may go for long periods without drinking.

FAYE

Faye drinks regularly and sometimes too much. She may drink alone.

1. CHECK ONE:

O — I'm like Sally

O — I'm halfway between Sally and Marie

O — I'm like Marie

O — I'm halfway between Marie and Faye

O — I'm like Faye

2. BETTY

Betty is a heavy smoker and has smoked for years. She has failed in her attempts to quit.

RUTH

Ruth previously smoked and still sometimes wishes she could have a cigarette.

WANDA

Wanda has never smoked. She can't identify with the difficulty of quitting.

2. CHECK ONE:

O — I'm like Betty

O — I'm halfway between Betty and Ruth

O — I'm like Ruth

O — I'm halfway between Ruth and Wanda

O — I'm like Wanda

3. MARTHA

Martha eats at mealtime or when hungry and does not think about food otherwise.

JEANNIE

Jeannie finds food relaxing and sometimes resorts to eating when stressed, or bored, or _____?

CAROL

Carol frequently overeats to the point where she gets mad at herself.

3. CHECK ONE

O — I'm like Martha

O — I'm halfway between Martha and Jeannie

O — I'm like Jeannie

O — I'm halfway between Jeannie and Carol

O — I'm like Carol

4. EILEEN

Eileen relies on medication, either prescription or over-the-counter. She sometimes takes more than one kind at a time.

DANIELLE

Danielle occasionally resorts to over-the-counter remedies or prescription drugs.

ELLA

Ella rarely uses any medication and then only as recommended or prescribed.

4. CHECK ONE:

O — I'm like Eileen

O — I'm halfway between Eileen and Danielle

O — I'm like Danielle

O — I'm halfway between Danielle and Ella

O — I'm like Ella

5.   ANNA   CLAIRE   NORMA

Anna's closest friend is a   Claire's closest friend some-   Norma's closest friend
regular and heavy drinker.   times has a drink at an outing. never drinks, even at a
                                                                     party.

5. CHECK ONE:

◯   ◯   ◯   ◯   ◯
I'm like   I'm halfway between I'm like   I'm halfway between I'm like
Anna   Anna and Claire   Claire   Claire and Norma   Norma

6.   BARBARA   KELLY   VICKY

Barbara does not use any   Kelly uses some illegal   Vicky uses many and
illegal drugs.   drugs on occasion.   diverse drugs.

6. CHECK ONE:

◯   ◯   ◯   ◯   ◯
I'm like   I'm halfway between I'm like   I'm halfway between I'm like
Barbara   Barbara and Kelly   Kelly   Kelly and Vicky   Vicky

7.   PATRICIA   DONNA   FRIEDA

Patricia comes from a home   Donna's parents had liquor   Freida comes from a
where heavy drinking occurred.   in the house. Mostly it was   home where there was
There were fights and problems   used in moderation or for   no alcohol, even at parties.
over the drinking.   entertaining.

7. CHECK ONE:

◯   ◯   ◯   ◯   ◯
I'm like   I'm halfway between I'm like   I'm halfway between I'm like
Patricia   Patricia and Donna   Donna   Donna and Frieda   Frieda

YOUR COMMENTS ABOUT FILLING OUT THIS QUESTIONNAIRE ARE MUCH APPRECIATED:

_____

_____

_____

_____

_____

Thank you for your time and attention.

DEVELOPMENT OF THE SUBSTANCE USE AND SIGNIFICANT OTHERS SCALE (SUSO)

The SUSO scale was modelled after Kaplan's (1977) social support scale which assesses the two distinct dimensions of love/esteem and social support. Because addiction studies generally focus on only one or two substances, it was necessary to develop a measure which would provide a substance use score for multiple substances that could be summed for a total substance use measure. Studies which have included many substances have been large national surveys with inappropriate scales. Those scales were overly detailed and unique to substances (i.e., number of ounces of alcohol, pounds overweight, cigarettes smoked) and did not reflect a comparable degree of substance use/abuse on one continuum.

Initially 10 sets of vignettes were developed which dealt with the following:
1. Alcohol

2. Wine and beer

3. Prescription drugs

4. Over-the-counter drugs

5. Illegal drugs

6. Nicotine

7. Food

8. Weight control/concerns

9. Family of origin habits

10. Significant friends behaviour

This original form of the SUSO scale was presented to 10 associates/friends for feedback about intention and clarity of the vignettes. As a result of this feedback, the alcohol and wine and beer vignettes were collapsed to one vignette

dealing with alcohol generally; the prescription and the over-the-counter drug vignettes were collapsed to one dealing with legal drugs; and the vignette around weight control was dropped as it appeared to deal with consequences rather than the food abuse itself. In consultation with experts, each of the vignettes was re-written for greater simplicity and clarity.

The format for each item includes three vignettes representing each of the five substances: the first represents a "no use" or "normal use", the second represents an "at risk" level of use and the third represents "excessive use" or "abuse". A set of vignettes deal with family of origin ranging from no alcohol use to one where there was heavy drinking, and another set deals with a closest friend, ranging from not drinking to regular and heavy drinking. For the purpose of this study the vignettes were written with women's names. A masculine instrument was also prepared for validation testing. Respondents were instructed to indicate which of the three vignettes most resembled their circumstances. An in-between choice was possible for subjects who did not fit exactly in any of the three examples. Scoring is on a range of 1 to 5 for each vignette; with 1 representing "no use", 2 representing "little use", 3 representing an "at risk" level, 4 representing "high use", and 5 representing "abuse" of the substance. A score on one substance is comparable to a similar score on another substance.

This revised 7-item scale was presented to 19 male and female graduate students, ranging from 25 to 45 years, in the Counselling Department, University of British Columbia, for assessment of the face validity and clarity of the statements. Comments and feedback space were provided. None of the students found the vignettes unclear. Concern regarding the instrument was expressed when the respondent was unable to fit clearly within one vignette and had to choose

between two. The possible range of scores was 1 to 25; the students scored between 3 and 10, with a mean of 5.42. This is what would be expected of a group not identified as having an addiction/substance use problem. The inclusion of the family of origin and the significant friend vignettes were questioned as to face validity for substance use.

This revised 7-item scale was then administered to male and female clients at a Alcohol and Drug Counselling Centre (A&D) in Vancouver during the months of January through to March, 1989. (See Appendix G for letter to Drug and Alcohol Centre). In April and May, 1989, the scale was also completed by residents at the Aurora Treatment Centre for Women in Vancouver. (See Appendix H for letter to Aurora Treatment Centre). During this period, a total of 113 men (A&D males) and 61 women (A&D females) from both sources completed the form. Respondents from these sources were expected to score above 10 on substance use as they represent a group already identified as having an addiction problem. The mean score on the five substances for the 61 A&D females was 13.8 and the mean score on the substances for the 113 A&D males was 14.6. Concurrently with the above testing, the revised SUSO scale was administered to 59 female managers during the months of December, 1988 and January, 1989, as part of a follow-up stage of the larger longitudinal research project. The mean score on use of the five substances by these managers was 9.4. A one-way multivariate analysis of variance (MANOVA) with the 5 substance use items, family history of alcohol use, and friends drinking behaviour as dependent measures, was conducted to examine differences between the A&D males and A&D females and the managers groups. The multivariate group effect was significant, $F(14, 448) = 11.93$, $p < .0001$. An examination of the univariate F tests revealed significant group effects for alcohol,

$F_{(2, 230)} = 20.85$, $p < .001$; smoking, $F_{(2, 230)} = 42.13$, $p < .001$; eating , $F_{(2, 230)} = 7.48$, $p < .001$; prescription drugs, $F_{(2, 230)} = 5.99$, $p < .002$; illegal drugs, $F_{(2, 230)} = 30.27$, $p < .001$; friends, $F_{(2, 230)} = 7.20$, $p < .001$; family of origin, $F_{(2, 230)} = 13.89$, $p < .001$. Post hoc analysis, using Scheffé tests, comparing the 59 managers with the 61 A&D females indicated significant differences ($p < .05$) for the alcohol, smoking, prescription drugs, illegal drugs and family background items; with the A&D females scoring higher on each substance. There was no difference on the eating item and no significant difference on the friends' drinking behaviour. Comparison of the managers group with the A&D males group found significant differences ($p < .05$) for every item; with the A&D males scoring higher on every item, except the eating item on which the managers scored higher. Comparison of the A&D males and the A&D females found significant differences ($p < .05$) only on the smoking and eating items. (See Table 5). The difference on the eating item between the two A&D groups may reflect a gender difference. The difference on the smoking item may be a reflection of the eating-difference, i.e., overeaters very frequently do not smoke and smokers frequently show less interest in food. Actually smoking is more closely associated with drinking (Beckwith, 1986; Mello, Mendelson, & Palmieri, 1987). The lower overall mean score for the managers group, compared with the A&D groups, indicates that the SUSO scale discriminates between groups and provides some evidence of construct validity.

The profiles for the A&D males and the A&D females show marked similarities and are quite different from the managers' profile. A surprising result was the high scores for the managers on the friends' behaviour, which was not significantly different from A&D females.

No significant difference was found between the managers and the A&D females on the eating measure. Clients at the drug and alcohol facility would not be solicited on the basis of problems with food and would be responding to a commonly and officially held view of addiction as related to narcotics. Accordingly it is expected that their level of food use/abuse would not necessarily be different than that of the "normal/average" women. Also, food being a very socially acceptable and non-stigmatized form of compulsion (particularly for women) it is not surprising to find the highest managers' scores to be on the eating item, along with alcohol (another "acceptable" legal form of indulgence). Based on the Cronbach's alpha (.40) found for the SUSO using 5 substances and that found when the item on food was removed (.56), a decision was made to eliminate the item on food in the SUSO calculations in the study.

Table 5

Means and Standard Deviations of Items from the Substance Use
and Significant Others Scale (SUSO) for Managers, Alcohol and
Drug (A&D) Females and Alcohol and Drug (A&D) Males

ITEMS	MANAGERS (n=59)		A&D FEMALES (n=61)		A&D MALES (n=113)	
	M	SD	M	SD	M	SD
Alcohol	2.26	1.16	3.15	1.50	3.61	1.30
Smoking	2.04	1.32	3.38	1.56	4.07	1.35
Eating	2.26	1.12	2.26	1.35	1.69	0.94
Prescrip. Drugs	1.60	0.93	2.38	1.58	2.32	1.56
Illegal Drugs	1.24	0.76	2.66	1.47	2.90	1.54
Total Substances	9.40	5.29	13.83	7.46	14.59	6.69
Friends Behav.	2.93	0.72	3.34	1.38	3.64	1.22
Family History	2.88	1.07	3.93	1.15	3.72	1.24

Note: Greater the score, the greater the substance use.

Table 6

Post hoc Analysis Scheffé Tests on Substance Use and Significant

Others Scale (SUSO) in Three Groups; Managers, Alcohol and

Drug (A&D) Females, and Alcohol and Drug (A&D) Males

	Managers/A&D Females		Managers/A&D Males		A&D Females/A&D Males	
	(n=59)	(n=61)	(n=59)	(n=113)	(n=61)	(n=113)
Alcohol	14.17***		41.50***		4.78	
Smoking	28.95***		84.18***		9.56**	
Eating	.01		9.63**		10.55**	
Pres. Drugs	9.10*		10.04**		2.22	
Illegal Drugs	32.62***		57.65***		1.23	
Friends	3.75		14.52***		2.65	
Family	23.85***		19.73***		1.14	

*p<.05, **p<.01, ***p<.001