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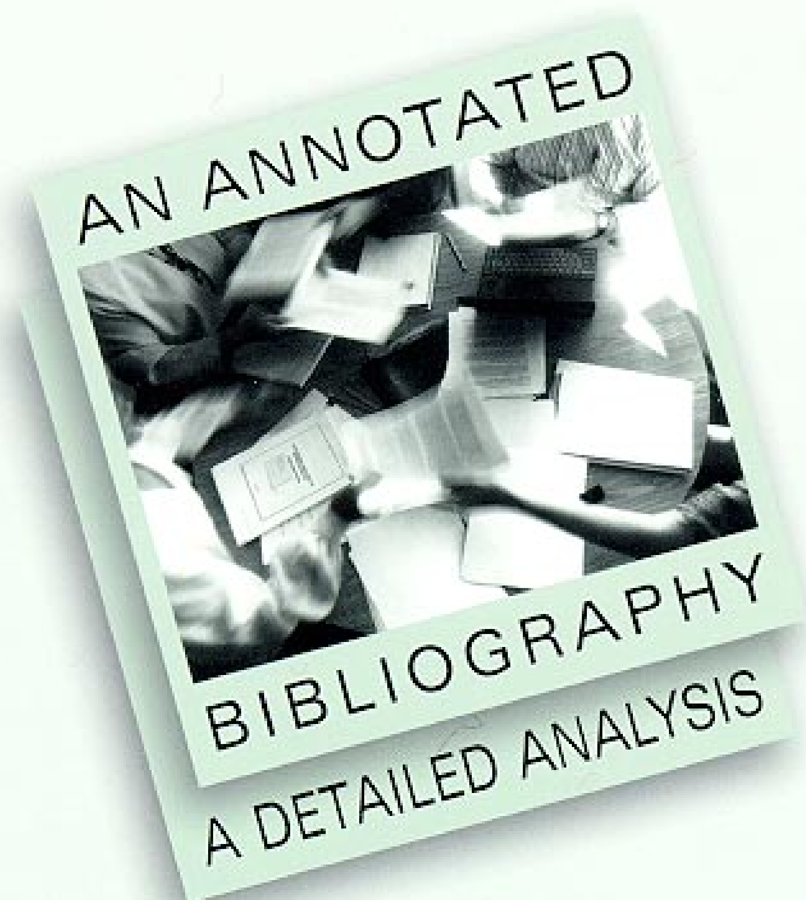
Exploring the Links Between Substance Use and Mental Health



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Health Canada Santé Canada

Exploring the Links Between Substance Use and Mental Health

SECTION I
AN ANNOTATED BIBLIOGRAPHY

SECTION II
A DETAILED ANALYSIS

Canada

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EXPLORING THE LINKS BETWEEN SUBSTANCE USE AND MENTAL HEALTH

SECTION I

An Annotated Bibliography

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INTRODUCTION

Purpose

This Annotated Bibliography is the first product of a three-phase project designed to explore the links and relationships between substance use and mental health. Its purpose is to identify current literature addressing aspects of both domains that illuminate possible links. Annotations are provided of articles, reports, books, and book chapters addressing factors in substance use and mental health separately, as well as articles explicitly identifying commonalities and interrelationships between the two. Literature on prevention and treatment issues that show possible links and relationships are also included. Two other documents, a detailed analysis of the literature, and a discussion paper addressing philosophical and other relevant issues, have also been produced. This project has been undertaken as the first step in a process intended to:

a) develop an increased awareness and understanding about the common links between mental health and substance use;

b) identify gaps and areas that require strengthening or further study and research;

c) assist policy-makers, program and service providers, and others in addressing the issues of mental health and substance use.

The information generated from the project should help to provide direction for prevention programs, treatment interventions, research initiatives and public policy. The project examined the relationship from both directions; that is, the influence of mental health factors on substance use, as well as the impact of substance use on mental health. To provide a context for the Bibliography, these relationships and issues are discussed briefly in the following sections.

The project should help to provide direction for prevention programs, treatment interventions, research initiatives and public policy.

Background

Traditionally, practitioners within the fields of addiction and mental health, respectively, have tended to work independently of one another. The two fields have evolved separately, each with its own scientific and philosophical supports, and each with its own infrastructure, or "system of care". Yet clearly the two domains are highly interrelated. An individual's mental health and the environment in which s/he functions can be affected by periodic or continual use of therapeutic or recreational drugs. Likewise, the extent to which an individual uses certain drugs may be determined by that individual's mental health status. The impact of substance use on

mental health and vice versa is of interest to most Canadians either personally or professionally. Personal lifestyles, the living environment, and the working environment are all affected by this relationship. If Canadians are able to better understand this relationship, they can respond more appropriately when faced with its consequences. We hope that a better understanding will produce public policies that are more sensitive to these issues, strengthen community services directed at mental health and substance use issues, and enhance the public's ability to influence the public good.

Impact of Mental Health Issues on Substance Use

Individuals who possess a large capacity to cope with stress, strong social support networks and healthy lifestyles are probably more likely to use substances appropriately. The use of substances becomes only one of many coping strategies in the individual's overall repertoire. This would suggest that there may be a relationship between some of the predisposing factors to mental illness and substance use.

Many of the issues that are seen to be a threat to mental illness have also been linked to substance misuse, including such things as family dysfunction, low self-esteem, poor coping skills, and limited social support networks. It seems that many of the characteristics associated with poor mental health serve as motivations for increased reliance on substance use. The alcoholism literature supports the notion that many individuals drink alcohol with specific expectations of particular outcomes, such as increased relaxation, increased social comfort, increased feelings of self-worth. In fact, the literature clearly indicates that many individuals "use" substances to "self-medicate" ongoing mental distress or illness.

It seems that many of the characteristics associated with poor mental health serve as motivations for increased reliance on substance use.

Impact of Substance Use on Mental Health

Historically, Canadians have had an ambivalent attitude toward substance use. This is particularly true if such use is for recreational rather than medicinal purposes. Using drugs to enhance one's well-being has been met with a conditional acceptance at one time and an altogether outlawing of the practice at another. Custom or law has determined what constitutes acceptable amounts for consumption, the appropriate settings for that consumption, who the acceptable users are, and which substances may be consumed. Many customs and laws change in response to changing societal mores, yet no single practice is considered acceptable by everyone.

Consequently, substance use to alter one's state of consciousness in order to produce pleasure or even to alleviate pain may be met with scorn or embraced with enthusiasm. A given drug-taking experience may constitute a ceremonial ritual in one setting, a medical intervention in another, a pleasurable

pastime in a third, or considered antisocial deviant behavior in a fourth context. The status of the individual user, the context of use, and the current social acceptability of the practice will determine how a particular form of drug usage will be perceived.

The issue of substance use alone is a complex issue; the examination of the impact of substance use on mental health is extremely complex. Non-problematic use of substances is often seen to have positive impact on mental health, such as relaxation, increased social comfort, and temporary disengagement from life responsibilities. However, this style of substance use may have impacts on individuals that vary greatly, change depending on the situation, and are not always positive (such as increased depression and emotional or social withdrawal). Of course, substance use — with or without addiction — can have detrimental effects on mental health, not only for the user but for others. For example, the relationships between alcohol abuse and alcoholism and family functioning and family violence are well documented, not to mention such outcomes as employment difficulties, family and relationship problems, poor physical health and poor self-esteem. All of these impact on overall mental health.

Finally, there is the issue of individuals experiencing co-morbidity, or some combination of diagnosed mental illness *along with* substance addiction. These individuals are often treated in settings that primarily address only one of the problems while ignoring the other. However, the realization of the importance of treating both issues concurrently is increasing. The frequent co-occurrence of substance abuse and mental health problems has been recognized for many decades, however they appear for many reasons to be increasing in severity and complexity. Addicted individuals appear to be at higher risk for mental health problems and vice versa.

To even begin to address issues such as these we need to know what the state of the art is in research illuminating the possible links and relationships between the two areas. This Annotated Bibliography attempts to capture the flavour of that research.

Format

The Bibliography is divided into four sections, each including an alphabetical list, by author name, of articles and other documents focusing on common ideas and issues, with accompanying annotations encapsulating key document content. Because some articles relate to multiple areas, they may appear in more than one section. Entries have been indexed by author and by subject area to facilitate use of the bibliography. Naturally, each entry will appear in the index under a number of subjects. Annotations include the highlights of the document and significant findings or conclusions. Together, the divisions and their contents should form a background for discussing links between the two areas of theory and practice. However, readers are cautioned that use of the Bibliography can help provide information, but cannot fully replace a direct examination of the literature.

Annotations include the highlights of the document and significant findings or conclusions.

The divisions for the Bibliography are as follows:

I. **Literature on Risk and Protective Factors for Substance Use.** This section includes selected documents exploring the risk and protective factors related to substance use, principally literature examining the demographic, environmental, and psychosocial risk factors associated with substance use. Included in this section are documents dealing with the causes, prevalence, and treatment of compulsive gambling.

II. **Literature on Risk and Protective Factors for Mental Health.**

Because mental health, per se, is a very broad area and the overall purpose was to identify links and relationships between mental health and substance use, this section focuses on articles describing and exemplifying the state of knowledge in the area. Areas of emphasis include protective and risk factors related to mental health and illness.

III. **Literature on Exploring Links between Mental Health and Substance Use.** In this section of the Bibliography, documents are included that explore the relationship between substance use and mental health from both directions; that is, the impact of substance use on mental health and the impacts of mental health on substance use. Although the "positive" roles of substance use in certain settings and conditions are controversial and the preponderance of literature deals with negative impacts rather than positive effects, some research and writing in this area has been sought to ensure a comprehensive and fair discussion of issues. Information sources are annotated that explore the links between substance use and emotional health and the role that substance use plays as a coping mechanism. Documents are also included that examine substance use/abuse as a causal or risk factor in mental or emotional problems or mental disorders, and likewise, articles identifying possible links between mental illness or diagnosed mental disorders and substance abuse.

IV. **Literature on Prevention and Treatment.** This section contains examples of research and writing in prevention of substance use/abuse, and/or the promotion of mental health. In the treatment realm, documents describing treatment modalities for substance abuse or mental disorders, or both (e.g. dual disorders), are included, with an emphasis on those modalities showing links between the two major health areas being examined. Some of these treatment approaches are relapse prevention, the community reinforcement approach, social skills training, and stress management. The literature on dual disorders has been specifically examined for articles related to the costs of dual disorders, in terms of impact on the health care system and on mental health outcomes.

Limitations

No printed bibliography is all inclusive, if only for the simple reason that the literature is being added to almost daily. Literature was examined on factors in mental health and substance abuse both individually and collectively, as was material on prevention and treatment issues. Because the pool of literature is so vast, all the information could not possibly be reviewed, much less included in an affordable document of reasonable length. Therefore, the intent of the Bibliography is not to cover all possible literature, but to include a body of sources that thoroughly exemplifies the breadth of issues. In selecting literature, human error and bias inevitably results in some documents being missed. This is particularly true of unpublished reports that, while often excellent and informative, do not always find their way into traditional databases and information indices.

The intent of the Bibliography is not to cover all possible literature, but to include a body of sources that thoroughly exemplifies the breadth of issues.

Search Parameters

Sources were identified and selected in the following ways:

1. Computer databases (Psychlit, Medline, Sociofile, ERIC) were searched using a variety of key search terms. Priority was placed on literature from Canada and the United States, though some documents from abroad are included.

2. A number of experienced mental health and/or substance use professionals across Canada made suggestions as to areas to be covered in the search; key words to use in guiding computer searches; and any specific documents that should be included.

3. Follow-up searches of reference lists from documents obtained in steps one and two were conducted.

The search stressed documents published in the past ten years, with emphasis on Canadian and American literature although some key documents from abroad are included. All annotations are in English; French language sources are identified by giving the source title in French.

DEFINITIONS

The following definitions apply within the bibliography:

Mental health is defined consistent with the document *Mental Health for Canadians: Striking a Balance*, (Health and Welfare Canada, 1988):

> the capacity of the individual, the group and the environment to interact with one another in ways that promote subjective well-being, the optimal development and use of mental abilities (cognitive, affective and relational), the achievement of individual and collective goals consistent with justice and the attainment and preservation of conditions of fundamental equality (p. 7).

Substance use includes the use of any of a range of substances including tobacco, alcohol, non-prescription and prescription drugs, illicit drugs, solvents and inhalants. This use may range from abstinence, to occasional or regular use, to frequent heavy use, to substance abuse.

Substance abuse, as defined in the World Health Organization's Lexicon of Alcohol and Drug terms, is:

> a maladaptive pattern of use indicated by ... continued use despite knowledge of having a persistent or recurrent social, occupational, psychological or physical problem that is caused or exacerbated by the use [or by] recurrent use in situations in which it is physically hazardous (p.4).

Process addiction implies compulsive engagement in a process (such as gambling) that produces health or economic problems and/or becomes uncontrollable, creating discomfort on withdrawal.

Risk and protective factors include attributes that either seem to protect, or to put individuals at increased risk of encountering or developing emotional or mental health problems and disorders, or abuse substances.

Contextual issues as used in this project relate to issues specific to portions of the population. These include immigrants, women, youth at risk (including street kids), seniors, and first nations peoples. Because the literature does not tend to treat these groups in complete isolation, an effort has been made to include literature recognizing them within the context of larger studies.

I

LITERATURE ON RISK AND PROTECTIVE FACTORS FOR SUBSTANCE USE

A. Substance Use

ADRIAN, M.; LAYNE, N.; AND WILLIAMS, R. T. (1991).
Estimating the effect of native Indian population on county alcohol consumption: The example of Ontario.
The International Journal of the Addictions 25 (5A and 6A): 731-765.

The purpose of this research paper was to test quantitative measures that may be used to measure per capita alcohol consumption among aboriginal peoples in Ontario, while accounting for economic and socio-demographic variables that contribute to differences in alcohol consumption. Using data obtained from the Liquor Control Board of Ontario, Indian and Northern Affairs Canada and the National Native Alcohol and Drug Addiction Program, 48 Ontario counties were surveyed. Alcohol consumption was greater for Aboriginal people residing in the northern counties of Ontario, compared to their southern peers. Aboriginal drinking behaviors appeared to be related to the availability and access to alcohol, and binge drinking was more prevalent when the alcohol supply was irregular. Drinking behaviors appeared to be related to boredom, isolation and discrimination encountered by many Aboriginal people and it is suggested that because entertainment and leisure opportunities and facilities are scarce, many Aboriginal people use alcohol as a form of recreation. As improved economic situations appear to be related to lower levels of consumption, an important area for research as well as for social policy would be to identify and implement strategies to reduce unemployment and poverty among the Aboriginal populations of Canada.

ATKINSON, R.M. (1987).
Alcohol problems of the elderly.
Alcohol and Alcoholism 22 (4): 415-417.

In this editorial paper, Atkinson calls on the medical and academic communities to perform greater research into the area of alcohol abuse by older adults, as an estimated 5% of U.S. men aged 60 and older abuse alcohol. Additionally, mental health professionals estimate that referrals related to alcohol abuse are at least as common as those for heart disease, visual and hearing impairment, and hypertension. In addition to studying how age-related illnesses may be aggravated by alcohol abuse, it is necessary to understand the biological, emotional and psychosocial risk factors which may predispose older adults to alcohol abuse. Furthermore, greater understanding is needed of changing alcohol consumption patterns, especially among women and seniors in higher socio-economic classes; these groups often have greater family and social stability and lower rates of familial alcohol abuse and addiction. Understanding how alcohol consumption patterns may change in response to risk factors and stressors across various points in the life cycle may bring about more rapid and effective diagnosis and treatment of alcohol abuse among the elderly.

It is necessary to understand the biological, emotional and psychosocial risk factors which may predispose older adults to alcohol abuse.

BARBOR, T. F.; HOFMAN, M.; DELBOCA, F. K.; HESSELBROK, V.; MEYER, R. E.; DOLINSKY, Z. S.; AND ROUNSAVILLE, B. (1992).
Types of alcoholics, I: Evidence from an empirically derived typology based on the indicators of vulnerability and severity.
Archives of General Psychiatry 49: 599-608.

Using the empirical clustering technique of data analysis, this study identified types of alcoholics. 321 alcoholic patients were recruited (mean age: males=39, females=37 years) and a reported drinking problem ranging from 7 to 15 years. The study utilized a number of assessment techniques, laboratory tests, and self-report questionnaires. The researchers pre-selected 17 variables as relevant indicators of pre-morbid risk factors, pathological use of alcohol and other substances, chronicity and consequences of drinking and psychiatric symptoms. These variables differentiated the groups, using t-tests, and based on the results, the sample was divided into two types: Type A — later onset, fewer childhood risk factors, less severe dependence, fewer alcohol-related physical and social consequences, and Type B — childhood familial risk factors, earlier onset, greater severity of dependence. Type B were younger and had lower vocational status than Type A. Type B alcoholics returned to heavy drinking sooner than type A.

BARNES, G. M.; AND FARRELL, M. P. (1992).
Parental support and control as predictors of adolescent drinking, delinquency, and related problem behaviors.
Journal of Marriage and the Family 54: 763-776.

Black families (n=211) and white families (n=488) were compared in this study, which found parental support as a predictor of adolescent drinking. The results give strong evidence that parental support and monitoring are the key to prevention of adolescent drinking. Several common notions (e.g. mother's education, social class, single parenting, discipline styles in relation to increase in alcohol abuse) have not been supported by this study. Also, contrary to popular belief, black adolescents drank less than white adolescents and had a lower level of overall deviance. Support and monitoring were the crucial factors in alcohol prediction rather than family structure. When parent-child interaction was problematic, the adolescent was more likely to turn to peer opinion for decisions, thus increasing the risk for substance use and other behavior problems.

The results give strong evidence that parental support and monitoring are the key to prevention of adolescent drinking.

BAUMANN, K.; FISHER, L.; BRYAN, E.; AND CHENOWETH, R. (1985).
Relationship between subjective expected utility and behavior: A longitudinal study of adolescent drinking behavior.
Journal of Studies on Alcohol 46: 32-38.

This one-year panel study of 1,339 grade seven students examined the relationship between perceptions of the roles and effects of alcohol, and subsequent onset of drinking. Subjects beginning to drink during the study tended to perceive alcohol as helping them to feel good, be happy, or forget problems.

BEAUCHAMP, S.; AND BRUNET, J. P. (1994).
Les motifs à l'initiation et à la surconsommation de psychotropes: Le point de vue d'adolescents délinquants.
Psychotropes 8 (3): 91-101.

The purpose of this study was to determine reasons associated with initiation into drug/alcohol use by delinquent teenagers and young adults. Twenty adolescents participated in the interview. Criteria for participation in the study included the following: between 15 and 18 years of age, identified as socially or effectively maladapted, having consumed at least one psychotropic substance within a month of the study, volunteering to participate in the

study and agreeing to enter rehabilitation programs after the interview process. More than half of the subjects identified hashish as the first substance they consumed, with 20% identifying alcohol as their first substance and 5% indicating that they inhaled glue. Over 75% of the subjects indicated that they consumed multiple substances at once, with alcohol and cocaine being the most frequent combination. The reasons cited for substance use were divided into two categories. Internal reasons included desire to experience a particular positive feeling or to avoid certain unpleasant feelings or negative life events. External reasons included expectations from family or friends and desire to participate in certain activities. Generally, external reasons were offered for subjects' initial substance use, such as wanting to imitate and be accepted by peers. Internal reasons were offered for continued use and abuse of substances, such as wanting to forget incidents of abuse or parental alcoholism. The authors conclude by suggesting that since many students are likely to experiment with substances, it may be reactionary to fear that most young people will develop substance abuse problems. However, since there appears to be a link between substance use and delinquent behavior, the authors argue that this segment of the student population should be targeted for research and intervention programs, as they are most likely to experience the negative effects of substance use.

BEAUVAIS, F. (1992).
Characteristics of Indian youth and drug use.
American Indian and Alaska Native Mental Health Research 5 (1): 51-67.

This paper presented a variety of theories explaining drug use among Native youth, including cultural elements, genetic weakness, acculturation stress, self-medication and peer-oriented psychosocial theories. Drug involvement appears to be most strongly linked to substance use by peers, although family influences are also very strong. Risk factors for Native American adolescents include low family caring, age at first intoxication, low academic achievement, weak family sanctions against drug use, positive attitudes toward drug use, lack of father figure in the home and low religious identification. In order to combat drug use by Native youth, it is necessary to create programs which address not only the personal and social factors placing these youths at risk, but also the community characteristics which promote a high drug-use environment.

Drug involvement appears to be most strongly linked to substance use by peers, although family influences are also very strong.

BERTRAND, L. D.; AND ABERNATHY, T. J. (1993).
Predicting cigarette smoking among adolescents using cross-sectional and longitudinal approaches.
Journal of School Health 63: 98-103.

Effective prevention programs require identification of the characteristics of children at risk, and their evaluation requires both cross-sectional and longitudinal data collection. The sample consisted of 7,508 sixth grade students in Calgary high schools. The cohort was tested annually until 9th grade, using a structured self-report Health Behavior Questionnaire. Matches were found across all years for 3,567 students, which formed the data base for analyses. By grade nine, 19.7% males, and 27% females reported current smoking. Factor analysis on items from the questionnaire produced five factors termed: peer influence, self-esteem, mental health, parent/child relationship, and leisure time activities. Using discriminant function analysis, interpersonal variables, particularly peer influence, emerged as the best predictors of smoking.

Interpersonal variables, particularly peer influence, emerged as the best predictors of smoking.

BOYLE, M. H.; OFFORD, D. R.; RACINE, Y. A.; FLEMING, J. E.; SZATMARI, P.; AND LINKS, P. S. (1993).
Predicting substance use in early adolescence based on parent and teacher assessments of childhood psychiatric disorder: Results from the Ontario Child Health Study follow-up.
Journal of Child Psychology and Psychiatry 34 (4): 535-544.

This study examines the predictive value of psychiatric disorder, school performance, family functioning, and family income on future drug use for young adolescents in Canada. The data used in this study were collected as part of the Ontario Child Health Study in 1983 and followed up in 1987. The sample included 770 families with children where teacher assessment data was available, and 872 families where children and family assessment data was available. Data included interviews with female heads of household and adolescents aged 12-16, and a problem checklist completed by the teachers of children in the family. The issues addressed within the area of psychiatric disorder included conduct disorder, attention deficit disorder, and emotional disorder (anxiety and depression). Measures of adolescent substance abuse included tobacco use, alcohol use, marijuana and hard drug use. School performance was measured by history of grade failure or remedial education; family dysfunction was measured with the McMaster Family Assessment Device; and income was assessed by examining total family annual income in the most recent year. The findings indicated that teacher-assessed conduct disorders were positively associated with alcohol

and hard drug use. Low income and poor school performance were found to be related to tobacco use. The study did not find any relationships between attention deficit disorder or emotional disorders and substance use.

BROOK, J.; NOMURA, C.; AND COHEN, P. (1988).
A network of influences on adolescent drug involvement: Neighbourhood, school, peer, and family.
Genetic, Social, and General Psychology Monographs 115 (1): 123-145.

Adolescent drug use was studied in the context of neighbourhood and school variables, as well as peer and family influences. Five hundred and eighteen subjects in the United States between 9 and 18 years and their mothers were interviewed to determine the interrelationship of these multiple factors. Family and peer variables had the most impact.

BROOK, J.; WHITEMAN, M.; GORDON, A. S.; AND COHEN, P. (1989).
Changes in drug involvement: A longitudinal study of childhood and adolescent determinants.
Psychological Reports 65: 707-726.

Personality and behavioral factors are studied among 653 American children, at three points — age 1-10 years, 9-18 years, and 11-20 years. Interviews were conducted at each point with both the children and their mothers. Factors found to predict drug involvement were lack of conventionality, anger, reduced control of emotions, rebelliousness, and tolerance of deviance. The strongest predictors related to lack of conventionality. Temper and anger were found to correlate negatively with other factors such as achievement, and to predict early onset and continued drug use.

BROWN, P.; AND SKIFFINGTON, E. (1987).
Patterns of marijuana and alcohol use attitudes for Pennsylvania 11th graders.
International Journal of the Addictions 22: 567-573.

This study compared alcohol-related attitude scores with the drinking patterns of 3,568 Pennsylvania adolescents. Not surprisingly, attitudes toward drinking were closely correlated with actual use patterns. Abstainers were most negative in their attitudes toward drinking.

BROWN, S. A.; CHRISTIANSEN, B. A.; AND GOLDMAS, M. S. (1987).

The alcohol expectancy questionnaire: An instrument for the assessment of adolescent and adult alcohol expectancies.

Journal of Studies on Alcohol 48 (5): 483-491.

This study explores the effectiveness of an instrument to measure the effects that individuals expect from alcohol. The instrument was examined with both adults and adolescents. Adult expectancies were identified as: global positive changes, sexual enhancement, physical and social pleasure, increased social assertiveness, relaxation and tension reduction, and arousal and aggression. Adolescent expectancies were identified as: global positive changes, changes in social behavior, improved cognitive and motor abilities, sexual enhancement, cognitive and motor impairment, increased arousal, relaxation and tension reduction. The findings of the study support the worth and quality of these two measure of expectancies and suggest that there is a positive relationship between alcohol use expectancies, alcohol consumption, and behavior while using alcohol.

CAMPEAU, N. (1989).

La nicotine: Une autre dépendance chimique.

L'Intervenant 6 (1): 10-11.

This paper discusses some facts associated with smoking and some issues necessary for successful treatment and cessation of smoking. Chemically, cigarettes are comprised of nicotine (a stimulant) and acetaldehyde (a suppressant), substances that serve to calm the individual while simultaneously making him/her more alert. The chemical composition of cigarettes affects every major system of the body; it is known that nicotine is more addictive than any other substance, including cocaine. The symptoms of nicotine withdrawal are similar to those of other substances, including anxiety, irritability, difficulties with concentration, emotional instability and reduced resistance to stress. Treatment often consists of two phases; a period of detoxification, and a period of behavioral retraining to teach more effective coping strategies. Persons who use multiple substances are encouraged to quit all of them simultaneously in order to prevent the development of subsequent addictions. A component of behavioral retraining should be the development of proper eating habits, as many individuals are likely to gain weight once they quit smoking. Methods such as Smokers Anonymous and acupuncture have also been effective in curtailing smoking since they address not only the physical but the psychological components of nicotine addiction.

A component of behavioral retraining should be the development of proper eating habits, as many individuals are likely to gain weight once they quit smoking.

CARLISLE-FRANK, P. (1991).
Examining personal control beliefs as a mediating variable in the health-damaging behavior of substance use: An alternate approach.
Journal of Psychology 125 (4): 381-397.

This article reviews the concept of internal and external locus of control, and personal beliefs about this control, as a factor in substance use. The author notes that research has been inconsistent in determining that internal locus of control is linked with drug use and abuse. She offers the explanation that individuals do not have a single, homogeneous sense of personal control, but rather may have internal control in some areas and external control in other areas. In these cases, individuals may actually "learn" the external control through experience. Carlisle-Frank acknowledges that this hypothesis must be tested empirically.

Individuals do not have a single, homogeneous sense of personal control, but rather may have internal control in some areas.

CARLSON, B. R.; AND DAVIS, J. L. (1988).
Demographic variables and recreational substance use among college students.
Journal of Drug Education 18 (1): 71-79.

The purpose of this study was to identify specific socio-demographic variables which would be most linked to the recreational use of substances by students. 832 students attending a large southwestern university in the U.S. completed selected portions of the Wellness Activity Profile. Socio-demographic variables associated with substance use, especially of marijuana, included being male, having a liberal political orientation, higher parental income, and having scored lower on high school GPA. Additionally, the data indicated that students who currently used alcohol or smoked cigarettes were more likely to experiment with marijuana and eventually with other illicit drugs. Consequently, it would appear that as use of marijuana is associated with subsequent use of other illicit drugs, greater emphasis should be placed on deterring students from experimenting with this drug at the outset to prevent further drug use and its resulting problems.

CARMODY, T. P.; BRISCHETTO, C. S.; MATARAZZO, J. D.; O'DONNELL, R. P.; AND CONNOR, W. E. (1985).
Co-occurrent use of cigarettes, alcohol, and coffee in healthy, community-living men and women.
Health Psychology 4 (4): 323-335.

This study examines the use of cigarettes, alcohol and coffee in two samples of individuals (a male subsample consisting of 226 individuals, and a

female subsample consisting of 245 individuals) through the use of a self-report questionnaire. The results suggest that smokers and ex-smokers were more likely to drink greater amounts of alcohol and coffee. Alcohol and coffee use was also positively related, in that those individuals who drank more alcohol also drank more coffee. In addition, the number of cigarettes smoked per day was related to alcohol and coffee use in the males.

CAROSELLI-KARINJA, M. (1985).
Drug abuse and the elderly.
Journal of Psychosocial Nursing 23 (6): 25-30.

This paper identifies some of the major issues related to drug abuse among older adults. Since many seniors frequent a number of doctors for a variety of ailments, it is not surprising that the elderly are often overusing prescription medication, and sometimes unknowingly combining medications that can react negatively with each other and put the patient at risk. Older adults are also likely to self-medicate with over-the-counter drugs, or to use psychotropic drugs such as tranquilizers as a means of coping with the loneliness and depression that often occurs as a result of decreased activity, the death of family and friends, loss of independence and so on. The problem of medication underuse due to forgetfulness or financial constraints can also negatively affect the health of older adults; erratic use of necessary medication may also impact on their physical and emotional health. Factors that would contribute to eliminating substance abuse by seniors include: greater awareness of the psychological, sociological and physiological variables associated with elders' drug abuse, and greater interaction between seniors and their families and communities to promote drug-free living.

CARRUTHERS, C.; AND HOOD, C. (1994).
Alcohol use in leisure.
Journal of Leisurability 21 (1): 3-12.

This article explores the relationship between alcohol use expectancies and qualities of the leisure experience. It is suggested that many of the qualities or changes individuals anticipate from drinking alcohol are related to critical dimensions of the leisure experience. The expectancies associated with alcohol use include: positive mood change, social comfort, relaxation and tension reduction, and arousal. These expectancies are seen to be directly linked to leisure in that positive mood, social comfort, relaxation, and arousal are both prerequisites and outcomes of quality leisure involvement. It is suggested that some individuals may drink to enhance the

It is suggested that many of the qualities or changes individuals anticipate from drinking alcohol are related to critical dimensions of the leisure experience.

"leisure-like" qualities of the situation or experience. Implications for prevention and treatment programs are also discussed.

CHABOT, R. (1978).
La situation de la femme alcoolique au Québec.
Toxicomanies 11: 131-141.

This review of the literature regarding women and alcohol debunks the myth that men and women are identical in the physical, social and psychological aspects of alcohol abuse and addiction. Citing statistics which suggest that at least five percent of any given population suffers from alcoholism, the author declares that it is not unreasonable to assume that at least 50,000 women in Quebec are alcoholic. Chabot argues that it is quite likely that the number is higher due to the number of women who are not diagnosed as alcoholic but who suffer the consequences of alcohol abuse. Some of the new discoveries regarding alcoholism among women include: 1) similarities to men in the physical risks and consequences of frequent intoxication; 2) the ratio of male to female alcoholism is 3 to 1; 3) the fathers and husbands of female alcoholics are often themselves alcoholics; 4) women are more likely to use alcohol in a self-medicating manner, to lessen the emotional pain associated with divorce, death of a loved one, unemployment, loss of a boyfriend, etc.; 5) women become intoxicated more rapidly than men, and become alcohol dependent more rapidly than men due to the differences in body composition; 6) women who seek treatment are often more physically and psychologically deteriorated than their male peers, often because their alcoholism remains undetected for a much longer period of time.

This literature review debunks the myth that men and women are identical in the physical, social and psychological aspects of alcohol abuse and addiction.

CHEUNG, Y. W. (1990-91).
Ethnicity and alcohol/drug use revisited: A framework for future research.
The International Journal of the Addictions 25 (5A and 6A): 581-605.

This discussion paper describes the limitations of the traditional methods used to distinguish between ethnic groups and to elicit from members of various ethnic groups information concerning substance use. The two primary means of obtaining necessary data were through studies of known addicts, and from self-report studies of the general, non-institutionalized public. However, both of these offer a number of methodological limitations, most notably that information may be biased or inaccurate due to the inability to access non-diagnosed addicts or due to personal error, forgetfulness or deliberate under-reporting of substance use. Additionally,

conceptualizations of ethnicity often do not incorporate factors and influences at both the individual and community level. This adds further difficulty to evaluating the role ethnicity may play in the development of attitudes and behaviors toward substance use. The author notes that greater attention must be paid to these issues if any degree of accuracy and usefulness is to be achieved from research on ethnicity and substance use.

CHEUNG, Y. W. (1993).
Approaches to ethnicity: Clearing roadblocks in the study of ethnicity and substance use.
The International Journal of the Addictions 28 (12): 1209-1226.

This article identified and explored some of the common methods by which the concept of ethnicity is defined and used in the study of substance use. The author discusses the difficulties associated with using the concept of ethnicity as defined by race, country of origin, and symbolic identification with a particular cultural group or community. The author asserts that a multitude of differences may exist within a particular cultural or racial group due to demographic variables, religion, and immigration, so that no generic definition of ethnicity can be established. Therefore, persons wishing to study the issue of ethnicity and substance use, or to design and implement treatments and interventions for ethnic groups should utilize a multi-intracultural approach that recognizes differences and responds to them.

Persons wishing to study the issue of ethnicity and substance use, or to design and implement treatments and interventions for ethnic groups should utilize a multi-intracultural approach that recognizes differences and responds to them.

CLAYTON, R.; AND RITTER, C. (1985).
The epidemiology of alcohol and drug abuse among adolescents.
Advances in Alcohol and Substance Abuse 4 (3-4): 69-97.

This major review of the epidemiology, or causes and patterns, of substance abuse among adolescents, discusses the psychosocial correlates of drinking among teens, as well as describing demographic aspects related to use patterns. For example, differences in alcohol consumption between male and female adolescents are decreasing.

COOMBS, R. H.; AND LANDSVERK, J. (1988).
Parenting styles and substance use during childhood and adolescence.
Journal of Marriage and the Family 50: 473-482.

The authors investigate parent-youth relationship and its effect on substance use in a sample of 443 youths (aged 9-17). In this sample, 112 (11% age 9-13 and 42% age 14-17) used substances everyday; 159 have abstained from substance use. Of the users, 67.5% reported no warm feelings toward their parents. Non-users considered it more important to get along with parents and perceived parents as role models. The parents of non-users were encouraging and appreciative of their children, felt the importance of interpersonal trust and typically had strict rules. Fathers of non-users were more involved with family matters and were closer to the child. Rather than punishing, parents maintained control by setting rules and reinforcing the children with praise for abiding by rules. By contrast, users came from distant parent-child relationships (especially with the father), where parents were cold and not encouraging.

COOPER, M.; CORRADO, R.; KARLBERG, A.; AND PELLETIER-ADAMS, L. (1992).
Aboriginal suicide in British Columbia: An overview.
Canada's Mental Health 40 (3): 19-23.

This article reviews the results of a B.C. study of Aboriginal suicide. Among the conclusions: suicide among Aboriginal peoples living off reserve are comparable to those among the non-Aboriginal populations; the rate of suicide on reserves is over twice that of the rest of the population. These are often young adult men with a history of personal and familial alcohol abuse and violence.

CORMIER, D. (1974).
Inhibitions personelles lors du passage du cannabis aux drogues fortes.
Toxicomanies 7: 135-145.

The purpose of this study was to examine the differences in personal inhibition between users of cannabis and users of highly addictive drugs such as LSD and cocaine. One hundred and eighty students from the Quebec school system, aged 16 to 23, were given tests to measure their levels of anxiety, self-perception, and personal orientation. The results obtained indicate that users of cannabis scored between the non-drug using participants and those who used highly addictive drugs. Cannabis users indicated that the primary reason they did not experiment with heavier drugs was their anxiety regarding the social stigma which might result from total disregard of social mores concerning drug use. With regard to self-perception and its impact on behavior, both cannabis and heavy drug users

indicated feeling inadequate and having a negative self-image, although negative feelings concerning self were greater among heavy drug users than cannabis users. Finally, with regard to personal orientation, cannabis users did not differ greatly from their non-using peers. However, they did indicate less tendency to recall unpleasant past experiences and to use drugs as a compensatory and self-medicating measure than those using more addictive drugs.

DEFRONZO, J.; AND PAWLAK, R. (1994).
Gender differences in the determinants of smoking.
Journal of Drug Issues 24 (3): 507-516.

This study explored the impact that childhood characteristics and social bonds exerted on later smoking behaviors, as well as whether these factors affected men and women differently. Data from 845 Americans responding to a general social survey for the National Opinion Research Center were used. The results conclude that education was negatively correlated with the smoking behavior of both men and women. Religious belief was among the strongest deterrents against smoking for women, while work satisfaction and financial satisfaction was the strongest deterrent for men. A history of being abused as a child appeared to promote smoking only in men. The authors offer the possible explanation that men may be less able to cope with the emotional and psychological stresses associated with childhood abuse.

Religious belief was among the strongest deterrents against smoking for women, while work satisfaction and financial satisfaction was the strongest deterrent for men.

DENTON, S. E.; AND KAMPFE, C. M. (1994).
The relationship between family variables and adolescent substance abuse: A literature review.
Adolescence 29: 475-495.

This review article looks at the relationship between parents and adolescents in relation to adolescence substance abuse. The authors divide the literature under two broad categories: 1) family drug use patterns, and 2) family atmosphere. A review of 18 studies is presented. All studies reported a positive association between the parent(s) pattern of drug use and the children's pattern. Also, younger siblings appeared to pattern their own use after older brothers or sisters. Under the category of family atmosphere, most research indicates that significant numbers of drug users were raised in single parent homes.

DIELMAN, T.; LEECH, S.; LORENGER, A.; AND HARVATH, W. (1984).
Health locus of control and self-esteem as related to adolescent health behavior and intentions.
Adolescence 19 (76): 935-950.

A cross-sectional study was conducted on 611 grade five and six students using a health behavior and attitudes questionnaire, and questions about past and present behavior and future intentions of selected drug use. Findings did not support the development of drug use prevention programs based on internal locus of control or the enhancement of self-esteem.

ELIANY, M. (1991).
Alcohol and drug use.
Canadian Social Trends 20: 19-26.

This article reports on the findings of the 1989 National Alcohol and Other Drugs Survey (NADS) collected by Statistics Canada. The sample consisted of almost 12,000 Canadians aged 15 and over from all ten provinces. The article summarizes the results of alcohol, over-the-counter and prescription drug use. Findings are presented for each related to prevalence, geographical differences in patterns of use, age and gender differences, relationship to socio-economic status, and problems related to use.

GRAHAM, K.; CARVER, V.; AND BRETT, P. (1995).
Alcohol and other drug use among older women: Results of a national survey.
Canadian Journal on Aging (in press).

This report examines substance use patterns among women aged 65 and over using the 1989 Canadian Alcohol and Other Drugs Survey (CADS). Among the women studied, use of alcohol was more moderate than among younger women, and lower levels of use were associated with religiosity. Smoking was related to poorer health, fewer social supports, and use of other substances. Psychoactive prescription drug use was associated with being widowed, experiencing greater stress, having lower income, and less social support. Use was highest among younger women. The findings suggest this group may be the gender-age group with the highest use of psychoactive prescription drugs.

Psychoactive prescription drug use was associated with being widowed, experiencing greater stress, having lower income, and less social support.

GROENEVELD, J.; AND SHAIN, M. (1989).
Drug Use Among Victims of Physical and Sexual Abuse.
Toronto: Addiction Research Foundation.

This report describes the results of the Domestic Violence Research Project, carried out among Ontario women aged 18 and older. The project obtained a profile of substance use patterns among the women. The highest prevalence of licit drug use (e.g. alcohol, prescription medications such as anxiolytic drugs) was reported among women currently experiencing or having experienced sexual or physical abuse.

HARVEY, R.; FOREST, C.; AND MERCIER-TREMBLAY, C. (1977).
Alcoolisme et activités loisirs.
Toxicomanies 10: 319-329.

The purpose of this study was to examine the ways in which alcoholics perceive and approach their leisure time and recreational experiences. Between December 1976 and May 1977, 100 male clients admitted to l'Hôpital St-Charles de Joliette in Quebec for treatment were asked to reply to a 96-item questionnaire and respond to interview questions regarding their leisure lifestyle. Passive and social leisure experiences requiring little effort and commitment were most frequently cited as regular recreational activities. Many of the respondents did not believe leisure and recreation to be as important to their health, happiness and well-being as their occupation. Recreational activities which enabled participants to be in close proximity to and/or consume alcohol, such as gambling, frequenting bars, taverns, nightclubs and so on were also highly popular forms of leisure. Mainstream recreational activities such as movies, carnivals, zoos, coffee with friends and volunteer work were less frequently cited. Indoor activities such as crossword or jigsaw puzzles, and indoor sports such as boxing, judo and karate, were less popular activities. Outdoor recreational activities and sports were listed among the least popular activities. The authors conclude that since many of the respondents crave rewarding activity, as observed through their work ethic, yet claim to find little fulfilment through leisure activities, more emphasis should be placed on incorporating sports and outdoor activities into treatment programs for alcoholics. This would enable them to experience greater pleasure and enjoyment from life without alcohol, as well as improve their physical and psychological health.

Many of the respondents did not believe leisure and recreation to be as important to their health, happiness and well-being as their occupation.

HAWKINS, J. D.; CATALANO, R. F.; AND MILLER, J. Y. (1992).
Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: Implications for substance abuse prevention.
Psychological Bulletin 112 (1): 64-105.

This paper outlines the risk and protective factors associated with adolescent substance use identified in research, and how these may influence the development of intervention programs targeted toward this age group. Issues discussed include contextual factors related to substance use, individual and interpersonal factors, current prevention programs and strategies that address these early risk factors, and methodological concerns regarding research evaluating these interventions. The authors indicate that greater understanding is needed of the relationship between risk and protective factors and their influence on substance use and abuse in programs that foster life skills, particularly intra-personal and interpersonal skills. This may be useful in combating the lack of self-efficacy and isolation felt by many youthful drug abusers. However, current strategies have been shown to have at least short-term effects on substance use by this age group and should continue to be implemented and improved.

HAWKINS, J.; LISHNER, D.; CATALANO, R.; AND HOWARD, M. (1985).
Childhood predictors of adolescent substance abuse: Toward an empirically grounded theory.
Journal of Children in Contemporary Society 12: 11-48.

In this landmark article, the authors offer twelve overall risk factors forming a predictive model for adolescent substance abuse. Key risk factors include family drug use, friends' use of substances, academic failure, alienation from school, lack of social bonding, lack of conformity to conventional norms, and early onset of use.

HEALTH AND WELFARE CANADA. (1990).
Canada's health promotion survey: Technical report.
Ottawa: Minister of Supply and Services.

The national survey of health knowledge, attitudes, and practices provides trends based on several demographic variables such as age, region, gender, and income. Drinking, drug use, and smoking behaviors are included.

HEATH, D. B. (1990-91).

Uses and misuses of the concept of ethnicity in alcohol studies: An essay in deconstruction.

The International Journal of the Addictions 25 (5A and 6A): 607-628.

This paper addresses the importance of ethnicity as a variable in research on the uses and abuses of alcohol in our society. Although the author believes that the concept of ethnicity in general can be useful to classify, categorize and discuss the variation in beliefs and behaviors towards alcohol, definitions of what ethnicity is and how it impacts those beliefs and behaviors have been poorly used. The inadequacies of defining ethnicity as bureaucratic model, as biological model, as national heritage, and as religion in the study of alcohol use are explored. Furthermore, the risk of mixing definitions of ethnicity by using variables from each of these models is explored. For example, comparing the heterogeneous group of Roman Catholics to the specific group of Mormons or by comparing the religious group of Jews to the national grouping of Poles or Italians is like mixing apples and oranges. The author contends that commonly used definitions of ethnicity are contrived by persons who intend to make classifications, with no uniform definitional basis or set of distinguishing criteria from one researcher to the next. The concept of ethnicity can be of importance in understanding the cultural, religious and psychological relationships a particular group may have regarding the use of alcohol. However, greater care must be taken to define ethnicity, using more homogenous variables to avoid confusing the issues.

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HIBBARD, J. H. (1993).

Social roles as predictors of cessation in a cohort of women smokers.

Women and Health 12 (4): 71-80.

This study sought to examine the social role factors and stressors associated with women's smoking and their subsequent cessation of smoking. One hundred and sixty-eight women in the western United States responded to a mailed questionnaire that measured social role variables such as marital, parental and work roles. Marital and parental roles, and the stresses associated with these appeared to exert little influence on smoking cessation behaviors. However, women with greater work satisfaction and greater social and material resources for coping with stress were more likely to quit smoking than those with lower job status and less control over their work. Women heading single parent households were the group most likely to maintain their smoking habits in order to cope with the stresses of daily living, illustrating the importance of close social support in smoking cessation.

HUGHES, S. O.; POWER, T. G.; AND FRANCIS, D. J. (1992).
Defining patterns of drinking in adolescence: A cluster analytic approach.
Journal of Studies on Alcohol 53: 40-47.

The authors report a United States study which sought to develop and test a method of identifying patterns of adolescent drinking. 84% of 189 (85 male, 104 female) high school students reported drinking in the past year. Factor analyses with non-orthogonal rotations were conducted separately on four aspects of drinking: quantity and frequency, social context, reasons for drinking, and consequences of drinking. Factor scores, extracted from the first three categories, were used in a cluster analysis, and drinking profiles constructed for males and females separately. Four socially appropriate drinking patterns and three problem drinking patterns emerged. The problem drinking patterns showed significant differences in reasons for drinking, and in drinking consequences, and were labelled male school drinkers, male solitary/stranger drinkers, and female solitary/school drinkers.

Four socially appropriate drinking patterns and three problem drinking patterns emerged.

JESSOR, R. (1987).
Problem-behavior theory, psychosocial development, and adolescent problem drinking.
British Journal of Addiction 82: 331-342.

This theoretical article reviews the framework of problem-behavior theory as an explanation of alcohol and drug abuse/misuse and other problem behaviors. The major premise of problem-behavior theory is that drinking behaviors are like other learned behaviors in that they are functional, purposive, and instrumental in the attainment of goals. "The goals that are attached to drinking, the meaning it has for the drinker, the various ways in which alcohol comes to be used, and even its experienced and observed effects, were all shaped by the norms and expectations of the larger culture and by the particular experiences a young person has had in the more immediate context of everyday life" (p.331). The article goes on to review various research studies which have utilized this theoretical framework and suggests future uses of the theory and directions for research.

JOHNSON, K. A.; AND JENNISON, K. M. (1992).
The drinking-smoking syndrome and social context.
The International Journal of the Addictions 27 (7): 749-792.

This study examined the relationship between smoking, drinking, and social affiliation/social context in a national sample of 6,072 individuals in the United States. The authors propose that the mix of alcohol and nicotine

creates a physiological response which is greater than the physiological response to either substance in isolation and they present a summary table of recent literature which examines this relationship. They also list the motivations for nicotine and alcohol use as facilitation of social interaction, relief from stress and anxiety, increased positive affect, and the desire for social acceptance. The data used in this study were derived from the General Social Surveys (1978, 1980, 1983, and 1984). Data were collected through personal interviews which contained questions covering a broad range of social issues. There were three main findings arising from this study. First, the results indicate that the socio-demographic characteristics of individuals who smoke and drink alcohol are more similar to those who drink excessively, than to smokers. The former are single individuals in white collar or professional occupations, while the latter are blue collar, less educated individuals. Second, smokers were much more likely to drink excessively than non-smokers and heavy drinkers were more often smokers than non-smokers. Third, the relationship between smoking and alcohol use was found to be influenced by social context. The authors suggested that interpersonal factors may be more influential in the development and maintenance of drinking and smoking behaviors than psychological or individual attributes taken in isolation.

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KANDEL, D.; AND ANDREWS, K. (1987).
Processes of adolescent socialization by parents and peers.
The International Journal of the Addictions 22: 319-342.

This article is based on longitudinal research by the authors on the onset and continuance of drug use, including alcohol and tobacco, among teens in New York State. The authors report that peer use and attitudes, and parental use and attitudes, most strongly influence the decision to use substances, as well as the pattern of use.

KANDEL, D.; SIMCHA, F. O.; AND DAVIES, M. (1986).
Risk factors for delinquency and illicit drug use from adolescence to young adulthood.
Journal of Drug Issues 16 (1): 67-90.

This study sought to examine the variables involved with prolonged illicit substance use and delinquency from adolescence into adulthood. 1,004 adolescents enrolled in American public schools were interviewed several times over a 9-year period, beginning when they were 15-16 years until they were 24-25 years. The persistence of illicit drug use into adulthood was greater than that of delinquency, and was higher among men than women. For men, early illicit drug use predicted continued adult drug use,

while for women early drug use predicted adult delinquency. However, prevalence rates of interpersonal aggression in adulthood were not affected by illicit drug use in adolescence.

KROHN, M.; AKERS, R.; RADOSEVICH, M.; AND LANZA-KADUCE, L. (1982).
Norm qualities and adolescent drinking and drug behavior: The effects of norm quality and reference group on using and abusing alcohol and marijuana.
Journal of Drug Issues 12: 343-359.

The authors conducted a study of the predictive effects of norm reference groups on the use of marijuana and alcohol among a large group of American adolescents. Based on this and other studies, a model is offered discussing the role of normative climate in substance use. The norm climate is created by the interplay of attitudes, values, and behaviors of friends, family, and formal and informal networks. Three categories of norm climate with reference to use of substances are described. These are *proscriptive,* where use is not sanctioned at all, *prescriptive,* where use is sanctioned under certain circumstances, and *permissive,* where use is sanctioned without controls.

LAFOREST, L. (1976).
L'usage quotidien de l'alcool et du tabac: deux habitudes de vie liées au système d'interaction sociale.
Toxicomanies 9: 73-79.

In this editorial, Dr. LaForest relies on information obtained from his doctoral thesis to propose that the medical approach to alcohol dependence and addiction, and the treatments offered by that discipline are unfounded and inadequate. Since there is not one specific, identifiable physical cause for alcoholism, nor is there a successful medical cure for the disease, LaForest rejects the medical model of addiction and counters that it is more important to study the general and specific aspects of individual and social deviance to understand the problem of alcohol abuse. Studying the drinking behaviors of 519 heads of household and the smoking behaviors of 656 students in Quebec, the author contends that the primary reasons cited by both groups for their consumption behaviors were sociological in nature. Discontent with the economy, job loss, lack of geographical mobility, discontent with their socio-economic status and so on were the primary reasons cited for general substance use. With regard to substance overuse and abuse, the primary reasons cited by both groups were more psychological in nature, including anomie, alienation and loneliness. The individual's

With regard to substance overuse and abuse, the primary reasons cited by both groups were more psychological in nature, including anomie, alienation and loneliness.

own tolerance of the norms governing social deviance then impacted upon how deviant s/he would become with his/her own behaviors, such as physical aggression and violence. Thus, effective treatment should focus on both sociological and psychological deviance influencing the alcoholic and enable him/her to deal more effectively with those sources of conflict.

LEGGE, C.; AND SHERLOCK, L. (1990-91).
Perception of alcohol use and misuse in three ethnic communities: Implications for prevention programming.
The International Journal of the Addictions 25 (5A and 6A): 629-653.

The purpose of this study was to explore the degree and extent of alcohol use, reasons for excessive use, and negative consequences of overuse within the Chinese, Indo-Pakistani and Latin American communities residing in the province of British Columbia. 205 youth and parents from these communities were interviewed. Findings indicated that the three groups differed to some extent in their tolerance of drinking among the sexes, their perceptions of alcohol consumption patterns and what constitutes problem drinking, and their reasons for excessive alcohol use. Similarities between the groups included greater tolerance for both drinking and excessive drinking among men, while women are frequently abstainers or light, infrequent drinkers. Family discord is the primary reason for excessive drinking within all three communities, and although there is recognition of problem drinking within the Indo-Pakistani and Latin American groups, family denial and resistance to treatment is the primary impediment to rehabilitation. Thus, the evidence suggests that greater emphasis on group and family counselling would be an effective aspect of treatment and recovery for all three ethnic communities.

The evidence suggests that greater emphasis on group and family counselling would be an effective aspect of treatment and recovery for all three ethnic communities.

LEIGH, G. (1985).
Psychosocial factors in the etiology of substance abuse.
In *Alcoholism and Substance Abuse: Strategies for Clinical Intervention*, eds. T. E. Bratter and G. G. Forrest, 3-48. New York: The Free Press.

This book chapter reviews a range of factors which are reported to influence substance abuse, which include biological (genetic, biochemical, physiological), cultural (customs, mores, attitudes, social policy), interpersonal (developmental, personality, affect, cognition, gender), interpersonal (social, familial) and environmental (conditioning, learning, life events) influences. Each of these categories is presented as a subsection, with a discussion on how factors may vary in scope and influence at different stages of drug or alcohol use. The chapter concludes with a section on etiologic factors and treatment implications.

MANNING, T. M. (1991).
Perceived family environment as a predictor of drug and alcohol usage among offspring.
Journal of Health Education 22 (3): 144-149.

This United States study examines the relationship between family atmosphere and parenting styles, and patterns of drug use. The literature suggests that individuals from families that are low in support and high in conflict use alcohol and drugs more extensively. A total of 311 individuals participated in this study, completing a questionnaire which assessed family environment. Of these 311 individuals, 200 were from a community college and 111 were from chemical dependency treatment centers. The participants were categorized into three groups based on alcohol and drug use (the low-use group, the heavy-use group, and the addicted group). The groups were then compared to determine differences in the family environment scores. The results indicated that low users perceived their families significantly more positively than did individuals in the addicted group. There were few significant differences between the low-use group and the heavy-use group. Addicts perceived their families very negatively — indicating that they felt they were unwanted and were a burden to their parents. Their families participated in fewer shared activities and generally lacked closeness and cohesion. Addicts also reported higher levels of physical abuse and substance use in their families than did individuals in the low-use group.

MILLAR, W. (1992).
A trend to a healthier lifestyle: New data from the 1991 General Social Survey.
Canadian Social Trends 24: centre insert (no page numbers).

This article summarizes the findings from the 1991 General Social Survey related to smoking, alcohol use, physical activity, and weight control. The findings suggest that in general Canadians are smoking less, drinking less, and exercising more. However, in spite of the general decline in smoking, the smoking rates for women have increased, particularly for younger women.

NADEAU, L. (1984).
Les caractéristiques psychosociales.
Les femmes et l'alcool en Amérique du Nord et au Québec. Monographies de psychologie, 85-116. Québec: Presses de l'Université du Québec.

This discussion chapter explored some of the psychosocial characteristics associated with women's alcoholism. Research has shown that unmarried women are most likely to have drinking problems, although among married women it is predominantly members of the upper socio-economic class who become alcoholics. Women appear more susceptible to becoming alcoholics if one of their parents, but especially fathers, have experienced drinking problems. Additionally, women with a family history of alcohol abuse are more likely to marry a man who will develop an alcohol dependency problem, and are more likely to become co-dependents in that relationship. Although no clear proof exists to indicate that the menstrual cycle affects women's drinking behaviors, it has been shown that women who believe there is a relationship, or those who feel they experience severe pre-menstrual syndrome, are more likely to report alcohol abuse problems related to their cycle. Female alcoholics are more likely to have lower self-esteem than either their non-drinking female peers or alcoholic men. Women drinkers are also more likely to have psychiatric disorders (especially depression) than their non-drinking peers, and are more often hospitalized for them. Lastly, female alcoholics tend to have higher rates of attempted suicide than either their non-drinking peers or male alcoholics. This suggests that the overall experience of alcoholism is more difficult and more detrimental to the mental health of women than men in North American society.

Women appear more susceptible to becoming alcoholics if one of their parents, but especially fathers, have experienced drinking problems.

NADEAU, L. (1990).
Les origines sociales de l'alcoolisme chez les femmes.
L'Intervenant 6 (3): 4-5.

This paper summarized findings of a doctoral dissertation that sought to determine whether female alcoholics were likely to experience particularly stressful life events prior to their drinking, and what risk factors may have made them more vulnerable to problem drinking. The findings of the study concluded that most female alcoholics in treatment began drinking in response to unfavourable life events, and that many experienced depression triggered by these same events. Most women studied indicated that it was problems related to their personal lives (especially family) that triggered their drinking; problems related to their work and careers precipitated their entry into treatment programs. Women with a history of parental negligence, of parental alcoholism, or who had been victims of sexual aggression were most likely to develop a dependency problem. Although

depression and affective disorders were likely to be present prior to or in response to the chemical dependency syndrome, it was found that most women remained depressed following treatment. It was concluded that since many women rely on alcohol to self-medicate, it is necessary to address underlying emotional and psychological problems and risk factors predisposing women to alcoholism, if continued sobriety is to be achieved.

NEWCOMBE, M.; AND BENTLER, P. (1986).
Frequency and sequence of drug use: A longitudinal study from early adolescence to young adulthood.
Journal of Drug Education 16: 101-120.

This longitudinal study, conducted among adolescents and young adults in the eastern U.S., suggests that distinct user groups are formed in adolescence, and reinforced by parents, families, and peers. These include early onset, heavy use, late onset, more moderate use, and near or absolute abstinence.

NEWMAN, I. M.; AND WARD, J. M. (1989).
The influence of parental attitude and behaviors on early adolescent cigarette smoking.
Journal of School Health 59: 150-152.

The influence of parental attitude on adolescent cigarette smoking was examined in this study. The authors replicate findings from a previous study investigating the same issue, but within a different population, and compare the findings. In this study (n=753), 18.5% of the adolescents were smokers, and 66.2% of these reported smoking by one or more parents, compared to 46.8% among non-smokers. In addition, when both parents smoked and held negative attitudes towards their children smoking, only 18.8% of the adolescents' smoked. The authors conclude that opposition by parents does affect smoking behavior regardless of parental behavior. It suggests that school personnel can recruit parents in their effort to decrease student smoking.

The authors conclude that opposition by parents does affect smoking behavior regardless of parental behavior.

OLECKNO, W.; AND BLACCONIERE, M. (1990).

A multiple discriminate analysis of smoking status and health-related attitudes and behaviors.

American Journal of Preventive Medicine 6 (6): 323-329.

In this study, health-related attitudes and behaviors were used to predict smoking status among 1,077 university students in the midwestern U.S. Nine attitudes and behaviors were used, including: several other health-related behaviors, interpersonal support, stress management, and use of tobacco or caffeine. Findings included the fact that overall, women in the study exhibited more positive health-related behavior than men with regard to interpersonal support, health responsibility, and alcohol/drug use, but less with regard to stress management. Smokers exhibited fewer health-related behaviors than non-smokers. Relationships between stress management and smoking among women are discussed by pointing to smoking as a possible stress coping mechanism for women smokers.

PAGE, R. M. (1989).

Shyness as a risk factor for adolescent substance use.

Journal of School Health 59 (10): 432-435.

The purpose of this study was to determine if shyness plays a role in adolescent substance use. The sample consisted of 1,297 high school students (grades 9-12) from 14 different high schools. The students completed a survey questionnaire on recent substance use (including alcohol, tobacco, cocaine, marijuana, hashish, LSD, PCP, mescaline, other hallucinogens, amphetamines, and sedatives) as well as the Cheek and Buss Shyness Scale. Students were placed into three groups for analysis based on their scores on the shyness scale: the super-shy group, the shy group, and the not-shy group. Findings suggested that shy males were more likely to use marijuana or hashish, cocaine, amphetamines, and hallucinogenic drugs than not-shy males and all females. In general, the super-shy males were more likely to use all types of drugs than shy males. Interestingly, the female students did not show the same relationship pattern. Females in the super-shy group were less likely to drink alcohol than females in the other two groups, but they were more likely to have used amphetamines than shy or not-shy females. The author suggests that shyness may be an important factor in adolescent drug use, particularly for males. Reasons include the idea that shyness is more of a burden for males so they tend to use drugs more frequently to overcome their shyness; or individuals who are shy may tend to be more easily influenced by peer pressure to fit in with the group; or finally, shy individuals, males in particular, may be drawn to social groups tending to use drugs as a normative behavior.

In general, the super-shy males were more likely to use all types of drugs than shy males. Interestingly, the female students did not show the same relationship pattern.

PAQUIN, P. (1988).
Les jeunes, l'alcool et les drogues: valeurs, profils, problèmes.
In *L'usage des drogues et la toxicomanie*, ed. P. Brisson, 253-268. Québec: Gaëtan Morin Éditeur.

This chapter offers more salient demographic information and characteristics relevant to the study of substance use among adolescents. Many studies examine who will be most susceptible to substance misuse, reasons for misusing, preferred substances, and whether there are different types of users. Although these studies have yielded varying results, the following information appears to be constant throughout. First, there appear to be different types of users, including abstainers, exploratory users, occasional users, regular users, overusers and abusers/problem users. The primary substances which are used, in descending order, include alcohol, cigarettes, cannabis, psychedelic drugs, cocaine, stimulants, tranquilizers, solvents and heroin. It is known that the prevalence rate for all of these substances has risen in recent years, but the use of cocaine and heroin has increased the most dramatically. The primary reasons associated with substance use include: to experience feelings of pleasure and relaxation, to reduce shyness, curiosity, to emulate peers, to relieve boredom, and to forget problems. Factors which seem to place youths at most risk of misusing substances include: boredom, lack of satisfaction in life, lack of alternatives to drug use for leisure and recreation, dysfunctional family situations, substance use by peers and other family members, and history of delinquent behavior. Since adolescence is a particularly volatile time of change and uncertainty, it is necessary to address this group's substance use issues and problems not only on an individual level, but by taking into account their relationships with family members and peers. These often exert the most influence on adolescents' attitudes and behavior.

> *Reasons associated with substance use include: to experience feelings of pleasure and relaxation, to reduce shyness, curiosity, to emulate peers, to relieve boredom, and to forget problems.*

PELLETIER, J. (1976).
Problèmes liés à la consommation excessive d'alcool chez les personnes agées.
Toxicomanies 9: 121-143.

In this review of the literature concerning alcohol abuse among the elderly, four primary areas of concern are identified: post-retirement revenue, health and wellness, leisure and recreation, and housing. Problems experienced in any or all of these domains are precursors of alcohol abuse. It is necessary to distinguish between individuals whose drinking problems began before and after retirement, as well as between those whose physical and cognitive

difficulties result from illness and old age rather than an excessive use of alcohol. Many adults do not begin drinking alcohol with any frequency or intensity until their later years; this behavior may be a response to greater inactivity, isolation and resulting loneliness. Since family members are often unable to detect or unwilling to acknowledge alcohol problems experienced by their elders, alcohol abuse remains largely untreated. When alcohol abuse or addiction is detected, treatments offered by specialists and hospitals are often designed to address issues concerning young and middle-aged adults, and so remain largely ineffective for older adults. However, the author suggests that programs such as "adopt a grandparent", which encourage interaction and learning between children and older adults, and greater emphasis on voluntarism by older adults could reduce loneliness and isolation and thus help to lower or eliminate their consumption of alcohol.

RHODES, J.; AND JASON, L. (1990).
A social stress model of substance use.
Journal of Consulting and Clinical Psychology 58 (4): 395-401.

This study used data from students (n=124) from two urban U.S. high schools to produce a causal pathway of substance use. Possible causal factors such as self-esteem, attitudes, locus of control, assertiveness, family cohesion and relationships, together with demographic factors, were taken into account. Only assertiveness and family factors were found to contribute significantly as *causal factors* in the pathway. Poor family relationships and environment, and lack of assertiveness, seemed to increase risk of substance.

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SCHROEDER, D.; LAFLIN, M.; AND WEIS, D. (1993).
Is there a relationship between self-esteem and drug use?
Journal of Drug Issues 23 (4): 645-655.

The authors criticize the frequent assumption that self-esteem is a significant causal factor in substance abuse. They contend that typically, only a small portion of the variance in drug use is explained by self-esteem scores, and that other statistical problems and erroneous assumptions about generalizing and interpreting data frequently occur in research in this area.

SKINNER, H.; HOLT, S.; AND ISRAEL, Y. (1981).
Early identification of alcohol abuse: 1. Critical issues and psychosocial indicators for a composite index.
Canadian Medical Association Journal 124: 1141-1152.

Though a bit dated, this review article provides a synthesis of research on the psychosocial factors related to alcohol abuse. These are listed as underlying predisposing factors such as family history of alcoholism, impulsiveness, and low self-esteem. Precipitating factors that can trigger a pattern of alcohol abuse include stressful life events, change in peer groups, and physical and economic availability of alcohol. The authors emphasize the role of these psychosocial factors, together with signs of problematic drinking, in providing early identification of alcohol abuse and alcoholism.

SMALL, S.; SILVERBERG, S.; AND KERNS, D. (1993).
Adolescents' perceptions of the costs and benefits of engaging in health-compromising behaviors.
Journal of Youth and Adolescence 22 (1): 73-87.

This study tested the hypotheses that a) the costs and b) the benefits of potentially health-compromising behaviors, including alcohol use, as perceived by teens are associated with engagement or abstinence. Data were collected from 2,444 high school students in Wisconsin. Teens engaging in risk behaviors did not perceive the benefits of such behaviors in a significantly different way than those who did not; however, they did perceive the costs differently. Examples of costs studied include social costs, ethical costs, risk of sanctions, and possible effects on performance (academic, physical). However, the cross-sectional study does not allow cause-effect relationships to be explored; the apparently differing attitudes toward drinking between abstainers and drinkers may cause, be caused by, or be related in some other way to the choice to use or to not use alcohol.

Teens engaging in risk behaviors did not perceive the benefits of such behaviors in a significantly different way than those who did not; however, they did perceive the costs differently.

SMART, R.; AND ADLAF, E. (1991).
Substance use and problems among Toronto street youth.
British Journal of Addiction 86: 999-1010.

A sample of 145 adolescent street youth were interviewed about their use of drugs and the data was compared to other street and mainstream populations. Alcohol use was found to be at least three times higher than average and other drug use at least ten times higher. Multiple drug use is the norm in this group. Alcohol use in the family, particularly by the father, was often given as a reason for leaving home. Not only were drugs a

problem for these youth, so were basic necessities of food, shelter, and clothing. One-third showed high levels of depression and almost one-half had attempted suicide.

SMITH, M. J.; ABBEY, A.; AND SCOTT, R. O. (1993).
Reasons for drinking alcohol: Their relationship to psychosocial variables and alcohol consumption.
The International Journal of Addictions 28 (9): 881-908.

This study was designed to evaluate psychosocial factors related to self-reported reasons for drinking. Four different reasons for drinking were identified as: to cope, to be sociable, to enhance social confidence, and for enjoyment. The demographic factors which were examined and had a relationship to reasons for drinking included: age, gender, ethnic background, educational level, and marital status. The psychosocial factors which were examined included: impulsiveness, willingness to travel to obtain alcohol, concern for appropriateness, stress, feeling obligated to drink in social situations, social pressure, and frequency of friends' drinking. The study also examined the relationship between reasons for drinking and alcohol use patterns. It was found that the reason "drinking to cope" was the strongest predictor of high-risk drinking patterns (drinking alone, large quantity consumed, and high frequency).

Four different reasons for drinking were identified as: to cope, to be sociable, to enhance social confidence, and for enjoyment.

SOBELL, L.; SOBELL, M.; KOZLOWSKI, L.; AND TONEATTO, T. (1990).
Alcohol *or* tobacco research or alcohol *and* tobacco research.
British Journal of Addiction 85: 263-269.

These researchers discuss the implications of the fact that tobacco research and alcohol research have been conducted in isolation from one another, when in fact the two behaviors are highly interrelated. Alcohol abuse and tobacco use share many features, such as proneness to relapse and risk of health problems. Differences, such as that tobacco use is more likely to progress to addiction than is drinking, and that tobacco is considered dangerous at all levels of use while alcohol is not, are acknowledged. The writers point to several reasons why research should focus on the concurrent use of both substances, such as the fact that smokers are very likely to be drinkers, that heavy drinkers are likely to be heavy smokers, that there is strong evidence that use of the two substances in tandem has synergistic effects on health, that tobacco use or abstinence among recovering alcoholics appears to affect treatment outcomes, and that similar psychosocial factors appear to be related to the onset of both in adolescence.

TORABI, M.; AND VEENKER, C. (1986).
An alcohol attitude scale for teenagers.
Journal of School Health 56: 96-100.

Based on a survey of a representative sample of adolescents in the midwestern U.S., the authors report that attitudes toward drinking closely follow actual use patterns.

TURNBULL, J. E.; AND GOMBERG, E. S. L. (1991).
The structure of drinking-related consequences in alcoholic women.
Alcoholism: Clinical and Experimental Research 15 (1): 29-38.

This study attempts to identify clusters of drinking-related consequences for women in treatment for alcoholism. The sample consisted of 254 women who were in treatment for alcoholism, and who completed a series of self-report interview items. Analysis showed that the items clustered into nine general areas: 1) social withdrawal (including increasing preoccupation with alcohol, and withdrawal from non-alcohol-related social contexts); 2) sexuality (including sexual behaviors and perceptions); 3) early effects (including behaviors and events which occurred early in the drinking career); 4) maternal role (including neglect and difficulties with children); 5) accidents (including home and auto accidents, and trouble with the police); 6) symptoms (including effects that were directly related to drinking); 7) work; 8) illness (including visits to hospitals, emergency rooms, illness, and hallucinations); and 9) relationship conflict (related to difficulties in primary relationships).

VERMETTE, G. (1988).
L'abus d'alcool chez les personnes âgées: une réponse à leurs conditions de vie?
In *L'usage des drogues et la toxicomanie*, ed. B. Brisson, 221-237. Québec: Gaëtan Morin Éditeur.

The goal of this chapter is to encourage greater understanding of the phenomenon of alcohol use among older adults. Researchers have only recently begun to explore the reasons why some adults only begin to drink heavily during their later years, and to identify symptoms of their dependency problems, which could facilitate diagnosis and treatment. Older adults in contemporary society experience a markedly different situation than those in the past; there is currently an emphasis on youth, individuality, independence, down-sizing of the nuclear family and reduction in family and social support, high cost of living and longer life expectancy. Older

adults, especially those in retirement, often experience a lack of activity, isolation, loneliness, and poverty. This highly stressful and volatile life experience could induce them to begin self-medicating with drugs and alcohol to escape boredom, isolation, anxiety and depression, which often encompass their later years.

Studies performed by both the Quebec and Canadian governments over the years have shown that between 10-20% of those aged sixty or more qualify as "heavy drinkers", with the prevalence rate of older women ranging closer to twenty percent. Some of the symptoms associated with drinking problems in older adults include: severe withdrawal symptoms; psychological dependence on alcohol and inability to function without consuming alcohol; medical problems related to alcohol including liver cirrhosis, ulcers, and cardiovascular problems; financial difficulties and/or work problems; problems with family members and/or spouses; legal problems; and displays of verbal or physical aggression. The author advises caution when attempting to diagnose substance abuse problems in older adults, as often the symptoms listed above can be indicators of other, non-substance related illnesses such as Alzheimer's disease or depression.

The author advises caution when attempting to diagnose substance abuse problems in older adults, as often the symptoms listed above can be indicators of other, non-substance related illnesses.

VITARO, F.; DOBKIN, P.; JANOSZ, M.; AND PELLETIER, D. (1992).
Enfants et adolescents à risque de toxicomanies.
Apprentissage et socialisation 15 (2): 109-120.

This paper reviewed the literature concerning risk factors that predispose children and young adolescents to drug and alcohol abuse. The risk factors discussed include: age of initial drug/alcohol/tobacco use, lack of resistance to peer pressure, behavior problems, scholastic problems, low self-esteem, poor communication skills, lack of social support, and family history of substance use and abuse. The authors call for the creation of a screening instrument based on these risk factors, which may be used in future to identify youth at risk for developing substance use problems.

WEBSTER, R. A.; HUNTER, M.; AND KEATS, J. A. (1994).
Personality and socio-demographic influences on adolescents' substance use: A path analysis.
The International Journal of the Addictions 29: 941-956.

The authors describe the influence of parents and peers on the forming of attitudes to drug use, testing the hypothesis that adolescents with external locus of control and low self-esteem are more influenced by their peers to drink and smoke than those with higher self-esteem and internal locus of control. The sample included 293 males and 244 females. The hypothesis was supported by the findings. Additionally, younger subjects were more

influenced by peer use than older subjects. Tobacco use was more influenced by peers in girls than in boys. Subjects coming from low-status families were more likely to be influenced by peers.

WILSNACK, R. W.; AND CHELOHA, R. (1987).
Women's roles and problem drinking across the life span.
Social Problems 34 (3): 231-148.

This study examined women's experience of drinking, across several age groups, and with regard to several role configurations. Using data obtained from a national survey of 917 women with various drinking styles, the results indicate that there are age-specific patterns of alcohol use. For women aged 65 or younger, risks of problem drinking increased as a result of specific role deprivation such as lack or loss of marital, employment and childbearing roles. For women aged 50 or older, close relationships with other drinkers appears to have a more significant impact on women's drinking behavior and problems.

For women aged 65 or younger, risks of problem drinking increased as a result of specific role deprivation such as lack or loss of marital, employment and childbearing roles.

WILSNACK, R. W.; KLASSEN, A. D.; AND WILSNACK, S. C. (1986).
Retrospective analysis of lifetime changes in women's drinking history.
Advances in Alcohol and Substance Abuse 5 (3): 9-28.

This paper demonstrates the potential usefulness of using retrospective studies to gain insight into women's experience of drinking. Using data from a 1981 national survey on women's drinking, the authors were able to obtain information concerning comparative ages at the onset of drinking behavior, various drinking consequences, women's health problems, the variation of women's lifetime drinking experiences, and the relationship between women's drinking and onset of depression and reproductive dysfunction.

WILSNACK, S. C.; AND WILSNACK, R. W. (1991).
Epidemiology of women's drinking.
Journal of Substance Abuse 3 (2): 133-157.

This discussion paper and literature review revealed that overall prevalence rates of women's alcohol consumption have not changed in Canada and the United States during the last twenty years. However, there do appear to be some subgroups of the population for whom consumption rates are rising. These groups differ from one another on variables such as age, ethnicity, employment and marital status. In addition, the prevalence

of diagnosable drinking problems among women seems to be increasing, especially among younger women. Factors that seem to be associated with women's drinking are most closely linked to their social environment, especially gender of co-workers and drinking behavior of significant others.

YANDOW, V. (1989).
Alcoholism in women.
Psychiatric Annals 19 (15): 243-247.

This article discussed the prevalence of women's drinking in the U.S., indicating that about 60% of adult women drink to some degree. The author also indicates that about 6% of adult females have serious problems with alcohol, however these women are still under-represented in alcoholism treatment. The article goes on to summarize various issues relevant to understanding alcohol abuse in women, including: effects on childbearing, genetic factors, research efforts, relationship to other psychopathology, effects on sexuality, minority groups, and treatment issues.

ZUCKER, R. A. (1978).
Developmental aspects of drinking through the young adult years.
In *Youths, Alcohol, and Social Policy*, eds. H. T. Blane and M. E. Chafetz, 91-146. New York: Plenum.

Zucker reviews the environmental and psychosocial aspects of adolescent drinking, and suggests a three-part organizational structure of influences on drinking and drug-use behavior, based on social learning theory. The three spheres of influence in Zucker's framework are socio-cultural/community influences, family and peer influences, and intra-individual influences.

B. PROCESS ADDICTIONS

BLAND, R. C.; NEWMAN, S. C.; ORN, H.; AND STEBELSKY, G. (1993).
Epidemiology of pathological gambling in Edmonton.
Canadian Journal of Psychiatry 38: 108-112.

Although opportunities and locations for gambling in North America have greatly increased in recent years, the majority of persons who gamble do so for social reasons. However, there is a subset of the population for whom gambling behaviors become problematic. This paper obtained prevalence

data on pathological gambling through interviews with 7,214 Albertans from 1983 to 1990. Thirty of the respondents were identified as pathological gamblers, yielding a lifetime prevalence of 0.42%; the prevalence rate was 0.71% for men and 0.23% for women. Median age at onset of heavy gambling was 25 years, with few persons beginning heavy betting after age 35. Persons identified as heavy gamblers also reported a higher incidence of drunkenness, suicide attempts, child and spouse abuse/neglect, and prolonged periods of unemployment. Pathological gamblers also reported higher incidence of psychiatric disorders, including higher prevalence of substance use disorders, affective disorders, and anxiety disorders than their non-gambling peers.

BRENNER, G. A. (1986).
Why do people gamble? Further Canadian evidence.
Journal of Gambling Behavior 2 (2): 121-129.

Supplementing her previous research examining the characteristics of lottery ticket buyers, the author used data obtained from 93 Canadian lottery winners and groups of buyers of lottery tickets to determine the reasons for their gambling. The results indicated that buyers turned to lottery ticket buying when faced with adverse situations over which they had no recourse. In addition, the results indicated that there is little correlation between crime and the purchase of lottery tickets.

The results indicated that buyers turned to lottery ticket buying when faced with adverse situations over which they had no recourse.

DIXEY, R. (1987).
It's a great feeling when you win: Women and bingo.
Leisure Studies 6: 199-214.

This literature review examining the use of bingo as a recreational pursuit in the U.K. attempted to explore some of the variables which popularize this activity and make it the leading choice among women. Bingo is often demeaned as a leisure activity because it is not useful as a means of education or of self-improvement, and because the media often portray women who play bingo as neglecting their homes and families, and wasting money on a frivolous game. However, due to social, familial and fiscal constraints faced by women, especially those in the middle and lower socio-economic classes, many find bingo to be an ideal "choice" among the few leisure opportunities they have. It is often the most easily engaged form of leisure, since commitment is flexible, its location is nearby, it is relatively inexpensive, its hours are scheduled to accommodate women's free time, and opposition by husbands is minimal since it is primarily women who play. Many women reported that attending bingo offered them time away from husbands and children, as well as opportunities to dress up

and to socialize with other women; attending different clubs with their varying ambiance also offered the occasional change in environment and opportunities to meet new women. The author concludes that as family and community ties often weaken in today's society, regular attendance at bingo clubs offer women an experience in a "moral community" where members are watchful of the health and happiness of their peers.

FILTEAU, M. J.; BARUCH, P.; AND VINCENT, P. (1992).
Le jeu pathologique: une revue de la littérature.
Revue canadienne de psychiatrie 37: 84-90.

This review of the literature addressing the phenomenon of pathological gambling examines a number of issues. The ways in which mixed messages may contribute to compulsive gambling are explored, as well as recent definitions of pathological gambling and antisocial personality disorder. The epidemiology of pathological gambling is discussed, including inappropriate parental discipline, excessive familial values of materialism, and parental or spousal alcoholism. The three phases of gain, loss and desperation are discussed, and an overview of the various psychological, social and psychobiological theories which have been used to study and treat pathological gambling is offered. Issues and concerns which must be addressed during clinical evaluations are discussed, as well as treatment plans and various treatment modalities, such as Gamblers Anonymous. The authors conclude by asserting that although the pathology of pathological gambling is the same for all, researchers and practitioners should not ignore that problems and treatment issues may vary on an individual basis. Therefore, it is necessary to identify individual issues and stressors which could increase that person's likelihood of displaying suicidal behaviors.

The ways in which mixed messages may contribute to compulsive gambling are explored.

LADOUCEUR, R. (1991).
Prevalence estimates of pathological gambling in Quebec.
Canadian Journal of Psychiatry 36: 732-734.

This study evaluated the prevalence of pathological gambling among adults in Quebec. The South Oaks Gambling Screen, which was translated into French, was used to score respondents during their interviews. Persons who scored 3 and 4 on the test were classified as problem gamblers; those scoring 5 and above were classified as pathological gamblers. The results indicated that 2.6% of respondents were problem gamblers, while 1.2% were pathological gamblers. The results also indicated that 88.3% of the total sample had gambled at least once in their lifetime, and 55.2% had gambled more than once during the preceding year. Most persons who developed problem gambling behaviors were male, and had begun gambling

at an earlier age than the other respondents. Of these, 11.5% had sought help for gambling, primarily from a health care professional or a self-help group.

LADOUCEUR, R.; AND GABOURY, A. (1989).
Jeu de hasard et d'argent sous sorme vidéo: la roulette américaine.
Revue québecoise de psychologie 10 (3): 20-28.

The purpose of this study was to explore whether persons who play electronic games of chance, such as video games, experience the same types of irrational thoughts and spending behaviors as do other gamblers. Thirty subjects were assigned to play either an American style roulette game in a casino environment, or to play the roulette option of the Mac Vegas computer video game. The subjects were told that they could keep 10% of their winnings, and were each given $200 worth of tokens. Each subject was also asked to verbalize all thoughts which they experienced during the games so that they could be tape-recorded. The results of the experiment showed that the amount of money risked by players increased with the amount of time each player spent gambling, and that the number of irrational thoughts expressed outnumbered rational thoughts. The results also demonstrated that although players of both types of games were unlikely to be able to control their behavior or recognize that they were expressing irrational thoughts while gambling, those who gambled in the casino environment were even more likely to express irrational thoughts. The authors conclude that despite fears that increasing the number of video games of chance available will contribute to a rise in problem gambling behaviors, it appears that such games are less likely to incite addiction than other games of chance.

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LADOUCEUR, R.; GABOURY, A.; DUMONT, M.; AND ROCKETTE, P. (1988).
Gambling: Relationship between the frequency of wins and irrational thinking.
The Journal of Psychology 122 (4): 409-414.

This study explored the issue of whether irrational thinking, which is believed to be a key component in the phenomenon of compulsive gambling, could be measured by counting the number of irrational thoughts verbalized by persons engaged in gambling behaviors. Twenty subjects, aged 20-30 years, were recruited at Laval University in Quebec. These students were given the task of completing one of two computerized simulations of a roulette game, one which offered a high frequency of wins and one which offered a low frequency of wins. The subjects were asked to

verbalize their thoughts as they participated in the simulations, without inhibiting or censoring any of the ideas or emotions they may experience. The findings of the study indicated that those who played the game which offered the high frequency of wins emitted just as many irrational verbalizations as those who played the game with a low frequency of wins. Although the researchers admit that their original hypothesis was not confirmed, they suggested that perhaps it is the structure of gambling activities which evokes irrational thinking in participants. More research would be beneficial to explore whether this is actually so.

LADOUCEUR, R.; AND MIREAULT, C. (1988).
Gambling behaviors among high school students in the Quebec area.
Journal of Gambling Behavior 4 (1): 3-12.

This study investigated the gambling behavior of 1,612 high school students from nine schools in the Quebec city area. Using questionnaires, the authors found that 76% of students had gambled at least once, 65% had placed a bet in the last year, and 24% gambled at least once a week. In addition, 5.6% of current gamblers reported being unable to stop although they wished to do so, and 1.7% were identified as being pathological gamblers.

LADOUCEUR, R.; TOURIGNY, M.; AND MAYRAND, M. (1986).
Familiarity, group exposure, and risk-taking behavior in gambling.
Journal of Psychology 120 (1): 45-49.

This study examined whether familiarity with a game of chance and or individual/group gambling affected risk-taking behavior in 38 college students. These students were randomly assigned to bet either individually or in groups while playing American roulette. The findings showed that players bet more heavily, the longer they played and the more familiar they became with the game. In addition, risk-taking behaviors did not differ between subjects playing individually or in groups.

LESIEUR, H.; AND BLUME, S. (1990).
Characteristics of pathological gamblers identified among patients on a psychiatric admissions service.
Hospital and Community Psychiatry 41 (9): 1009-1012.

Using the South Oaks Gambling Screen, of a total of 105 psychiatric patients, 7 (6.7%) were found to be pathological gamblers, compared to

1.4% to 3% found in the general population by other surveys. Of 36 patients with a secondary diagnosis of psychoactive substance abuse, 4 (11%) were also pathological gamblers compared to 9% to 14% of non-psychiatric substance abusers in other studies.

MARKS, I. (1990).
Behavioral (non-chemical) addictions.
British Journal of the Addictions 85 (11): 1389-1394.

This editorial sought to compare the etiologies and treatments of behavioral and chemical addictions and liken them to one another. Marks asserts that the pathophysiologies of these disorders may not be as distinct as was once believed. He reports that the conditioning processes are the same for both, as are the dependency syndromes, the brain mechanisms, the response to external cues, the desire to alter negative mental states through the performance of some ritual behavior, the onset of withdrawal symptoms if the behavior is not completed and so on. Furthermore, treatment therapies and strategies for relapse prevention and long-term abstinence from the compulsive behaviors are quite similar for both types of addiction processes. If greater understanding of the similarity between these two seemingly different disorders can be achieved, this may improve treatment behaviors and therapeutic success.

Marks asserts that the pathophysiologies of these disorders may not be as distinct as was once believed.

MURRAY, J. B. (1993).
Review of research on pathological gambling.
Psychological Reports 72: 791-810.

In this literature review of pathological gambling, the author provides criteria to facilitate identification, understanding and treatment. The paper offers a psychological profile of pathological gamblers, describes some of the psychopathological problems associated with gambling (especially drug and alcohol abuse), offers comparisons between gambling and alcoholism, describes gambling as an addictive process, and offers suggestions for therapy and rehabilitation. Described as an impulse-control problem, pathological gambling is a poorly understood phenomenon. However, due to its similarity to substance abuse, and because pathological gambling often occurs in conjunction with substance abuse, many of the same treatment methods (such as AA, group therapy, behavioral retraining) are used and appear to be effective in treating this disorder.

OCEAN, G.; AND SMITH, G. J. (1993).
Social reward, conflict, and commitment: A theoretical model of gambling behavior.
Journal of Gambling Studies 9 (4): 321-339.

This paper presented a theoretical model of gambling behavior that examines the linkage between regular gamblers, gambling institutions and the influence of society. Looking at the experience of gamblers in urban casinos as well as reviewing the literature, the authors suggest that it is the positive social rewards associated with gambling institutions, as well as the perceived threatening nature of the wider social structure, which attract potential gamblers and affect their subsequent behavior.

SEABORN, J. (1992).
L'ignorance du jeu pathologique.
L'Intervenant 8 (4): 13-14.

The purpose of this paper was to serve as a warning of the dangers of using gambling and lotteries as a method of adding to the government's coffers. In the past, the concept of the pathological gambler was that of criminal or luckless taker of unnecessary chances. More recently, however, it has been acknowledged that pathological gambling is a psychological disorder in its own right, and has been accepted and defined by the DSM-III-R. Furthermore, it has been acknowledged that pathological gamblers are also likely to have multiple dependencies, with addiction to alcohol and/or drugs frequently being ascribed to them. Additionally, pathological gamblers are likely to be identified as having one or more emotional disorders, such as depression, lack of control, and paranoia; they are often recognized due to their conjugal, professional and social problems. The author concludes by suggesting that if Quebec intends to continue to use games of chance as a means of obtaining revenue, then Quebec clinicians would do well to conduct more research and improve prevention and intervention strategies related to problem gambling behaviors. This would likely benefit a large number of Quebec residents who may develop problem gambling behaviors.

More recently, however, it has been acknowledged that pathological gambling is a psychological disorder in its own right.

II

LITERATURE ON RISK AND PROTECTIVE FACTORS FOR MENTAL HEALTH

ABU-LABAN, S. M. (1984).
Les femmes âgées: problèmes et perspectives.
Sociologie et sociétés 16 (2): 69-78.

This paper examines the losses, difficulties and hardships experienced by many of today's aging or elderly women, as well as some of the factors which may add to their resiliency. Among the issues examined are women's loss of physical attractiveness and child-bearing ability during the aging process, and the resulting perceived loss of social and personal value experienced by many. Additionally, women are more likely to live longer than husbands, friends, and family members and so are more likely to experience great social and emotional loneliness and alienation. Since many women did not work or were not able to amass savings prior to retirement or their husbands' death, older women are more likely to live under conditions of great financial strain if not outright poverty. However, many older women are capable of maintaining and establishing friendships and social networks during their aging process. They are able to weather transitional periods better than their male peers and maintain an active lifestyle despite numerous troubles. The author concludes that although women may have certain coping strategies which men do not possess, they are still more vulnerable to states of poverty, loneliness, alienation by family and being undervalued by society, all of which may negatively affect their physical and mental health.

Among the issues examined are women's loss of physical attractiveness and child-bearing ability during the aging process, and the resulting perceived loss of social and personal value experienced by many.

ADCOCK, A. G.; NAGY, S.; AND SIMPSON, J. A. (1991).
Selected risk factors in adolescent suicide attempts.
Adolescence 26: 817-828.

A survey involving 3,803 adolescents (aged 12-17) identified 27% of the sample (n=1,026) who engaged in sexual activity and had consumed alcohol during the previous month. These "participants" were compared with

those who abstained from both behaviors (n=1,347, 35%). Using chi square analysis, the former were almost three times as likely to attempt suicide, to have difficulty coping with stressful situations at home and school, to feel sad and hopeless, and to feel there is nothing to look forward to. The authors felt that their data supported the hypothesis that students who engage in risky behavior are also at risk for depression and suicide.

ATKINSON, T.; LIEM, R.; AND LIEM, J. H. (1986).
The social costs of unemployment: Implications for social support.
Journal of Health and Social Behavior 27 (12): 317-331.

This investigation sought to examine how unemployment impacted on the quality and availability of social support resources, and how these social supports acted to buffer the stress often experienced by the unemployed. 167 white- and blue-collar families in the Boston area were interviewed four times, with the primary measures examining marital and family support, availability of help with problems, and social networks. Findings showed that all unemployed workers reported having less support than their employed peers, with blue-collar workers reporting even less support resulting from loss of former friends and coworkers. Workers who were unemployed for prolonged periods of time reported greater dissatisfaction with family and marital relationships. White-collar workers reported receiving less help with problems during the immediate stages of their unemployment; blue-collar workers reported receiving more help the longer they remained jobless. While social networks for both groups of unemployed decreased, persistently jobless blue-collar workers reported even less contact with former network members, as many of these were former coworkers. Since prolonged unemployment appears to impact negatively on family, marital and social support alike, the authors' contention that these variables may serve to decrease the stress experienced by the jobless worker does not seem justified. Therefore, more research is needed to determine what factors do act as mediating or protective factors in the stress management of the unemployed.

More research is needed to determine what factors do act as mediating or protective factors in the stress management of the unemployed.

BRENT, D. A.; PEPPER, J. A.; GOLDSTEIN, C. E.; KOLKO, D. J.; ALLAN, M. J.; ALLMAN, C. J.; AND ZELENAK, J. P. (1988).
Risk factors for adolescent suicide.
Archives of General Psychiatry 45: 581-588.

Using semi-structured interviews with adolescent suicidal inpatients, information on suicide attempts was compared with information gained from families of adolescent suicide completers. Subjects were grouped into

interpersonal conflict, interpersonal loss, and external stressors. Suicide victims were older by 2.3 years, but other demographics were similar, as were the relative frequency of suicide attempts. Both groups showed a high prevalence of affective disorders, but more completers had bipolar disorder, and were less likely to have had psychiatric treatment. Firearms were more likely to have been present in the homes of completers. Conceptually, a continuum of suicidality from ideation, to behavior, to completion is proposed. Each major risk factor is discussed in detail.

CHOQUET, M.; KOVESS, V.; AND POUTIGNAT, N. (1993).
Suicidal thoughts among adolescents: An intercultural approach.
Adolescence 28: 649-659.

Two surveys were conducted concurrently, but independently of one another, on Quebec (n=208) and French (n=390) adolescents, aged 15-19 years. Similar questions on consumption of illicit drugs, health, family, social integration, self-perception and suicidal ideas were used in both surveys. The outcome was similar for both groups, with some exceptions. Among French adolescents, 5% of the boys and 12% of the girls had thought about suicide during the past 12 months; in Quebec, the percentages were 10% for boys and 12% for girls. Suicidal ideation was associated with similar factors (drug consumption, somatic symptoms, and affective disturbances) in both countries, despite socio-economic differences. Suicidal ideation was also associated with adolescents who reported themselves to be more jittery, sadder, more labile, more easily upset and less able to concentrate. The authors suggest these indicators could be warning signs for treatment personnel.

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DESMARAIS, D.; PERRAULT, C.; LEBEAU, A.; AND ALLARD, D. (1985).
Les pratiques de santé mentale dans l'espace du non-travail: problématique de recherche.
Sociologie et sociétés 17 (1): 143-155.

The intent of this working paper was to explore some of the variables which affect the state of mental health experienced by unemployed workers. In addition to the obvious financial constraints imposed by unemployment, workers may additionally experience psychological stress and tension. This results from their increased free, unstructured time, reduced activity levels, reduced social networks and interaction with others, and lack of engagement in goal-oriented behaviors. Factors which may affect the jobless individual's mental health on a more personal level include identity

and attitudes regarding self, degree of self-actualization, integration with self and others, ability to engage in autonomous behavior and belief in one's ability to master the environment and control outcomes. Greater understanding is needed as to how these factors aid in the resiliency of the unemployed, and how additional variables such as race, sex, ethnicity, religion and so on may additionally affect coping with unemployment. Knowing how to encourage resiliency factors is of particular importance since many negative outcomes coincide with prolonged periods of unemployment. These include increased consumption of drugs and alcohol, decreased marital satisfaction, and increases in family violence and interpersonal aggression.

DEW, M. A.; PENKOWER, L.; AND BROMET, E. J. (1991).
Effects of unemployment on mental health in the contemporary family.
***Behavior Modification* 15 (4): 501-544.**

This review of the literature investigated the variables which influence and impact upon the mental health of family members where one or both of the breadwinners is unemployed. Particular areas included were: 1) effects of job loss on workers' mental health; 2) effects of workers' job loss on spouses' mental health; 3) effects of workers' job loss on their children's mental health; and 4) implications for research and clinical practice. Findings of particular importance include the fact that stress experienced by unemployed women is at least as great, if not greater than that of their male peers. Spouses of unemployed workers also experienced stresses associated with job loss, with increased marital discord being cited as one of the consequences of prolonged unemployment. Additionally, children whose fathers were unemployed displayed greater tendencies toward substance abuse, and were also likely to experience greater physical or emotional abuse from the unemployed parent. The authors conclude by asserting that while unemployment is associated with poorer mental health for all members of the family, greater research must be conducted to specifically investigate its effects on spouses and children.

The authors conclude by asserting that while unemployment is associated with poorer mental health for all members of the family, greater research must be conducted to specifically investigate its effects on spouses and children.

GHENT, W. R.; DA SYLVA, N. P.; AND FARREN, M. E. (1985).
Family violence: Guidelines for recognition and management.
Canadian Medical Association Journal 132 (3): 541-548.

The purpose of this paper was to describe the three main types of family abuse, which are wife-battering, child abuse, and abuse of the elderly.

Written as a guide to aid in the documentation of medical records of doctors and nurses who are often the first to come in contact with the victims of abuse, the article provides lengthy descriptions of the various physical, emotional, behavioral and social signs and symptoms of each type of abuse. Additionally, the traditional referral systems and resources available to help each type of victim are outlined, as well as particular psychological approaches which may be used to calm each type of victim. Advice on how best to elicit the needed information from them is also provided.

GOTOWIEC, A.; AND BEISER, M. (1993-94, WINTER)
Aboriginal children's mental health: Unique challenges.
Canada's Mental Health 41 (4): 7-11.

The authors explore numerous misconceptions about Canadian aboriginal children based on data generated in the United States and on interpretations of aboriginal behavior by the dominant society. Issues of achievement in school, substance use, suicide, and family violence are considered. A "deficit model" orientation to native culture is challenged.

GREENFIELD, S.; SWARTZ, M.; LANDERMAN, L.; AND GEORGE, L.
Long-term psychosocial effects of childhood exposure to parental problem drinking.
American Journal of Psychiatry 150 (4): 608-613.

The issue of whether childhood exposure to a problem drinking parent results in a greater likelihood of psychiatric symptoms and impaired social and occupational functioning in adulthood was studied using self-report data from a random sample of 2,936 adults. Results showed that the study group was at greater risk for psychiatric symptoms and marital instability in later life.

GRIZENKO, N.; AND FISHER, C. (1992).
Review of studies of risk and protective factors for psychopathology in children.
Canadian Journal of Psychiatry 37: 711-721.

This article reviewed the literature on the interaction of risk and protective factors on the psychopathology of children. Risk factors increase a child's vulnerability or susceptibility to the development of difficulties in situations of stress. Protective factors modify, ameliorate or alter the child's responses to stressful situations, thus encouraging successful adaptation and resiliency. A variety of studies were explored, particularly those discussing

the risk and protective factors of youths at risk. The authors contend that additional factors need to be examined in order to augment and complement the data offered by these studies. Longitudinal studies must be performed in order to ensure greater certainty of the causal effect of the various risk and protective factors under examination. Also, it must be ascertained whether the competence levels of youths at risk who are identified as being "resilient" equal the competence levels of their peers in the general population. Furthermore, the very nature of resiliency remains poorly understood, and so more research must be performed to more accurately describe and assess resiliency. Finally, better definitions and quantification of stress must be offered in order to account for individual variations in perceptions of and responses to situations which are classified as "stressful".

Longitudinal studies must be performed in order to ensure greater certainty of the causal effect of the various risk and protective factors under examination.

HALL, L. A.; WILLIAMS, C. A.; AND GREENBERG, R. S. (1985).
Supports, stressors, and depressive symptoms in low-income mothers of young children.
American Journal of Public Health 75 (5): 518-522.

This research paper examined how social support systems and everyday stressors affected the depressive symptoms of low-income mothers. 111 women residing in North Carolina completed the interviews and questionnaires. The findings of the study indicated that married women were least likely to exhibit depressive symptoms in response to either everyday stressors or negative life events, while unmarried women were most likely to report depressive symptoms, particularly in response to everyday stressors such as meeting the basic financial needs of the family and rearing children as a single parent. Although all women reported fewer depressive symptoms in response to greater social networks and resources, unemployed women continued to exhibit the most depressive symptoms. This may indicate that while social networks may be an important emotional resource for single mothers, the enhancement of personal competence, self-efficacy and self-esteem which accompanies work status may exert an even greater impact on the mental health of single mothers and their ability to cope with daily stressors than previously believed.

HEALTH CANADA. (1988).
Mental Health for Canadians: Striking a Balance.
Ottawa: Supply and Services Canada.

This document follows the 1986 paper, *Achieving Health for All*. Definitions of mental health are provided in a health promotion context. The document then discusses challenges to mental health in terms of reducing

inequities, increasing prevention, and enhancing coping. A number of guiding principles are included. These are consumer participation, human rights, voluntary service and mutual aid, professional participation, strengthening communities, knowledge development, and policy coordination. The principles espoused somewhat parallel those in Canada's Drug Strategy.

KAPLAN, S. L.; LANDA, B.; WEINHOLD, C.; AND SHENKER, I. R. (1984).
Adverse behaviors and depressive symptomatology in adolescents.
Journal of American Academy of Child Psychiatry 23: 595-601.

A pilot study which suggested a relationship between health maintenance behaviors and depressive symptomatology prompted these authors to administer the Beck Depression Inventory (BDI) and the Health Behavior Questionnaire (HBQ) to 398 (153 male, 245 female) high school students, aged 11-18 years. Six highly correlated items on the HBQ were used to create an Adverse Health Behaviors (AHB) scale. Analysis of covariance was used to examine the relationship between AHB and demographic indices. Younger students engaged in less adverse behaviors, and male subjects had a higher score than females. AHB was highly related to total BDI, and suicidal ideation and hopelessness (BDI items 2 and 9), explained a significant proportion of variance. These authors propose the inclusion of adverse health behavior in social indices relating to health and illness behavior.

These authors propose the inclusion of adverse health behavior in social indices relating to health and illness behavior.

KINGERY, P. M.; PRUITT, B. E.; AND HURLEY, R. S. (1992).
Violence and illegal drug use among adolescents: Evidence from the U.S. National Adolescent Student Health Survey.
The International Journal of the Addictions 27 (12): 1445-1464.

The purpose of this study was to examine the relationship between illicit drug use and violence by adolescents, and specific behaviors which put some individuals at particular risk for victimization. The data used in the study was obtained from The National Adolescent Student Health Survey performed in 1989; information from 224 school units was used to compare results obtained from grade 8 and 10 students. Results of the study indicated that grade 8 boys were most likely to be both perpetrators and victims of violence. Grade 10 boys were more likely than either grade 8 boys or any of the girls to use illicit drugs, and although violent behavior was no more prevalent from this group, the level of aggression and dangerous behaviors reported made the nature of their violence much more serious. Risk factors which place adolescents at greater risk for violence include using illicit drugs, belonging to peer groups which condone and/

or use illicit drugs, unsafe behaviors and having been the victim of violence oneself.

KUO, W. H.; AND TSAI, Y. (1986).
Social networking, hardiness and immigrant's mental health.
Journal of Health and Social Behavior 27 (6): 133-149.

This paper explored the importance of personality and the establishment of a supportive network on the mental health of immigrants to North America, and especially the U.S. Three hundred and eleven recent Asian immigrants were asked to complete a battery of tests concerning their current and future social support network, stressful life events and their ability to cope with these, their personal orientation and preparedness prior to immigration. The results of this study suggest that the rate and ease with which an immigrant can reestablish communal ties and build a social network can greatly reduce the amount of isolation, stress and related problems experienced. As well, immigrants who display a hardy personality, that is, who display an internal locus of control and mastery traits are more likely to experience fewer difficulties throughout their migratory process and eventual relocation into North American society.

LATHAM, P. K.; AND NAPIER, T. L. (1992).
Psychosocial consequences of alcohol misuse in the family of origin.
The International Journal of the Addictions 27 (10): 1137-1158.

The intent of this research was to explore whether parental drinking problems would influence the behaviors of adult children in ways which would negatively affect their subsequent social support systems. 285 people in the midwestern United States responded to a mailed questionnaire which measured such variables as social support, helping networks, life events, self-esteem, parental, sibling, and personal drinking behaviors, as well as coping mechanisms. Findings revealed that the variable most linked with social support was self-esteem, with persons with lower self-esteem reporting less social support than others. However, there appeared to be no correlation between parental drinking problems and self-esteem, indicating that it is possible for some children to internalize positive self-images despite their parents' drinking, which may then lead to their increased ability to develop and benefit from positive social networks. The authors conclude that more research is required to further study the differences between these groups, as well as to examine the impact of other variables, such as race and gender, on these relationships.

Findings revealed that the variable most linked with social support was self-esteem, with persons with lower self-esteem reporting less social support than others.

LUTHAR, S.; AND ZEGLER, E. (1991).
Vulnerability and competence: A review of research on resilience in childhood.
American Journal of Orthopsychiatry 61 (1).

This review includes a discussion of defining stressors, theoretical models of vulnerability and resilience and findings related to protective mechanisms.

MANGHAM, C.; MCGRATH, P.; REID, G.; AND STEWART, M. (1994).
Resiliency in health promotion.
Annotated bibliography, detailed analysis, and discussion paper. Reports to Health Canada.

These three documents explore the concept of resiliency — defined in the documents as "the ability of individuals and systems to cope successfully in the face of significant adversity or risk". The annotated bibliography lists a variety of literature on resiliency, including research and application to programs. The detailed analysis synthesizes the literature, expands the concept to include families and communities, and discusses policy and programs relative to resiliency. The discussion paper provides an overview of key factors linked to resiliency, and raises issues pertinent to health promotion research, policy, and programs. Resiliency is considered a positive mental health trait, and appears to be made up of a constellation of protective factors in the individual and environment. While it is not synonymous with low risk (resiliency implies survival despite *high* risk), many of the protective factors associated with low risk apply to resiliency. For this reason, the authors call for caution in moving too quickly to treat resiliency as a new concept.

> *Resiliency is considered a positive mental health trait, and appears to be made up of a constellation of protective factors in the individual and environment.*

MATES, D.; AND ALLISON, K. (1992).
Sources of stress and coping responses of high school students.
Adolescence 27 (106): 461-474.

Focus group interviews were used to study stressors and coping responses of 23 grade 10 students in three Toronto schools. Relationships with parents, work, and lack of money were identified as the primary sources of stress. Coping responses included substance use.

McCubbin, H.; and McCubbin, M. (1988).
Typologies of resilient families: Emerging roles of social class and ethnicity.
Family Relations 37: 247-254.

Characteristics of families who resist disruption brought on by change, and adapt to crisis situations are explored by examining family strengths and coping skills via several models of family life. Social class and ethnicity are important considerations when developing programs of family life education or family-based prevention initiatives.

Social class and ethnicity are important considerations when developing programs of family life education or family-based prevention initiatives.

McDaniel, S. A. (1993).
Challenges to mental health promotion among working women in Canada.
Canadian Journal of Community Mental Health 12 (1): 201-210.

This review examines what is currently known about work and mental health issues as they relate to women. Although available research indicates that women experience positive mental health gains as a result of paid work, some aspects of their work can be detrimental to both their physical and mental health. Less pay, less job security, sexual harassment and the difficulty of combining home and work responsibilities, combined with more negative self-images at the start can create situations where women's level of depression and anxiety may soar and possibly result in problems such as substance abuse or eating disorders. The importance of developing work-based mental health programs is discussed, and the authors suggest that although programs which emphasize physical fitness, nutrition, active living and reduction in the use of alcohol and tobacco can be useful, these programs were originally designed for use by male employees, whose realities and sources of daily stress are not identical to those of female workers. Therefore, more emphasis must be placed on addressing the structural and social pressures faced by women in the workforce to accurately identify and address their mental health needs.

Miller, B. A.; Downs, W. R.; and Testa, M. (1993).
Interrelationships between victimization experiences and women's alcohol use.
Journal of Studies on Alcohol Supp. 11: 109-117.

This study explored the relationships between women's childhood experiences of physical and/or sexual abuse and their development of alcohol problems. Four hundred and seventy-two women in New York State between

the ages of 18 and 45 completed a battery of questionnaires. The results of the study indicate that alcoholic women report a higher incidence of both physical and sexual abuse than the general population. Alcoholic women were also significantly more likely to have had an alcoholic parent, and to have experienced more family changes during childhood. One theory suggested for the high rate of alcoholism among women who have been abused is that such experiences result in low self-esteem. Subsequent use of drugs and alcohol are an effort to self-medicate these negative emotions. Additionally, the authors suggest that women who come from abusive families may believe themselves to be different from their peers as children, and so are more likely to associate with fringe groups where they feel more acceptance. These fringe groups may support, if not encourage, substance use to demonstrate their rejection of family, peers, and society in general. Thus, patterns of alcohol use that may have been learned in the home are reinforced through peer modelling and acceptance and may be the precursor to alcoholism.

One theory suggested for the high rate of alcoholism among women who have been abused is that such experiences result in low self-esteem.

MITIC, W.; MCGUIRE, D.; AND NEUMANN, B. (1987).
Adolescent inhalant use and perceived stress.
Journal of Drug Education 17 (2): 113-121.

The possible links between stress and inhalant use among high school students in Nova Scotia were examined through a comparison of stress scores between students abstaining from, experimenting with, and regularly using inhalants (n=1,684). It was found that overall, inhalant users had higher stress scores than their abstaining peers. This was particularly so in the case of stress related to school, teachers, parents, and money. The authors caution against overuse of the results, given the often modest differences found and the cross-sectional nature of the survey. However, the implications are consistent with those of other studies associating substance abuse with alienation from school and problems with authority.

MONCHER, M. S.; HOLDEN, G. W.; AND TRIMBLE, J. E. (1990).
Substance abuse among Native American youth.
Journal of Consulting and Clinical Psychology 58 (4): 408-415.

The purpose of the study was to examine the influence of parent and peer modelling of substance use on risk factors known to precede the onset of substance use and abuse by Native American youth. One thousand, one hundred and forty-seven school-aged youth in the western United States completed the survey. Results indicated that high-risk scale scores were correlated with greater use across a wide range of substances. Confirming previous studies, these results showed that substance use among Native

American youth was higher than in the general population. Additionally, Native American youths whose parents, siblings, and/or peers also used substances such as tobacco, smokeless tobacco, alcohol, and illicit drugs were more likely to use such substances. Since the risk factors associated with such behaviors place Native youths at particular risk for developing problems associated with abuse and addiction, greater attention must be devoted to improving their familial, social, economic and scholastic environments to reduce the high rates of substance use and related mental and physical health problems.

MOORE, D.; AND POLSGROVE, L. (1991).
Disabilities, developmental handicaps, and substance misuse: A review.
The International Journal of the Addictions 26 (1): 65-90.

In their review of the literature, the authors indicate that persons who are physically or intellectually challenged, persons who are visually or hearing impaired, and persons who suffer from hyperactivity are often at great risk for developing problems associated with substance misuse. Although addiction to prescription drugs may occur as a result of chronic pain or medication misuse, psychological and emotional issues are often the precursors to addiction. Low self-esteem, self-handicapping behavior, inadequate self-control, peer pressure, disenfranchisement, sensation seeking and vicarious experiences are frequently issues tackled in treatment and recovery to end the self-medicating behaviors which often result in addiction. The authors indicate that there is little research conducted specifically with regard to persons with disabilities. They suggest that areas of interest might be to compare the age of onset of disability with the onset of substance use and misuse, to examine the prevalence of prescription and non-prescription drug abuse among the disabled, and to determine the prevalence of drug abuse among disability groups in general.

Although addiction to prescription drugs may occur as a result of chronic pain or medication misuse, psychological and emotional issues are often the precursors to addiction.

MOORE, T.; PEPLER, D.; WEINBERG, B.; HAMMOND, L.; WADDELL, J.; AND WEISER, L. (1990).
Research on children from violent families.
Canada's Mental Health, 19-23.

This paper presented some of the issues and variables identified as important in the development of children from violent families. A variety of risk and protective factors are discussed, including the child's self-esteem and locus of control. Parental sensitivity, especially positive interaction with mothers, appears to create supportive and nurturing environments that provide a buffer for children who experience family violence. Sibling

interactions can act as both a risk or protective factor in that children may come to rely upon, nurture or protect each other in times of stress, or they may model violent behaviors upon each other and ingrain their predisposition for such behaviors. Peers may also act in this dual capacity, either through acceptance of the child or rejection when s/he displays violent and aggressive behaviors. In addition, children of battered women often experience self-imposed isolation from their peers, and so are unable to develop positive, healthy peer relationships. The authors assert that while many children who experience family violence endure many emotional and psychological hardships, some of these children are fairly well-adjusted. Therefore, further research is required to determine which variables may affect their adjustment in order to design and offer better programs and treatments to all children from violent families.

The authors assert that while many children who experience family violence endure many emotional and psychological hardships, some of these children are fairly well-adjusted.

MOOS, R. H.; AND MOOS, B. S. (1984).
The process of recovery from alcoholism: III. Comparing functioning in families of alcoholics and match control families.
Journal of Studies on Alcohol 45: 111-118.

Families of 105 alcoholic patients who had undergone treatment were matched with 105 control families on three domains of family functioning: role functioning, family environment, and husband-wife congruence. Three groups were compared 2 years after treatment: a) families of relapsed alcoholics (n=51), b) families of recovered alcoholics (n=54), control families (n=105). The families of relapsed alcoholics indicated more conflict and less organization, less participation from the alcoholic member, lower agreement on joint participation, and lower family cohesion and recreational orientation. Families of recovered alcoholics were similar to control families, except for avoidance of conflict or social situations. The relationship between family functioning and post-treatment functioning is discussed.

MORSE, R. M. (1988).
Substance abuse among the elderly.
The Menninger Foundation, 259-268.

This discussion paper and literature review attempts to examine and explain a number of issues which put older adults, and especially the elderly, at greater risk for substance abuse and addiction. Although many older adults are at greater risk for the development of common physical and psychological ailments associated with aging, their increased biological sensitivity puts them at greater risk for experiencing tolerance or even overdose to the

drugs commonly prescribed to help them. Cognitive deficiencies associated with aging may put older adults at risk for accidentally misusing medication through over and under use, and interactions between drugs prescribed by several physicians may place clients at unintentional risk of substance abuse and overdose. Furthermore, attitudes espoused by family and the medical community which encourage older adults to seek relief for their problems through medication and/or substance use may put older adults at risk for abusing alcohol and medication.

MOTET-GRIGORAS, C. N.; AND SCHUCKIT, M. A. (1986).
Depression and substance abuse in handicapped young men.
Journal of Clinical Psychiatry 47 (5): 234-237.

In this research study, the prevalence of depression and drug/alcohol use and abuse in disabled students and non-academic staff at a California university were examined. 1,033 males aged 21 to 25 were identified as having or not having a physical disability (4% had a disability); all participants completed a questionnaire which included information concerning their drug and alcohol use patterns, physical and psychological health, and family patterns of drug and alcohol use. The findings obtained indicate that men with disabilities reported greater use of drugs and alcohol, and higher rates of depression than their non-disabled peers. Additionally, men with disabilities reported a greater instance of substance misuse among their mothers, while their non-disabled peers reported greater misuse by their fathers. The authors contend that perhaps the consequences of greater maternal abuse may have included the onset of the disability, or reduced coping after the disability, putting the disabled men at greater risk for addiction and depression. Additionally, the stresses associated with learning to adjust to the disability, the possible physical pain associated with injury, and decreased social activity may be precursors to substance misuse among physically disabled young men.

The findings obtained indicate that men with disabilities reported greater use of drugs and alcohol, and higher rates of depression than their non-disabled peers.

NEIGER, B. L.; AND HOPKINS, R. W. (1988).
Adolescent suicide: Character traits of high-risk teenagers.
Adolescence 23: 469-475.

The authors provide a discussion of the psychosocial characteristics which have been found to increase the risk of suicide, together with an overview of different theories which provide an interactive context to answering the question "why commit suicide?".

NEWCOMB, M. D.; AND BENTLER, P. M. (1988).

Impact of adolescent drug use and social support on problems of young adults: A longitudinal study.

Journal of Abnormal Psychology 97 (1): 64-75.

This study was designed to explore the relationship between adolescent drug use, social support and later life problems. 654 individuals were contacted three times over an 8-year period from adolescence into early adulthood, and completed questionnaires measuring their general drug use, social support, and social conformity. The findings of the study revealed that teenage drug use, especially of cigarettes and hard drugs, resulted in a variety of negative consequences on physical and mental health during early adulthood, such as relationship problems, emotional distress, family problems, and problems associated with substance use. The authors note that it is likely that these problems are not solely attributable to prior drug use, but to the social, psychological and emotional difficulties and deficiencies which predisposed the subjects to substance use. Therefore, prevention programs should not focus entirely on avoiding the use of substances, but on improving deficiencies in coping and social skills. This approach should be used with adolescents likely to go beyond experimentation, and begin using substances as a self-medicating or coping tool.

NEWCOMB, M.; MADDAHIAN, E.; AND BENTLER, P. (1986).

Risk factors for drug use among adolescents: Concurrent and longitudinal analysis.

American Journal of Public Health 76 (5): 525-531.

This project used 994 Los Angeles high school students in a 5-year study of adolescent drug use. Frequency of tobacco, alcohol, cannabis, hard drugs, and non-prescription medication was compared to risk factors of low grade point average, lack of religiosity, early alcohol use, low self-esteem, psychopathology, poor relationship with parents, lack of social conformity, sensation seeking, perceived peer drug use, and perceived adult drug use. The study found a linear association between the number of risk factors present and the percentage of drug users, frequency of use, and heavy use. No single risk factor explained any particular drug usage or form of usage.

The study found a linear association between the number of risk factors present and the percentage of drug users, frequency of use, and heavy use.

PARKER, J.; AND ASHER, S. (1987).
Peer relations and later personal adjustment: Are low-accepted children at risk?
Psychological Bulletin 102 (3): 357-389.

An extensive review and examination of peer relationship difficulties as a possible predictor for later life adjustment. Although substance use issues are not directly studied in this article, implications for drug education programming are clearly apparent.

PELLETIER, D.; AND COUTU, S. (1992).
Substance abuse and family violence in adolescents.
Canada's Mental Health, 6-12.

This paper sought to examine the issue of violence by adolescents against other family members, as well as the relationship between substance abuse and family violence. Violence by children is not to be mistaken with the common, yet brief periods where younger children may bite, kick or hit parental figures in response to feelings of anger or disappointment. Rather, abuse of family members by adolescents is often directed toward mothers or younger siblings, less able to defend themselves from physical and verbal assaults. Adolescent aggression is often linked to patterns of substance use and physical abuse established by parents. Simply put, adolescents are often reacting to their overwhelming emotions using the only outlets of which they are aware. Of particular concern is the practice of directing clinical and medical interventions only on the perpetrator of the violence, and not on its victims. Additionally, more information is needed concerning the dynamics of the dysfunctional family to understand how individual, social and familial variables influence the abusive family system and how best to treat all members of such families.

Violence by children is not to be mistaken with the common, yet brief periods where younger children may bite, kick or hit parental figures in response to feelings of anger or disappointment.

PENKOWER, L.; BROMET, E. J.; AND DEW, M. A. (1988).
Husbands' layoff and wives' mental health.
Archives of General Psychiatry 45 (11): 994-1000.

This study examined the influence of three vulnerability factors on the short and long-term effects of husbands' unemployment on the mental health of their wives and children. 188 women were interviewed three times over the course of three years regarding these issues (family mental health history, demographic characteristics, and social support). The findings revealed that women whose families had financial difficulties prior to their husbands' layoff were most likely to experience psychiatric distress,

and that lack of support (especially from family members) also had detrimental effects on wives' mental health, especially those from blue-collar households. Women with a family history of psychiatric disorder were the most susceptible to poor mental health following their husbands' layoff, and this condition was most visible in families with very young dependent children. The authors conclude that since unemployment has far-reaching psychological implications for all family members, more research is needed to understand how the husbands' mental health prior to unemployment affects later family functioning, as well as how vulnerability factors may change over the course of the period of unemployment.

Women with a family history of psychiatric disorder were the most susceptible to poor mental health following their husbands' layoff.

PERODEAU, G. M.; KING, S.; AND OSTOJ, M. (1992).
Stress and psychotropic drug use among the elderly: An exploratory model.
Canadian Journal on Aging 11 (4): 347-369.

This study was performed to examine the variables which affect psychotropic drug use among the elderly, and in particular to test the usefulness of a stress-and-coping model of drug use. 109 seniors in Verdun, Quebec, were asked to respond to a questionnaire on drug use as well as engage in two interview sessions. One of the main findings of the study was that psychotropic drug use among the elderly was less a result of stress and coping, than a response to the individual's age, attitudes toward drug use in general, and recent negative experiences. Younger seniors, and especially women, were more likely to use drugs as a coping mechanism, possibly because they have been socialized to accept the medicinal value of tranquilizers and such. Additionally, neither the number of illnesses nor recent negative life events affected the number of psychotropic drugs used by older adults. However, the authors note that it is important not to mistake frequency of negative life events and illness with the intensity and impact which these events may exert on the lives of the elderly. Thus, although the data obtained in this study do not suggest a relationship between stress and drug use as a coping mechanism, more research is needed to determine if drug use is not, in fact, a frequent coping mechanism used by older adults.

RHÉAUME, J. (1985).
Thérapie et action culturelle.
Sociologie et sociétés 17 (1): 109-126.

This paper elaborates on the ideas presented by Sevigny (1985) concerning the sociological constructs used in the discussion of mental health and treatment of mental health issues. Rhéaume uses these ideas to discuss some of the theoretical constructs used to evaluate and treat mental illness,

such as the humanist approach, the human potential and social adaptation approach, the cultural reproduction approach, the socio-cultural approach, and so on. Rhéaume discusses the implications of variables such as the type of language used to discuss mental health issues, the clinical models used to describe them, the approaches and orientations used to describe and treat mental health problems, and the ramifications of treatment by medical professionals in institutional settings. These may have little in common with society in general and the effects everyday living may have on the problem of mental illness. Greater attention should be given to addressing the dichotomies which may exist between various forms of treatment and clinical approaches, and to the differences between the issues addressed in interventions and those in the subject's actual social environment.

RHODES, J. E.; AND JASON, L. A. (1990).
A social stress model of substance abuse.
Journal of Consulting and Clinical Psychology 58: 395-401.

According to the social stress model, adolescents begin abusing substances when there is a great degree of stress from various sources (e.g. family, school, peer groups and community). It is a way of coping with many stressors. The model hypothesizes that adolescents will be more resilient if they are members of a positive social support network. This study is a preliminary investigation of the social stress model, and tests some of its parameters. Data from 124 students was randomly selected and results were consistent with prior research, in that there was a significant positive correlation between family support and substance use (.86), and assertion and substance use (.60). The authors, on the basis of their findings, suggest that the family is the single most influential factor in the child's later adaptation to stress. They suggest that prevention programs should include family and should focus on improving opportunities for youth to develop a supportive social network.

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RICH, C. L.; RICKETTS, J. E.; FOWLER, R. C.; AND YOUNG, D. (1988).
Some differences between men and women who commit suicide.
American Journal of Psychiatry 145: 718-722.

Several hypotheses are examined to determine why more men commit suicide than women in the U.S. The first 204 (143 men, 61 women) cases were examined from a group of 133 individuals under 30, and 150 over 30 years of age who committed suicide in San Diego County between 1981-83, representing the largest consecutive suicide study to date. Each case was

reviewed independently by two investigators and diagnosed according to DSM-III. Substance use disorders and affective disorders were the most frequent diagnoses for both women and men, with significantly more major depressive disorders among the women. Men were 2.7 times more likely than women to commit suicide because of the greater frequency of substance abuse. More women used drugs and poisons, and more men used firearms. No clear conclusion could be drawn from the several hypotheses, but the authors contend that there was greater intent among the men, leading to a higher suicide rate.

SACK, W. H.; BEISER, M.; PHILLIPS, N.; AND BAKER-BROWN, G. (1992-93).
Co-morbid symptoms of depression and conduct disorder in First Nations children: Some findings from the Flower of Two Soils Project.
Culture, Medicine, and Psychiatry 16 (4): 471-486.

This study examined whether co-morbid symptoms of pathology displayed by Native children would result in higher rates of subsequent adolescent psychopathology. The project, entitled "Flower of Two Soils", surveyed 1,115 children of Native and non-Native descent from Canada and the United States, relating scholastic performance and cognitive ability to various measures of mental health. The findings of the study confirmed those of previous projects, that Native children are more likely to self-report depressive symptoms and are more likely to be described by authority figures as displaying conduct disorder behaviors. Both of these variables were linked to decreased cognitive ability and reduced academic achievement for both male and female Native children.

The findings of the study confirmed those of previous projects, that Native children are more likely to self-report depressive symptoms and are more likely to be described by authority figures as displaying conduct disorder behaviors.

SCOTT, J. (1993).
Homelessness and mental illness.
British Journal of Psychiatry 162: 314-324.

This review article identifies the various issues related to homelessness in Great Britain. Areas discussed include the various ways in which the homeless are classified, some of the pathways to homelessness, issues related to the physical and mental health of the homeless, as well as the services available for the homeless and the mentally ill. The author notes that more research is needed to identify the various needs particular to the various sub-populations found within the homeless population. In particular, greater attention must be paid when psychiatric illness is a factor in their homelessness.

Sevigny, R. (1985).
Santé mentale et processus sociaux.
Sociologie et sociétés 17 (1): 5-14.

This paper examines the various social concepts and processes that influence our beliefs concerning mental health and the treatment of mental illness. Two prevailing ideas appear to be current in the literature: 1) no one is completely mentally healthy, with some displaying greater nuances of neurotic, depressive, or self-serving behavior; and 2) these mental states and behaviors reflect to some extent the relationships between society and the individual. Using this subtext, the author described such factors as the conception of mental health and illness; prevailing trends in mental health interventions; the influence of organizational, institutional and professional bureaucracy on the use of various interventions; how social systems affect the choice and locale of treatment interventions; and how to improve the relationship between the issues and problems addressed in treatment with those faced by subjects in society.

Shedler, J.; and Block, J. (1990).
Adolescent drug use and psychological health.
American Psychologist 45 (5): 612-630.

This longitudinal study was designed to measure the variables influencing child development, and particularly how these variables affect drug use behaviors and the influence these behaviors have on total development. One hundred and one 18-year-olds were again interviewed and completed a battery of questionnaires, having done so six times throughout their childhood. The results of the study indicate that those who experimented with drugs and alcohol during their adolescence appeared to demonstrate the best psychological health profiles. Overusers and frequent users were described as being more alienated, more distressed and displaying deficiencies with regard to impulse control. Abstainers were described as being more anxious, more emotionally restricted, more controlling and displaying deficiencies in social skills. The authors note that while they are not suggesting that drug use is a positive occurrence and should be ignored, it appears that youths who experiment with drugs are probably doing so as a means of exerting their independence, experimenting with values and beliefs, exploring new roles and identities, and so on. These behaviors can possibly be indicative of more mentally healthy individuals for whom it is not necessary to engage in either extreme of frequent excess or total restraint and abstinence as means of controlling or compensating for problems and deficiencies in their lives.

The results of the study indicate that those who experimented with drugs and alcohol during their adolescence appeared to demonstrate the best psychological health profiles.

SHERMAN, D. J. (1992).
The neglected health care needs of street youth.
Public Health Reports 107 (4): 433-440.

This study was concerned with the current levels of physical and mental health among North American street youth, as well as the risk factors to the maintenance of their health. 214 youths were asked to complete medical history and physical examinations at three primary health service clinics in San Francisco. The data revealed that street youth surveyed had very high levels of mental health problems, almost 50% having received some type of counselling, and 15% having been previously remanded to psychiatric hospitals. Over 40% reported feeling frequently sad or depressed. Substance use also appeared to be a risk factor among the youth, with almost 40% indicating they used alcohol and 35% indicating use of illicit drugs, most notably IV drugs. The data revealed that many of the street youth reported coming from dysfunctional homes where high rates of alcohol, physical and sexual abuse were prevalent. Additionally, many of the youths reported engaging in high-risk sexual and IV drug-using behavior, putting them at risk for contracting STDs and HIV. The authors conclude that more must be done to enhance the health care services offered to street youth to reduce or eliminate their health problems, and to ensure greater accessibility to these services.

The data revealed that many of the street youth reported coming from dysfunctional homes where high rates of alcohol, physical and sexual abuse were prevalent.

SMART, R. G.; AND WALSH, G. W. (1993).
Predictors of depression in street youth.
Adolescence 28 (109): 41-53.

The purpose of this research was to evaluate the impact of a number of variables on the levels of depression experienced by street youth. Thirty-seven Toronto youths agreed to respond to hour-long interviews, as well as to complete questionnaires measuring such variables as social support, self-esteem, alcohol problems, drug problems and family instability. The results revealed that low social support, low self-esteem and time spent in a hostel were factors which were most related to depression; youths who left home in response to parental substance abuse also scored high on measures of depression. Although the youths had high rates of both depression and substance abuse, no correlation was found between these variables. Additionally, although the youths recognized that they had substance abuse problems, they felt that these were secondary to more immediate concerns of obtaining food, shelter and money. The authors conclude that more information is needed to determine whether the youths' depression occurred prior to their leaving home, and whether efforts aimed at reducing depression among the young would reduce their homelessness.

STATISTICS CANADA. (1994).

Emotional Balance: Results of the Bradburn Affect Scale in the 1991 General Social Survey.

Ottawa: Minister of Supply and Services.

This document reports the results of the Bradburn Affect Scale in the 1991 General Social Survey. The Scale provides a measure of overall affect, with positive affect being described as feelings of pleasure, pride, and cheer about life in general, and negative affect being characterized by feelings of depression, anxiety, and despondency. The findings report that one in nine Canadians is more negative than positive in affect. Fewer young people (age 15-19) are highly positive in affect than are older persons. Affect appears to increase through the middle years, and decline with age. The findings are described in conjunction with several variables, such as chronic pain, marital status, income, gender, and tobacco and alcohol use. Regular smokers were more likely than other groups to be negative on balance; findings were inconsistent with alcohol because of the confounding effects of age.

THOMPSON, K. M. (1989).

Effects of early alcohol use on adolescents' relations with peers and self-esteem: Patterns over time.

Adolescence 24 (96): 837-849.

This panel study examines the impact of alcohol use on peer and family relationships, and on self-esteem. One of the major premises of the study is that adolescent alcohol use generally occurs in groups and that the primary function of alcohol use for these adolescents may be a social function. These social functions are defined here as enhancement of relations with same-sex peers and enhancement of feelings of high self-esteem. The sample for this study consists of 839 adolescents who participated in a larger study first during grades 7 and 8 and then in grades 11 and 12. The questionnaires consisted of a measure of drinking behavior modified from the quality-frequency scales, a question about change in relationships with same-sex peers, and a question about changes in overall feelings about themselves. The results indicated that alcohol use appears to negatively impact same-sex peer relationships over time, except for those adolescents who drank to be part of a group or to be sociable. In addition, the author found that self-esteem appeared to decrease as a consequence of drinking except in those young adolescents who perceived drinking to be a sophisticated, positive activity.

The results indicated that alcohol use appears to negatively impact same-sex peer relationships over time, except for those adolescents who drank to be part of a group or to be sociable.

TOUSIGNANT, M. (1989).

La pauvreté: cause ou espace des problèmes de santé mentale.

Santé mentale au Québec 14 (2): 91-103.

The intent of this paper was to discuss the relationship between mental health and socio-economic status. Recent studies in Quebec and elsewhere in Canada demonstrate that there is a very strong link between poverty and poor mental health/mental illness. Some researchers stress that the prevalence of mental illness is similar throughout all social and economic classes, but that for various reasons the rate of recovery and rehabilitation is lower for those in the lower classes, leading to the increased prevalence. The factors associated with the poorer rate of recovery for the poor include: 1) more difficult life situations and more frequent sources of stress; 2) fewer social support networks and less awareness of additional sources of social and economic support; 3) greater psychological vulnerability resulting from lower self-esteem and self-efficacy; 4) poorer socialization resulting in decreased resiliency to stress and poorer coping skills to effectively manage stress; 5) greater likelihood of unemployment, especially prolonged and/or repeated incidence of job loss due to lack of skills and education; and 6) greater likelihood of living in neighbourhoods with poor housing, little greenery, few parks, high crime rates and with little sense of community or neighbourhood cohesiveness. The authors contend that it is not poverty per se which results in poor mental health, but the combination of these additional variables contributing to or resulting from poverty that prevent persons of lower socio-economic classes from achieving optimal mental health.

The authors contend that it is not poverty per se which results in poor mental health, but the combination of these additional variables contributing to or resulting from poverty that prevent persons of lower socio-economic classes from achieving optimal mental health.

WAKEFIELD, J. C. (1992).

The concept of mental disorder.

American Psychologist 47: 373-388.

This theoretical paper seeks to clarify what is a mental disorder, by describing it as a harmful dysfunction. By calling it a dysfunction, one must assume that an internal mechanism is failing to perform its natural function. The word "harmful", is a value term referring to the consequences that occur to the person because of the dysfunction. The author contrasts this definition with others used by different professional groups, to clarify the concept of mental disorder. At present no widely accepted analysis exists explaining which conditions are disorders. This paper discusses in detail other definitions of disorder and describes the widely used DSM-III-R concept of disorder as being close to the present definition.

WOLFE, D. A.; AND JAFFE, P. (1991).
Child abuse and family violence as determinants of child psychopathology.
Canadian Journal of Behavioral Science 23 (3): 282-299.

This paper reviewed the literature examining the effects of family violence on children's development. A variety of issues are addressed, including the relationship between traumatic experiences and disturbed child behavior, the general framework for studying children from violent and abusive families, and evidence of adjustment disorders among children from abusive and violent families. Physically abused children, children of battered women, and sexually abused children were the primary groups examined. The authors concluded the paper by discussing the trends in theory development and testing for this phenomenon, as well as the issues relevant for the development of assessment tools and the creation of better research designs.

III

LITERATURE ON EXPLORING LINKS BETWEEN MENTAL HEALTH AND SUBSTANCE USE

AKERLIND, I.; AND HORNQUIST, J. (1992).
Loneliness and alcohol abuse: A review of evidences of an interplay.
Social Science Medicine 34 (4): 405-414.

This is a review of literature extending back to the 1950s. Using a medical model to define the problems of alcohol use, it concludes that throughout the literature, aspects of loneliness are evident in many individuals at every stage of problematic alcohol use. Loneliness contributes to the continued use of alcohol in a problematic manner and impedes the treatment or discontinuation of problematic usage.

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ALLAN, C. A. (1988).
Characteristics and help-seeking patterns of attenders at a community-based voluntary agency and an alcohol and drug treatment unit.
British Journal of Addictions 84: 73-80.

It is assumed that those who attend community-based facilities have less severe physical, psychological and social problems, compared with clients in psychiatric treatment facilities. This study reported more similarities than differences between the two groups. Using random sampling techniques, the study compared a community mental health clinic (n=50) and a psychiatric facility (n=50). Measures of social adjustment, alcohol related problems, and general health were collected by standard self-report, general health and substance abuse questionnaires and scales (SBS, PAS). The results found that 27% of the hospital treatment group were dependent on alcohol, compared with 24% of the mental health clients. No significant

differences were found in degree of distress experienced due to alcohol-related problems. Social stability and the number of agency contacts were similar for both groups. Problem drinkers in both facilities were more likely to change treatment settings.

ALLAN, C. A.; AND COOKE, D. J. (1985).
Stressful life events and alcohol misuse in women: A critical review.
Journal of Studies on Alcohol 46: 147-152.

This review of the literature concerning the impact of stressful life events on the misuse of alcohol by women questions the validity and reliability of past studies. The three main types of stressors identified in all research studies include those which arise from female biology, psychosocial changes which impact women's roles and functioning in society, and life events which are not exclusive to women such as divorce, retirement, loss of spouse and so on. The problems associated with research design and analysis which are discussed include the direction of influence between stressful life events and substance misuse, the recording of events in retrospect, temporal contiguity and priority, exclusion of third-variable explanations, diversity in the definitions of stressful life events, the significance of stressful life events on the abusers' lives, and the need for a general population sample with which to compare all other samples. The authors conclude that studies conducted in the past are not supported by the more rigorous evaluation techniques now used, and so more research is needed to begin to understand the phenomenon of female alcohol misuse.

This review of the literature concerning the impact of stressful life events on the misuse of alcohol by women questions the validity and reliability of past studies.

ANDA, R.; WILLIAMSON, D.; ESCOBEDO, L.; MAST, E.; GIOVINO, G.; AND REMINGTON, P. (1990).
Depression and dynamics of smoking: A national perspective.
Journal of the American Medical Association 264 (12): 1541-1545.

Using the U.S. National Health and Nutrition Examination Survey and its follow-up study, the authors found a positive correlation between smoking and depression. After 9 years of follow-up, incidence of quitting was 9.9% for depressed smokers compared to 17.7% for non-depressed smokers. Adjusting for amount smoked, age, gender, and educational attainment, depressed smokers were 40% less likely to quit than non-depressed smokers.

ANESHEUSEL, C. S.; AND HUBA, G. J. (1983).
Depression, alcohol use, and smoking over one year: A four-wave longitudinal causal model.
Journal of Abnormal Psychology 92 (2): 134-150.

This longitudinal one-year study was conducted to examine the relationship between depression, alcohol use, and smoking. The sample consisted of 742 adults, who participated in the data collection four times during the course of one year. Data were collected through the use of personal and telephone interviews. Depression was evaluated using the Center for Epidemiological Studies-Depression Scale (CES-D), a four-item hopelessness scale, a four-item positive affect scale, and a three-item death ideation scale. Smoking and drinking were assessed during the first and last set of interviews and were evaluated by asking the number of cigarettes smoked per day, the frequency of drinking during the last two months, and the number of drinks consumed in one day. The results indicated that alcohol use was associated with depression but that this association only occurred across the longest time period interval (one year). This suggests that alcohol use may have a delayed or cumulative impact on depression. The impact of depression on alcohol was also examined, with the finding that increased levels of depression were associated in the short term (three month interval) with increased alcohol use but that this association does not hold over longer periods of time. The authors suggest that these findings may be explained in the following way — it appears that the immediate effect of alcohol is to alleviate depression, while the long-term effect is to increase depression. Smoking was not found to be associated with either depression or alcohol use in this study.

It appears that the immediate effect of alcohol is to alleviate depression, while the long-term effect is to increase depression.

ANNIS, H. M. (1990).
Relapse to substance abuse: Empirical findings within a cognitive-social learning approach.
Journal of Psychoactive Drugs 22 (2): 117-124.

This article reviews research on self-efficacy and relapse to substance abuse. The importance of Bandura's theory of self-efficacy is discussed and related to substance abuse. Based on the research reviewed, the author concludes that the application of self-efficacy theory in relapse prevention shows promise. In particular, Annis distinguishes between initiation and maintenance of behavior change, and the importance of developing self-efficacy to reduce relapse and increase the likelihood of recovering from relapse when it occurs.

ANNIS, H.; AND DAVIS, C. (1988).
Self-efficacy and the prevention of alcoholic relapse: Initial findings from a treatment trial.
In *Assessment and Treatment of Addictive Disorders*, eds. T. Baker and T. Cannon. New York: Praeger.

This book chapter discusses the issue of relapse in alcohol treatment, particularly as related to the failure to maintain abstinence or control following treatment. Self-efficacy is presented both as a factor in reducing relapse and as a product of one's success in controlling one's drinking behavior. The authors present evidence from a clinical trial among 41 alcoholics in treatment at the Addiction Research Foundation of Ontario. Treatment outcomes and client self-efficacy ratings were kept over a six-month period. A significant increase in self-efficacy was found to occur following treatment, which was attributed to clients' successful control of their drinking. The role of self-efficacy in relapse prevention is discussed.

BASS, M. J. (1981).
Do physicians over-prescribe for women with emotional problems?
Canadian Medical Association Journal 125 (12): 1211.

This brief examination of the practice of prescribing medication for women seeking help for emotional problems describes the difficulties which many doctors face when trying to limit their prescription of tranquilizers. Since women are more likely to visit their doctor regularly, are more likely to report experiencing emotional problems, and are less resistant to taking medication than are men, women are therefore more likely to receive prescriptions for tranquilizers from doctors who realize that it is easier to alleviate the patient's suffering with medication than to completely alter their physical and social environment. However, since it is inappropriate to use tranquilizers in lieu of addressing the social and emotional problems, greater attention must be made by physicians to avoid prescribing medication simply due to its ease and availability.

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BELANGER, H.; AND DE VARENNES, S. (1989).
Suicide et toxicomanie.
L'Intervenant 5 (2): 8-9.

This review article familiarizes practitioners with some of the basic information and intervention strategies necessary to deal with suicidal individuals who are also addicted to drugs and alcohol. The literature reviewed demonstrates that the rate of alcohol and drug addiction is twice as high

among suicidal individuals than among the rest of the population. Not only does substance addiction reduce the individual's control over their physical and psychological behavior, but s/he is less able to function socially and utilize available support resources. Persons who are addicted are already in a state of emotional and psychological disequilibrium, so that any excessively stressful or dangerous life event can have catastrophic consequences. Such persons may begin to have brief and periodic thoughts of suicide, and unless they are able to cope with their difficulties, these thoughts may become more persistent until a crisis develops. For clinicians who encounter individuals in such a state, the primary focus should be on eliminating the suicide crisis; persons can be made to understand that it is not death which they are seeking but a solution to their overwhelming difficulties which they are otherwise unable to escape. Once this is achieved, the process of detoxification can begin, as well as that of emotional healing and psychological and behavioral reform. It should be noted, however, that each phase of the recovery process can be very difficult for the individual, and s/he may not yet have begun to acquire effective coping skills to replace their drug or alcohol dependency. Therefore, it is necessary to monitor the individual's abilities and limitations in order to prevent the onset of additional suicidal crises.

BENNETT, G. (1988).

Stress, social support, and self-esteem of young alcoholics in recovery.

Issues in Mental Health Nursing 9: 151-167.

This study examines the relationship of stress, social support and self-esteem to the quality of recovery of young alcoholics. Specifically, the author hypothesized that social support is positively related to self-esteem and that stress is negatively related to self-esteem. Data were collected through the use of questionnaires with 45 non-randomly selected alcoholics in recovery. The questionnaires consisted of: the Recent Life Change Questionnaire (to measure stressful life events); the Norbeck Social Support Questionnaire (to measure the perceived availability of interpersonal resources and degree of integration in a social network); the Tennessee Self-Concept Scale; the Alcohol and Drug Use Questionnaire (to evaluate past alcohol and other drug involvement); and demographic and treatment information. The results indicated that social support was positively related to self-esteem, that stressful life events were not strongly related to self-concept, and that social support did not act as a buffer to stressful life events but in fact had a direct impact on self-esteem. The other interesting finding from this study is the profile of the subjects on the measures included. In terms of social support, the recovering alcoholics did not differ significantly from

The author hypothesized that social support is positively related to self-esteem.

the norm group. The recovering group did have significantly lower self-esteem scores than a non-alcoholic normative group. Finally, the study found that length of abstinence was positively related to self-esteem.

BOIVIN, M.; AND VIOLETTE, F. (1994).
L'alcoolisme: un problème qui concerne la famille entière. Comment s'en protéger? Quelles sont les avenues d'intervention à privilégier?
Revue québécoise de psychologie 15 (3): 109-134.

The aim of this paper was to address the effect of alcoholism on the entire family system. It is estimated that for every person who drinks abusively, an additional 5-6 people are affected, and experience many negative consequences of alcoholism. Family members are particularly likely to experience its effects, as rates of family violence and parental negligence are higher in alcoholic families. Additionally, members of alcoholic families are more likely to develop substance abuse problems themselves, and are more susceptible to a variety of physical and psychological ailments. Persons whose alcoholic family member drinks only sporadically are at even greater risk, as they are unable to develop effective coping skills to deal with the abusive behavior. In addition, the family system is in a constant state of change and individual members are not afforded the opportunity to develop particular roles, behaviors, and coping regimes to deal with the problem drinker. This is not the case in families where the alcoholic is constantly inebriated and family members come to anticipate certain behaviors and routines; these families are the most likely to develop positive coping behaviors and routines which lessen their susceptibility to substance misuse and violent behavior. These risk and protective factors, and family coping styles are discussed with regard to three models of addiction. The first is the disease model, where alcoholism is seen as a sickness and family members are seen as victims of this disease. The second is the systems model, where the family system is seen as dysfunctional and where the alcoholic and associated behaviors are seen as playing specific and vital roles in the maintenance of the equilibrium of the family system. The third is the cognitive-behavioral model, where the alcoholic is believed to have learned that behavior as a result of a series of reinforcing events, and where s/he can unlearn that behavior through deprogramming. The authors conclude that each of these models has certain merits, but that the systems model is likely the most comprehensive as it allows for examination and treatment of the alcoholic, his/her family members, as well as of the family system itself.

Members of alcoholic families are more likely to develop substance abuse problems themselves, and are more susceptible to a variety of physical and psychological ailments.

BREAKEY, W. R.; FISCHER, P. J. ET AL. (1989).

Health and mental health problems of homeless men and women in Baltimore.

Journal of the American Medical Association 262 (10): 1352-1357.

The purpose of the Baltimore Homeless Study was to obtain information on the mental and physical health and substance abuse problems experienced by homeless people. Five hundred and forty-four people recruited from missions, shelters and jails in the Baltimore region were asked to complete a baseline survey, as well as undergo a clinical evaluation involving standardized physical and psychiatric tests; one third of the subjects received a follow-up interview six months later. The results of the project revealed that over half of the homeless population was male, and over two-thirds were non-white. A large majority of both males and females indicated current or prior substance abuse, primarily alcohol-related, as well as current smoking habits often in excess of two packs a day. Both sexes had higher rates of psychiatric illness than the general population, with personality disorders, affective disorders, anxiety and phobic disorders and schizophrenia being over-represented in the homeless population. The authors suggest that while many of the physical health needs of the homeless can be addressed by improving basic public health, more treatment services and facilities must be offered to counteract the high rates of substance use and abuse and the mental and physical problems associated with these.

A large majority of both males and females indicated current or prior substance abuse, primarily alcohol-related, as well as current smoking habits often in excess of two packs a day.

BRESLAU, N.; KILBEY, M.; AND ANDRESKI, P. (1993).

Vulnerability to psychopathology in nicotine-dependent smokers: An epidemiological study of young adults.

American Journal of Psychiatry 150 (6): 941-946.

This study examined the relationship between nicotine use and psychological vulnerability. The sample consisted of 1,007 young adults aged 21 to 30 randomly selected to participate in personal interviews. Participants were assessed to determine the presence or absence of nicotine dependence using the DSM-III-R criteria (evidence of three of the criteria over the last month indicated nicotine dependence). The four measures of vulnerability included a measure of neuroticism (using the Eysenck Personality Questionnaire-Revised), negative affect (using the Positive Affect-Negative Affect Schedule), hopelessness (using the Beck Hopelessness Scale), and general emotional distress (using the Brief Symptom Inventory). Of the total sample, 39.1% of the subjects reported daily smoking, and of these individuals 51.3% met the DSM-III-R criteria for nicotine dependence. The results indicated that those individuals with nicotine dependence showed higher levels on all four measures of psychological vulnerability

than did those individuals who were non-dependent smokers. The authors state, in conclusion, that "neuroticism and the correlated psychological vulnerabilities may commonly predispose to nicotine dependence and major depression or anxiety disorders" (p. 941).

BRILL, N. Q.; CRUMPTON, E.; AND GRAYSON, H. M. (1971).
Personality factors in marihuana use: A preliminary report.
Archives of General Psychiatry 24: 163-165.

This study examines the relationship between personality factors and marihuana use in young adults. Four groups of marihuana users (use every day, n=14; use once or twice a week, n=19; use once or twice a month, n=18; and use less than once a month, n=28) were compared with two groups of non-users (never tried marihuana, n=20; and tried it once, n=20). The subjects were grouped based on their responses to a questionnaire which contained marihuana use questions. The questionnaire also contained a psychological inventory consisting of four scales (psychopathic deviate, depression, levels of anxiety, and ego strength) taken from the MMPI, a risk-taking propensity scale, a stimulus seeking scale, and several other items specific to the study. Results indicated that two of the scales were related to differing levels of marihuana use — stimulus seeking and psychopathic deviate. Relationships with several of the other scales were in the expected direction but were not statistically significant. Finally, the authors indicated that the findings did not suggest a simple linear relationship between personality variables and marihuana use; instead, the infrequent users and experimenters appeared more like non-users than like the frequent users.

Results indicated that two of the scales were related to differing levels of marihuana use — stimulus seeking and psychopathic deviate.

BROWN, S. A. (1989).
Life events of adolescents in relation to personal and parental substance abuse.
American Journal of Psychiatry 146 (4): 484-489.

This study examined the relationship between life events and substance use in two groups of adolescents — one group consisted of 68 adolescents in treatment for substance abuse and the second group consisted of 76 non-abusing adolescents. Within each of these groups, about half of the families had a history of parent substance abuse problems. Life events were measured using a checklist which evaluated seven different types of events: family and/or parental problems; accidents and/or illness; sexuality; autonomy; deviance; relocation; and emotional distress. Each specific life event was also evaluated in terms of its desirability (very happy to very unhappy).

The findings suggest that adolescent substance abuse was related to a higher number of negative life events and a more negative perception of those life events. In addition, the results suggest that adolescents with substance abusing parents also experience more negative life events than do adolescents from non-abusing families. Further, this perception of more negative life events in substance abusing families was particularly high when the adolescent was a non-abuser.

BUCKNER, J.; AND MANDELL, W. (1990).
Risk factors for depressive symptomatology in a drug-using population.
American Journal of Public Health 80 (5): 580-585.

This study examined personality, stressful life events, specific forms of drug use and social support-related variables associated with the onset of a depressive episode in a cohort of 942 psychoactive drug-using young adults. At two collection points one year apart, subjects were classified as developing or not developing depressive symptomatology at collection point two. Findings suggest that lower self-esteem together with negative life events produced elevated risk for depression. Methaqualone use was the only drug that significantly elevated depressive symptomatology independent of other variables.

CARLISLE-FRANK, P. (1991).
Examining personal control beliefs as a mediating variable in the health-damaging behavior of substance use: An alternative approach.
The Journal of Psychology 125: 381-397.

This is a discussion paper examining internal/external locus of control in relation to health-related behaviors. Individuals who demonstrate more adaptive functioning, in a broad range of health-related topics, hold internal locus of control beliefs. Contrary to prediction, alcoholics have consistently been found to be more internally oriented. The author contends that some people may be internal in some domains, but external in habits which are health damaging. Individuals who try to overcome, but fail, in these behaviors may view this domain externally, which now becomes a consequence rather than an antecedent of the health-damaging behavior. A domain-specific approach allows for the fact that one's control orientation may vary over situations and time, and this requires a multidimensional approach.

Contrary to prediction, alcoholics have consistently been found to be more internally oriented.

COHEN, S.; AND LICHTENSTEIN, E. (1990).
Perceived stress, quitting smoking and smoking relapse.
Health Psychology 9: 466-478.

The relationship between perceived stress and smoking status is the area of investigation in this study. The major hypothesis was that decrease in the perceived level of stress was associated with abstinence and increase in perceived level of stress was associated with increase in smoking. Two hundred and sixty-six participants took part in the investigation, which found that perceived stress was not significantly correlated with smoking rate. However, the authors found that relapsers had the highest stress score and quitters the lowest. They also found that subjects who failed to quit for more than 24 hours had an increased stress level over those who quit for the entire 6-month period. The authors were unable to determine whether stress was the cause of smoking or whether failure to quit caused stress, or both.

They also found that subjects who failed to quit for more than 24 hours had an increased stress level over those who quit for the entire 6-month period.

COHEN, S.; SCHWARTZ, J.; BROMET, E. J.; AND PARKINSON, D. (1991).
Mental health, stress, and poor health behaviors in two community samples.
Preventive Medicine 20: 306-315.

The authors evaluated the relationship of obesity, smoking, drinking, and lack of exercise to mental health and stress among 404 employed males and 764 mothers of preschool children. Among the men, only a history of smoking and depression were found to be significant. Among the women, a history of smoking was significantly related to a history of depression, increased marital conflict, greater number of undesirable life events, and full-time employment. Depression and marital conflict was also associated with higher drinking levels. In men, the joint effect of high job demands and low decision latitude was significantly associated with a greater likelihood of smoking.

COVEY, L. S.; GLASSMAN, A.; AND STEINER, F. (1990).
Depression and depressive symptoms in smoking cessation.
Comprehensive Psychiatry 31 (4): 350-354.

This study reexamined data on smoking cessation from a previous investigation that suggested people with a history of depressive symptoms were less likely than other people to succeed in smoking cessation programs. The analysis of 36 individuals showed that during the first week of quitting,

persons with a history of depression experienced a re-occurrence of symptoms. This reappearance of depression, in turn, had a negative effect on cessation. The authors suggest that depression needs to be diagnosed and treated during the withdrawal period, if these individuals are to have success in quitting smoking.

COX, M. (1985).
Personality correlates of substance abuse.
In *Determinants of Substance Abuse*, eds. M. Gradizo and S. A. Maisto. New York: Plenum Press.

This book chapter presents an overview of the concept of personality, by contrasting two approaches, dynamic or intra-psychic, and differential or psychometric. The chapter approaches the subject from 3 aspects: a) personality precursors of substance abuse, b) characteristics of substance abusers, c) the effect of addictive substances on personality. The authors summarize their findings by identifying future substance abusers as persons who have disregard for social mores and an affinity for adventure, and who are independent and impulsive. The substance can have a variety of effects on personality. Longitudinal research and personality-related instruments specifically for substance users would increase understanding of this area. A comprehensive reference list is given.

The authors summarize their findings by identifying future substance abusers as persons who have disregard for social mores and an affinity for adventure, and who are independent and impulsive.

DEMBO, R.; WILLIAMS, L.; LA VOIE, L.; SCHMEIDLER, J.; KERN, J.; GETREU, A.; BERRY, E.; GENUNG, L.; AND WISH, E. D. (1990).
A longitudinal study of the relationships among alcohol use, marijuana/hashish use, cocaine use, and emotional/psychological functioning problems in a cohort of high-risk youths.
The International Journal of Addictions 25 (11): 1341-1382.

This longitudinal study examined the issue of substance use and psychosocial problems in high-risk adolescents. The authors propose a model which suggests that physical abuse, alcohol and other drug use, and sexual victimization all contribute to a decrease in emotional/psychological functioning. This decrease in psychological functioning is then seen to be related to current and future substance use. The data were collected through interviews with adolescents detained in the justice system in Florida. The initial interviews were conducted with 399 individuals and 305 follow-up interviews were conducted 10 to 15 months later. Adolescents who had warrants out for their arrest or who had moved out of state by the time of the follow-up interviews were not included in the second set of interviews.

The interviews consisted of questions about history of physical abuse, sexual victimization, psychological functioning, and alcohol and illicit drug use. The psychological functioning consisted of nine subscales: somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. The drugs covered were tobacco, alcohol, marijuana/hashish, inhalants, hallucinogens, cocaine, heroin, barbiturates and other sedatives, tranquilizers, stimulants, and analgesics. The findings indicate that there are clear relationships between these four variables — physical abuse, sexual victimization, psychological functioning, and drug and alcohol use. Each variable impacts and is in turn impacted by the other variables. The authors describe in detail these relationships as they emerge from the specific analysis of alcohol use, marijuana use and cocaine use. The authors suggest that the findings give support to the notion that high-risk youths have multiple issues to deal with and that these issues must be dealt with in a holistic manner.

DOBKIN, P. L.; AND DONGIER, M. (1990).

Les parents ont mangé des raisins verts et les enfants n'ont pas eu les dents agacées: peut-on identifier des facteurs de protection contre le risque génétique de devenir alcoolique?

Psychotropes 5 (2): 15-21.

The purpose of this study was to examine what protective factors might serve to immunize young males with a family history of alcoholism from becoming alcohol abusers themselves. Forty-five young men attending McGill University who had a family history of alcoholism but who were not misusing alcohol themselves were tested in three stages. First, they completed a battery of questionnaires examining their personality, their family functioning, their level of stress, and their cognitive functioning; second, they underwent a laboratory experiment designed to measure their physiological reactions to situations of stress; third, they completed a 3-day sequence monitoring and recording their experience of stress and measuring their pulse rate at eight predetermined times of the day. The results indicated that men who were in the high-risk category demonstrated higher levels of self-esteem than those in the middle- to low-risk categories. Additionally, high- and middle-risk subjects appeared to be very well-adjusted on tests of psychological and interpersonal functioning. With regard to family functioning, high-risk subjects did not score differently than middle- or low-risk subjects on measures of conflict, cohesion, or effective expression. In addition, high-risk subjects obtained similar scores on measures of stress, although they did indicate that they used self-control strategies more frequently than the other two groups. Lastly, cardiovascular tests yielded

The results indicated that men who were in the high-risk category demonstrated higher levels of self-esteem than those in the middle- to low-risk categories.

similar results among the three groups, indicating that high- and middle-risk males did not react more strongly to situations of stress. In conclusion, the authors suggest that primary protective factors observed in males from alcoholic families include reduced reactions to stress, increased use of self-monitoring and self-controlling behaviors, greater family cohesion and higher levels of self-esteem.

DRYMAN, A.; AND ANTHONY, J. C. (1989).
An epidemiological study of alcohol use as a predictor of psychiatric distress over time.
Acta Psychiatrica Scandinavica 80: 315-321.

The purpose of this study was to evaluate how current and prior levels of alcohol use may affect the incidence of psychiatric distress in the general population. Baseline data used in this project was obtained from the Eastern Baltimore Mental Health Survey performed in 1981-82; 2,091 subjects were contacted one year later for subsequent interviews. The results revealed that psychiatric distress was related to frequency and intensity of alcohol consumption. A number of explanations are suggested for this, including dose-related short term effects of alcohol consumption on behavior and affect, especially levels of depression. Additionally, alcohol may be used as a form of self-medication to cope with the problems associated with psychiatric distress, as well as to eliminate the physical and psychological withdrawal symptoms which accompany substance addiction. The authors conclude that greater attention must be given by clinicians and physicians to psychiatric patients' recent alcohol consumption patterns, as these can greatly influence their diagnosis and subsequent course and effectiveness of treatment.

The results revealed that psychiatric distress was related to frequency and intensity of alcohol consumption.

EPSTEIN, L. H.; AND PERKINS, K. A. (1988).
Smoking, stress, and coronary heart disease.
Journal of Consulting and Clinical Psychology 56: 342-349.

This review article focuses on stress and its relation to smoking, and how the two influence Coronary Heart Disease (CHD) risk. It also looks at how stress promotes smoking and relapses. Men who quit smoking prior to the age of 65 cut their risk of initial or recurrent CHD by 50%. Finally, the authors discuss future research directions in this area.

FRIEDMAN, A. S.; UTADA, A. T.; GLICKMAN, N. W.; AND MORRISSEY, M. R. (1987).
Psychopathology as an antecedent to, and as a "consequence" of, substance use in adolescence.
Journal of Drug Education 17 (3): 233-244.

This longitudinal study was designed to investigate the relationship between substance use and psychopathology. The sample in this study consisted of 232 students in grades 9, 10, and 11 in public high schools who identified themselves as either drug or alcohol users or both. Data were collected using the Brief Symptom Inventory to assess psychopathology (including somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism), by creating a summary drug use score labelled the Drug Severity Index (including frequency of use and risk level of the drug used), and by questions which assessed personal and school-based problems. Information was collected on these measures three times, with the second assessment coming eight months after the first, and the third assessment occurring nine months after the second. The main findings of this study are that early psychopathology predicted later drug use and that conversely, early drug use predicted later psychopathology. The types of psychopathology which were found to be most related to later drug use included obsessive-compulsive symptoms, hostility, paranoid ideation, and depression.

The main findings of this study are that early psychopathology predicted later drug use and that conversely, early drug use predicted later psychopathology.

GOMBERG, E. S. L. (1993).
Women and alcohol: Use and abuse.
Journal of Nervous and Mental Disease 191 (4): 211-219.

This article summarizes recent research on women and alcohol use and addresses the issue of female alcohol use in North American society. The article suggests some unique factors which relate to alcohol use, including: biological factors, family history of drinking, impulse control problems, depression, and influence of significant others on drinking. The author goes on to suggest that the histories of female alcoholics are not that different from non-alcoholics, however, the mediating factor appears to be the effectiveness of coping strategies. In comparing males to females, the author indicates that females begin drinking later than males, and have typically been drinking a shorter period of time than males before entering treatment. In addition, many more females suffered both alcoholism and depression than males. The article concludes with some guidelines for the treatment of alcoholism in women.

GREENFIELD, S. F.; SWARTZ, M. S.; LANDERMAN, L. R.; AND GEORGE, L. K. (1993).
Long-term psychosocial effects of childhood exposure to parental problem drinking.
American Journal of Psychiatry 150: 608-613.

This study utilized a 5-county Epidemiological Catchment Area (ECA) survey, using the Diagnostic Interview Schedule (DIS) and other indices, to determine the diagnosis, psychological functioning and mental health status of 2,936 survey responders (mean age=42 years, range 18-94 years). Of particular interest were the associations between childhood exposure to problem drinking and measures of adult dysfunction. The multivariate analysis included demographic characteristics and childhood traumas. The data were weighted, and least squares linear regression applied. After controlling for other risk factors, childhood exposure to parental problem drinking was associated with greater lifetime psychiatric symptoms and marital instability. The authors caution that this study did not allow different levels of exposure to parental problem drinking, or the stage of development during which the exposure occurred; also the term "problem drinking" was less specific than "parental alcoholism" or "alcohol abuse", which might have strengthened the association.

After controlling for other risk factors, childhood exposure to parental problem drinking was associated with greater lifetime psychiatric symptoms and marital instability.

GROVER, S. M.; AND THOMAS, S. P. (1993).
Substance use and anger in mid-life women.
Issues in Mental Health Nursing 14: 19-29.

This study sought to explore the relationship between women's individual and social support resources and their patterns of substance use in mid-life. Eighty-seven women residing in Tennessee were mailed questionnaires three times over a five year period. The women reported that the manifestations of their stress levels could be seen not only in their displays of anger symptomatology but also in their use of over-the-counter drugs and alcoholic substances. This tendency toward self-medication in response to stress could well be a high-risk situation leading to the development of substance abuse and addiction. Although social support has been shown to have a mediating effect between daily stress and substance use, women whose social networks are very large do not seem to cope better than women whose resources are smaller; the greater time and energy needed to maintain large social supports possibly provides women with additional stressors which counteract the benefits. Lastly, women who used alcohol as a coping mechanism appeared to be better educated than those who used OTC drugs; both groups reported greater feelings of anger, guilt, tension and depression and sought to self-medicate in an attempt to manage these

feelings. The goal of future research should be to examine the extent of women's substance use in response to negative emotions, as well as to develop more effective stress-management techniques for women.

HAMMER, T.; AND VAGLUM, P. (1992).
Further course of mental health and use of alcohol and tranquilizers after cessation or persistence of cannabis use in young adulthood: A longitudinal study.
Scandinavian Journal of Social Medicine 20 (3): 143-150.

This study examines the impact of continuation or discontinuation of cannabis use on the use of legal drugs and mental health. The sample consisted of 1,997 adolescents and young adults aged 17-20 who participated in three mail surveys in Norway. These surveys occurred in 1985, 1987, and 1989. The surveys contained questions examining parental background, adaptation to work and school, health problems, family upbringing, use of leisure time, mental health, and use of substances. The results indicated that alcohol use was related to cannabis use; the higher the use of cannabis, the higher the use of alcohol. Cessation of cannabis did not have any relationship to alcohol use, however individuals who had used cannabis had much higher levels of alcohol consumption than individuals who had never used cannabis. Individuals who had tried cannabis also had a much higher level of use of tranquilizers than those who had never tried cannabis, and individuals who used cannabis regularly had higher tranquilizer use rates than infrequent cannabis users or experimenters. Mental health was not found to be related to continuation or discontinuation of cannabis use. Regular cannabis users reported more symptoms of mental problems than non-users, but it was not clear if the symptoms preceded use or were a result of cannabis use. The authors conclude that in the general population, cannabis is probably used primarily for social motives rather than as self-medication.

Regular cannabis users reported more symptoms of mental problems than non-users, but it was not clear if the symptoms preceded use or were a result of cannabis use.

KNOBLAUCH, D. L. (1988).
A psychological component to women's alcoholism.
Alcoholism Treatment Quarterly 5: 219-229.

This article explores the relationship between certain psychological variables and alcoholism in women. The psychological aspects studied were a blend of anxiety, depression, and low self-esteem. The sample consisted of 714 freshman students at Northwestern University who completed a self-administered, mailed questionnaire. The findings suggest that for women, these psychological factors appear to be either an antecedent or concomitant

of alcoholism. Interestingly, this relationship was not found for males, suggesting that either the relationship does not exist or that the instrument used was not relevant for the males' experience. The author suggests that males tend towards psychological characteristics closer to antisocial personality rather than anxiety and depression, as is the case for women.

LAVERDIERE, S. (1994).
Alcoolisme et toxicomanie en milieu de travail.
L'Intervenant 11 (1): 9.

This discussion paper examines the problem of substance misuse in the workplace. Although the policy of employers in the past has been to ignore employee intoxication and to allow them to work out their personal problems, the trend is now to recognize employees' substance use problems and offer them aid, often in the form of counselling. A general personality profile of substance misusers is suggested. Alcoholics are frequently excessively dependent, emotionally immature, experience frustration very easily, cannot express their emotions, experience anxiety in their interpersonal relationships, have low self-esteem, are perfectionists, and have difficulty accepting blame/negative consequences, especially when dealing with authority figures. Persons who abuse cocaine display similar personality traits, but are also known to be hyperactive, are extremely controlling both at home and at work, are extremely compulsive and have difficulty being productive at work. It has been estimated that the incidence of emotional or mental disorder in the workplace is anywhere from 15 to 30 percent. An inquest into drug use in the workplace performed in Quebec estimates that 10-17% of workers use illicit drugs, 20-25% are alcoholics, 28% self-medicate with prescription drugs, 20% use cocaine, and 18% use marijuana. Prevalence rates such as these suggest that a large portion of the workforce is often impaired while at work, and that accidents due to impairment are the leading cause of death and injury for workers. Therefore, it is important that employers and families work together to battle the problem of drug use in the workplace not only to make the work environment more secure but to improve workers' overall mental and physical health.

Prevalence rates such as these suggest that a large portion of the workforce is often impaired while at work, and that accidents due to impairment are the leading cause of death and injury for workers.

LAVIK, N. J.; AND ONSTAD, S. (1986).
Drug use and psychiatric symptoms in adolescence.
Acta Psychiatrica Scandinavica 73: 437-440.

This study examined the relationship between substance use and mental health in junior high school students. The sample consisted of 177 young adolescents in junior high school in Norway. Data were collected through interviews and questionnaires and were focused on drug use (including

tobacco, alcohol, cannabis, inhalants, and tranquilizers), mental health (including psychosomatic complaints, anxiety, depression, interpersonal conflicts, and social dysfunction), and demographic variables. The results indicated that all types of drug users reported more symptoms of mental disorder than non-users. The use of inhalants was related to a higher level of mental disorder symptoms for males and the use of tranquilizers for females. For both males and females, smoking was related to more symptoms of mental disorder. There was no significant relationship between alcohol use and mental disorder symptoms.

MITIC, W.; MCGUIRE, D.; AND NEUMANN, B. (1987).
Adolescent inhalant use and perceived stress.
Journal of Drug Education 17 (2): 113-121.

The possible links between stress and inhalant use among high school students in Nova Scotia were examined through a comparison of stress scores between students abstaining from, experimenting with, and regularly using inhalants (n=1,684). It was found that overall, inhalant users had higher stress scores than their abstaining peers. This was particularly so in the case of stress related to school, teachers, parents, and money. The authors caution against overuse of the results, given the often modest differences found and the cross-sectional nature of the survey. However, the implications are consistent with those of other studies associating substance abuse with alienation from school and problems with authority.

It was found that overall, inhalant users had higher stress scores than their abstaining peers.

MOTET-GRIGORAS, C. N.; AND SCHUCKIT, M. A. (1986).
Depression and substance abuse in handicapped young men.
Journal of Clinical Psychiatry 47 (5): 234-237.

In this research study, the prevalence of depression and drug/alcohol use and abuse in disabled students and non-academic staff at a California university were examined. 1,033 males aged 21 to 25 were identified as having or not having a physical disability (4% had a disability); all participants completed a questionnaire which included information concerning their drug and alcohol use patterns, physical and psychological health, and family patterns of drug and alcohol use. The findings obtained indicate that men with disabilities reported greater use of drugs and alcohol, and higher rates of depression than their non-disabled peers. Additionally, men with disabilities reported a greater instance of substance misuse among their mothers, while their non-disabled peers reported greater misuse by their fathers. The authors contend that perhaps the consequences of

greater maternal abuse may have included the onset of the disability, or reduced coping after the disability, putting the disabled men at greater risk for addiction and depression. Additionally, the stresses associated with learning to adjust to the disability, the possible physical pain associated with injury, and decreased social activity may be precursors to substance misuse among physically disabled young men.

NEWCOMB, M. D.; AND BENTLER, P. M. (1988).
Impact of adolescent drug use and social support on problems of young adults: A longitudinal study.
Journal of Abnormal Psychology 97 (1): 64-75.

This study examines how adolescent drug involvement affects social and psychological development in adulthood and whether social support acts as a mediating factor. The measures of adjustment in adulthood included: problems with drugs, psychosomatic complaints, relationship problems, emotional distress, work problems, health problems, and family problems. This study is based on a questionnaire completed three times over a period of eight years (early adolescence to young adulthood) by 654 subjects. The findings indicate that drug use, especially of cigarettes and hard drugs, is related to a variety of negative consequences in young adulthood, including: health problems, psychosomatic problems, impaired emotional functioning, impaired romantic attachments, and family problems. The only exception to this relationship was the use of alcohol; no negative consequences of alcohol use were found in this study. In fact, there were three positive effects of alcohol use: increased positive self-feelings, improved family relationships, and improved romantic attachments.

The findings indicate that drug use, especially of cigarettes and hard drugs, is related to a variety of negative consequences in young adulthood, including: health problems, psychosomatic problems, impaired emotional functioning, impaired romantic attachments, and family problems.

PAGE, R. M.; ALLEN, O.; MOORE, L.; AND HEWITT, C. (1993).
Co-occurrence of substance use and loneliness as a risk factor for adolescent hopelessness.
Journal of School Health 63 (2): 104-108.

This study examined the relationship between substance use, loneliness and hopelessness. The sample consisted of 1,915 adolescents from seven different schools in grades 10-12. The schools were randomly selected; all grade 10 and 12 students participated in the study. The students completed surveys which contained the Beck Hopelessness Scale, the Revised UCLA Loneliness Scale, and questions regarding illicit drug use (cocaine, marijuana, hashish, hallucinogens, sedatives, and amphetamines) and alcohol use. The results indicate a strong relationship between the three variables. Adolescents who were frequent drug and alcohol users showed the highest

levels of hopelessness. Each of these two variables taken alone was also related to higher levels of hopelessness. Loneliness was also found to be related to hopelessness. When examining all three variables — drug and alcohol use, loneliness, and hopelessness, it was found that there was a greatly increased level of hopelessness in those adolescents who both used drugs and alcohol and were lonely. The level of hopelessness in this group of adolescents was much higher than for lonely non-substance users or for not-lonely substance users. These findings suggest that the addition of substance use in the lives of lonely adolescents places them at great risk for feelings of hopelessness, which may in turn lead to an increased risk of suicide.

PARKER, D.; PARKER, E.; HARFORD, T.; AND FARMER, G. (1987).
Alcohol use and depression symptoms among employed men and women.
American Journal of Public Health 77 (6): 704-707.

Self-reported drinking practices and symptoms of depression were studied in 1,367 employed males and females. After controlling for contextual variables like age, education, family income, marital status, medication use, and father's drinking, the authors found that increased alcohol consumption was positively correlated with an increase in symptoms of depression in subsequent sober states. The study was not able to control for the variable of lifetime consumption and its possible directional effect. The authors offer several possible explanations for their findings.

> *The authors found that increased alcohol consumption was positively correlated with an increase in symptoms of depression in subsequent sober states.*

PEDERSEN, W. (1991).
Mental health, sensation seeking and drug use patterns: A longitudinal study.
British Journal of Addictions 86: 195-204.

This longitudinal study examined the impact of mental health and sensation seeking on drug use over a 20-month period. The sample consisted to 533 adolescents between the ages of 16 and 18 in Oslo. These adolescents completed surveys twice — during the initial data collection phase and 20 months later. The response rate in the second data collection period was 90.3% of the initial sample. The survey contained questions which examined drug use and included a version of Zuckerman's Sensation Seeking Scale, Form V, and the General Health Questionnaire 12 to evaluate depression, anxiety, social performance, and somatic complaints. The drugs involved were tobacco, alcohol, cannabis, inhalants, and benzodiazepines; Form V consisted of four subscales: thrill and adventure seeking, disinhibition,

experience seeking, and boredom susceptibility. The findings indicated that the stability over time of sensation seeking was good while the stability of the mental health measure was relatively low. Because of its low stability, the measure of mental health was not found to be a good predictor of future drug use. However, sensation seeking in general, and the specific subscales, were found to be stable and important longitudinal predictors of drug use. The subscale of disinhibition appeared to be the best predictor of future drug use, including all the drugs included here and for both genders. Thrill and adventure seeking were associated with moderate alcohol use, while experience seeking was associated with cannabis use for males, disinhibition with cannabis use for females.

ROSS, C. A.; AND DAVIS, B. (1986).
Suicide and parasuicide in a northern Canadian Native community.
Canadian Journal of Psychiatry 31: 331-334.

This paper calls attention to the high incidence of suicide and parasuicide among the Native community, and of the need for better methods of prevention. A retrospective chart review of the reasons and prevalence of deaths in Manitoba from 1981 to 1984 was conducted. The findings indicated that within this three-year period, there were 8 suicides and 131 parasuicides among the Native community, none of whom had made previous attempts, nor were they known to the mental health system. Although the problem of suicide is largely confined to male Treaty Indians, the parasuicide rate (specifically the drug overdose rate) was especially high for Treaty females. For native females aged 15-19, the overdose rate was 7,000 per year per 100,000 population, where only 10% of the drug of choice was a psychotropic agent. The authors contend that suicide and parasuicide rates such as these are of epidemic proportions, and call for greater funding and research efforts to be directed toward better suicide detection and prevention services for the Native community.

Although the problem of suicide is largely confined to male Treaty Indians, the parasuicide rate (specifically the drug overdose rate) was especially high for Treaty females.

SADAVA, S.; AND THOMPSON, M. (1986).
Loneliness, social drinking, and vulnerability to alcohol problems.
Canadian Journal of Behavioral Science 18 (2): 133-139.

The UCLA measure of loneliness was given to a volunteer population of 99 current drinkers. When controlling for levels of alcohol consumption, a strong correlation was found among those who reported adverse consequences of drinking, perceived themselves to be problem drinkers, or had

fewer coping functions. Also, loneliness and alcohol problems were found to be related to external locus of control. Loneliness as a source of vulnerability to alcohol problems among heavy drinkers is discussed.

SHER, K. J.; WALITZER, K. S.; WOOD, P. K.; AND BRENT, E. E. (1991).
Characteristics of children of alcoholics: Putative risk factors, substance use and abuse, and psychopathology.
Journal of Abnormal Psychology 100 (4): 427-448.

This study examined the differences between children of alcoholics and children of non-alcoholic parents on such variables as drug and alcohol use, psychopathology, cognitive ability, and personality. 253 COAs and 237 non-COAs completed a battery of diagnostic tests. The findings of the study showed that COAs reported more drug and alcohol problems, stronger alcohol expectancies, higher incidence of behavioral and psychological disorders, and more psychiatric distress than their non-COA peers. Although gender and family history of substance abuse did not significantly alter results for male or female subjects, when gender effects were found they showed greater family history effects for women.

SNELL, W. E., JR.; BELK, S. S.; AND HAWKINS, R. C. (1987).
Alcohol and drug use in stressful times: The influence of the masculine role and sex-related personality attributes.
Sex Roles 16 (7/8): 359-373.

This study sought to determine whether socially undesirable traits and verbal aggression would predict the use of drugs by men and women currently experiencing stressful life episodes. 567 male and female subjects enrolled in undergraduate psychology courses at the University of Texas were asked to complete a battery of questionnaires, including the MRI, EPAQ, CAB, and the LES. The findings indicate that substance use patterns and prevalence rates in response to stressful life events were influenced by both sex role and personality phenomena. The authors indicate that particular types of stressful life experiences may occur in conjunction with certain types of gender-role tendencies (marital dissatisfaction, spousal abuse, success preoccupation), and so further research is needed to fully understand how such factors may predispose certain individuals to substance misuse and abuse.

Swaim, R. C.; Oetting, E. R.; Edwards, R. W.; and Beauvais, F. (1989).

Links from emotional distress to adolescent drug use: A path model.

Journal of Consulting and Clinical Psychology 57 (2): 227-231.

This study examined the links between adolescent emotional distress and drug use. Questionnaires were given to 563 high school students. Emotional distress was defined and measured as self-esteem, anxiety, depression, blame/alienation, and anger. The results of the study indicate that the relationship between emotional distress and drug use is mediated by peer drug associations. This suggests that the generally accepted self-medication understanding of drug use may not hold for adolescents. The one sub-component of emotional distress that did have a direct relationship to drug use was anger. However, the strength of the relationship was small compared to the strength of the peer drug associations relationship. The findings suggest that the use of interpersonal dimensions to predict and understand drug use in adolescents may not be as useful as the use of interpersonal, peer-related dimensions.

The one sub-component of emotional distress that did have a direct relationship to drug use was anger.

TAKALA, J.; RYYNANEN, O.-P.; LEHTOVIRTA, E.; AND TURAKKA, H. (1993).

The relationship between mental health and drug use.

Acta Psychiatrica Scandinavica 88: 256-258.

This cross-sectional study conducted on adults in Finland was designed to examine the relationship between mental health and use of various drugs. The sample consisted of 1,821 individuals who completed mailed questionnaires and participated in personal interviews. Mental health was assessed using Goldberg's questionnaire which examines overall mental status. Drug use was assessed by asking participants the names of all prescribed drugs which they currently use. The findings of this study indicate that the overall use of prescription drugs, both frequency and variety of drugs used, increases with age. In addition, there was a higher level of drug use in those individuals who displayed symptoms of mental disorders. The authors suggested several explanations for their findings. First, that individuals with mental disorders may be diagnosed with a physical condition (such as cardiovascular disease) and prescribed medication when in fact they may need treatment and intervention for mental problems (such as panic and anxiety disorders) instead. Second, that individuals with mental disorders may in fact perceive more physical complaints and seek treatment for perceived physical problems more often than individuals with fewer symptoms of mental disorder.

TIMMER, S. G.; VEROFF, J.; AND COLTEN, M. E. (1985).

Life stress, helplessness, and the use of alcohol and drugs to cope: An analysis of national survey data.

In *Coping and Substance Abuse*, eds. S. Shiffman and T. A. Wills, 171-198. California: Academic Press, Inc.

This book chapter summarizes the results of a nationally representative survey research project (n=2,264) which examined the relationships between life stress, feelings of helplessness, and the use of drugs and alcohol to cope. The findings of the study indicated that "people under stress or with fewer psychological resources (e.g., lack of self-confidence, feelings of vulnerability) show a greater overall tendency to use alcohol or drugs to help handle tension" (p. 195). However, the authors suggest that this relationship between stress and alcohol or drug use is not clearly linear, in that some individuals who are not under stress and who appear to be well-adjusted drink and use drugs more than individuals who appear less well-adjusted. The authors go on to state, "as stress increases, people who feel vulnerable to stress and lack confidence in themselves are more likely to rely on drinking and drug use to cope, but people who feel efficacious and confident about themselves are less likely to rely on drinking and drug use" (p. 195).

TOLONE, W. L.; AND TIEMAN, C. R. (1990).

Drugs, delinquency and "nerds": Are loners deviant?

Journal of Drug Education 20 (2): 153-162.

This study examines the differences in drug use and lifestyle issues in adolescents who are not part of the peer culture, those considered Loners, from those very socially oriented (Socials). This study used data from the Monitoring the Future survey conducted annually by the National Institute on Drug Abuse to evaluate behaviors and attitudes of high school seniors. This study used data from nine consecutive years, 1976 to 1984. For this nine-year period, over 30,000 seniors responded to the survey. However, only Caucasians were selected for analysis due to lifestyle difference between blacks and Caucasians. Only non-married individuals were included, thus reducing the total number used in the analysis. Since the focus was on comparing Loners with Socials, an Index of Social Involvement was constructed based on several questions from the original survey. The findings indicated that male Socials were more involved in alcohol and drug use, delinquency, and truancy than were male Loners. However, male Socials were also involved in more socially acceptable activities such as religion, and were generally happier and more satisfied with life than male Loners. Female Socials were also more involved in drug and alcohol use, delinquency

Male Socials were also involved in more socially acceptable activities such as religion, and were generally happier and more satisfied with life than male Loners.

and truancy than female Loners. The authors discussed the findings, suggesting that Socials (male and female) have lifestyles that incorporate both conventional and deviant activities, and that these activities tend to be social in nature, while the Loners (male and female) tended to be involved in less deviant activities and more conventional activities which were not social in nature (such as reading, listening to music, etc.).

TORABI, M.; BAILEY, W.; AND MAJD-JABBAN, M. (1993).
Cigarette smoking as a predictor of alcohol and other drug use by children and adolescents: Evidence of the "gateway drug effect".
Journal of School Health 63 (7): 302-306.

The authors analyzed data from a state-wide survey of adolescent substance use in Indiana to determine the effect of smoking on initiation to drinking or other drug use. Regular smokers were three times more likely to drink heavily, and 10-30 times more likely to use illicit drugs, than non-smokers. While this cross-sectional survey does not show whether smoking preceded the other drug use nor does it show a causal relationship between smoking and other drug use, it is presented as evidence that tobacco may serve as a "gateway" drug. Other findings include the fact that peer approval, age, gender, and ethnic background, all acted as predictors of drug usage. *Predictors,* in the context of this article, means that these variables were correlated independently with drug use.

Regular smokers were three times more likely to drink heavily, and 10-30 times more likely to use illicit drugs, than non-smokers.

TOWBERMAN, D. B.; AND MCDONALD, R. M. (1993).
Dimensions of adolescent self-concept associated with substance use.
The Journal of Drug Issues 23 (3): 525-533.

This study examined the relationship between self-concept and adolescent substance use. The authors suggested that self-concept is a very ambiguous term and thus attempted to identify sub-components or dimensions of self-concept which relate to substance use. The sample consisted of 1,050 young adolescents in public school, grades five and six, in Virginia. The survey instrument, the Youth Life-Styles Inventory, consisted of six subscales: socio-demographic information, drug use attitudes, self-concept, drug knowledge, perceived levels of peer substance use, and frequency of personal substance use. Results indicated the presence of four distinct subscales within the construct of self-concept: negative image (negative self-perception and personal inadequacy), self-confidence (degree of positive esteem and self-worth), bonding (perceived connection between the youth and support

systems), and effectiveness (beliefs about social and personal effectiveness). In regard to the relationship between self-concept and substance, the authors found that higher levels of self-confidence, bonding, and effectiveness were related to lower levels of experimentation and drug use frequencies. Higher disagreement with negative self-image items was related to lower drug use and experimentation. Therefore, the authors conclude that all four subscales identified in this study are significantly related to drug use and drug experimentation. They also discuss research and intervention implications of these findings.

WHITEHEAD, P. C.; AND LAYNE, N. (1987).
Young female Canadian drinkers: Employment, marital status and heavy drinking.
British Journal of Addiction 82: 169-174.

This study examined the prevalence of drinking, and especially heavy drinking, and its relationship to such variables as age, employment and marital status. Data was obtained from 22,000 respondents to the Canada Fitness Survey conducted in 1981. The highest proportion of female heavy drinkers was for employed women aged 18-21, who reported drinking an average of 3 drinks per occasion. Married women between the ages of 15-29 reported the lowest rates of heavy drinking, while 28% of divorced or separated women reported being heavy drinkers. Unemployed women reported the highest rates of heavy drinking, while full-time students reported the lowest. Homemakers reported the third highest rates of heavy drinking at 15%, with 23% of homemakers aged 18-21 reporting heavy drinking. Overall, the single most important variable in the relationship between age and heavy drinking was employment, with employed single women or unemployed homemakers reporting the highest rates of heavy drinking.

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WILLIAMS, O. B.; AND CORRIGAN, P. W. (1992).
The differential effects of parental alcoholism and mental illness on their adult children.
Journal of Clinical Psychology 48 (3): 406-414.

This study examined the impact on young adults of growing up in a household with a parent with alcoholism or mental illness or both. The sample consisted of 139 undergraduate and graduate students at a university in Southern California. These students completed a battery of self-report measures including: the Children of Alcoholics Screening Test (CAST), the Relative Psychiatric History Questionnaire, the Coopersmith Self-Esteem Inventory, the Beck Depression Inventory, the trait portion of the State-

Trait Anxiety Inventory, the Social Avoidance and Distress Scale, and the Social Support Questionnaire. The results indicated that 45% of the students included were adult children of alcoholics, adult children of mentally ill, or both. These students with dysfunctional family backgrounds had lower self-esteem, greater depression, and more social anxiety than students from families perceived as functional. The impact of having a mentally ill parent was greater in terms of depression and trait anxiety than the impact of having an alcoholic parent. Additionally, the overall impact of parental mental illness or alcoholism was mediated by the presence of a large and/or satisfactory social support network. Individuals with larger and more satisfactory social support networks had lower levels of depression and anxiety than those individuals with few social supports. Adult children of mentally ill parents tended to have smaller social support networks than other subjects, although they did not show any differences in satisfaction with social support.

WILLS, T. A.; VACCARO, D.; AND MCNAMARA, G. (1992).
The role of life events, family support, and competence in adolescent substance use: A test of vulnerability and protective factors.
American Journal of Community Psychology 20 (3): 349-374.

This study sought to determine some of the risk and protective factors associated with adolescent substance abuse. Using 1,289 urban, multi-ethnic students in the U.S., the authors determined that the primary vulnerability factor of negative life events was most often cited by adolescents who had high negative affect and low positive affect. Subjects who had positive relationships with parents were least likely to use substances, as were those with personal competence in the domains of academic achievement and relationships with adults.

Subjects who had positive relationships with parents were least likely to use substances.

WILSNACK, R. W.; AND WILSNACK, S. C. (1992).
Women, work, and alcohol: Failures of simple theories.
Alcoholism: Clinical and Experimental Research 16 (2): 172-179.

This paper sought to add insight into the relationship between women's employment status and their drinking behaviors. The authors contend that past studies have examined the issue in a simple, one-dimensional fashion. The research questions were largely focused on whether paid employment was hazardous to women, whether job stress led to problem drinking, or whether paid employment was beneficial to the mental health of women. The authors assert that these studies, including their own, have offered

theories and variables too simplistic to explain why the effects of employment on drinking behaviors were not consistent or universal to all women. They suggest that additional research be conducted to examine the interaction effects of employment characteristics and other conditions and the ways in which these may influence drinking behaviors. In addition, they suggest that future research might look at employment as the context for drinking behaviors. This would facilitate a greater understanding of how job-related situations or peers may influence women's desire and opportunities to drink alcohol, and how these, in turn, may cause or worsen predisposition to problem drinking behavior.

WINDLE, M. (1991).

The difficult temperament in adolescence: Associations with substance use, family support, and problem behaviors.

Journal of Clinical Psychology 47 (2): 310-315.

This study examined the relationship between difficult temperament, perceived family support, problem behaviors and substance use in adolescents. The sample consisted of 297 adolescents in high school. Several variables were addressed in the questionnaires: first, difficult temperament, measured using the Revised Dimensions of Temperament Survey (consisting of ten attributes — general activity level, activity level related to sleep, approach-withdrawal, flexibility-rigidity, rhythmicity-sleep, rhythmicity-eating, rhythmicity-daily habits, distractibility, and persistence); second, frequency of drug use (including tobacco, alcohol, marijuana, cocaine, opiates, stimulants, barbiturates, hallucinogens, and inhalants); third, childhood behavior problems, measured using the Childhood Hyperactivity/Minimal Brain Dysfunction questionnaire; fourth, delinquency; fifth, depressive symptoms, measured using the Center for Epidemiological Studies Depression Scale; and sixth, perceived social support from family. The findings indicate a positive relationship between adolescent difficult temperament factors and childhood behavior problems. The author also found that the total number of difficult temperament factors was also related to higher levels of substance use, lower perceived family support, more depressive symptoms, and higher levels of delinquent activity.

The findings indicate a positive relationship between adolescent difficult temperament factors and childhood behavior problems.

ZUCKERMAN, B. S.; AMARO, H.; AND BEARDSLEE, W. (1987).

Mental health of adolescent mothers: The implications of depression and drug use.

Developmental and Behavioral Pediatrics 8 (2): 111-116.

This review article proposes that depression and/or drug use are key factors in determining the health and developmental outcomes of adolescent mothers and their children. The paper explores some of the biological, cognitive and social changes and risk factors which may correlate with the onset of adolescent depression. Although adolescence is a time for experimentation with many things, including drugs and alcohol, many of the personality factors which link depression, substance use and problem behavior may also influence the rate of teen pregnancy. External locus of control, low self-esteem, greater tolerance of deviance, greater social criticism and alienation and lower expectations for academic success are common characteristics of adolescents who report greater incidence of both depression and substance use. Additionally, substance use may impact the cognitive functioning of many teens, putting them at greater risk for becoming pregnant as a result of unprotected sexual encounters. Stressful life events and little social support were key issues in determining the maternal depression of younger mothers, as well as the age at first pregnancy and number of children born. Future research and clinical issues to be explored include the differences between adolescent mothers and non-mothers and the impact which drug use has on these differences, as well as the social and economic stressors experienced by younger mothers and how best they can be helped to avoid or overcome substance use in response to these difficulties.

IV

LITERATURE ON PREVENTION AND TREATMENT

A. PREVENTION AND PREVENTION PROGRAMS

ADAM, D. (1989).
Women and stress: A community prevention and health promotion program.
Canada's Mental Health 37 (4): 5-8.

This paper outlines the development, implementation and evaluation of a community health promotion program that targeted French-speaking women in minority situations, as they are often socially and economically disadvantaged. The program was 15 hours in length, and focused primarily on strategies women could implement to improve their physical and mental health, to better cope with their stress, and to feel more control over their lives. In total, 29 groups of women completed the program and responded to questionnaires; a majority of the women indicated that they had a better understanding of certain relaxation techniques and believed that they could effectively use them to better manage their everyday stress.

BAER, M. E.; AND QUIGLEY, L. A. (1993).
Harm reduction for alcohol problems: Moving beyond the controlled drinking controversy.
Behavior Therapy 24: 461-504.

This review article provides an overview of a disease model approach (implying abstinence) along with a secondary prevention model (implying moderate drinking treatment goals), and seeks to integrate the two approaches into a model of harm reduction. This model is based upon the assumption that habits can be placed along a continuum ranging from beneficial to harmful consequences. It aims to facilitate a movement along a continuum from greater to lesser harmful effects of drug use, where any movement

along this continuum is encouraged and supported. Reporting treatment outcomes from brief treatments for problem drinkers, and a "stepped-care" model for college students, the authors develop an integrative approach based upon harm reduction. A comprehensive reference list is provided.

BANGERT-DROWNS, R. (1988).
The effects of school-based substance abuse education — A meta analysis.
Journal of Drug Education 18 (3): 243-265.

Meta analysis involves the statistical combination of results from numerous similar studies to determine roughly what the overall impact of the programs studied appears to be. In this analysis, 33 evaluations of drug abuse prevention programs were analyzed. Programs were selected only if they had been thoroughly evaluated. Findings included the fact that programs, taken as a whole, had a consistent effect on knowledge and attitudes, but no significant effects on behavior. Changes in attitude were greatest when peer-led teaching was employed. The author suggests that attitude change is a positive, realistic step in itself.

Findings included the fact that programs, taken as a whole, had a consistent effect on knowledge and attitudes, but no significant effects on behavior.

BOSWORTH, K.; AND SAILES, J. (1993).
Content and teaching strategies in 10 selected drug abuse prevention curricula.
Journal of School Health 63 (6): 247-253.

Program content and common teaching strategies are reviewed for ten drug abuse prevention programs for schools, representing a variety of approaches. Not surprisingly, content focuses on a combination of cognitive and affective strategies, including various life skills such as peer refusal, assertiveness, and communication. The authors point out that the teaching methods used, which include small group work, brainstorming, games, and role play, require more teacher preparation and training than is made available. As a result, programs may suffer in degree and duration of implementation.

BRISSON, P. (1992).
Prévention des toxicomanies et promotion de la santé: des stratégies de contrôle aux pratiques d'auto-détermination.
Psychotropes 7 (3): 59-63.

This paper discusses the recent trend in health promotion, including drug and alcohol programs, to emphasize prevention and public education versus the traditional curative and rehabilitative approaches to mental health and

substance use. Brisson refers to the global approach to mental health, which allows practitioners and the public alike to *act on* the problem of mental health and substance abuse to control it, to *act for* mental health and to normalize certain measures which are needed to ensure it, to *act with* each other and ensure the participation of every group in society, and to *allow others to act* to reduce the factors that make them more vulnerable to poor mental health and the abusive consumption of psychotropic drugs. In effect, this global approach encourages all to act both individually and collectively to prevent the onset of poor mental health and associated problems such as substance addiction.

CANADIAN MENTAL HEALTH ASSOCIATION (ONTARIO DIVISION).
Living Colour: Building Self-esteem & Developing Communication Skills.
Toronto: Authors.

This mental health enhancement program is designed for use with preschool to grade six children. It seeks to address the mental and emotional health of young people, particularly self-image, communication, and self-management skills. A teachers manual and other materials are provided.

ELIANY, M.; AND RUSH, B. (1992).
How Effective are Alcohol and Other Drug Prevention and Treatment Programs?
Ottawa: Minister of Supply and Services.

This report discusses common theoretical bases for prevention and treatment programs as well as research on program effectiveness. Policy and Legislative measures controlling economic and physical availability are cited as the most successful prevention programs. Educational programs, while often influencing knowledge and attitudes at least in the short term, have generally failed to show behavioral change as a program outcome. Findings as to treatment effectiveness were mixed. Not all approaches are equal in effectiveness, but no single approach stands out.

Policy and Legislative measures controlling economic and physical availability are cited as the most successful prevention programs.

FLAY, B. R. (1985).
Psychosocial approaches to smoking prevention.
Health Psychology 4 (5): 449-488.

This article reviews 27 smoking prevention programs, some based on a social influences approach, others on a broader life skills approach. Flay breaks the programs temporally down into four "generations". Apparent

over time is an evolution and improvement of programs, with more recent programs having positive behavioral impacts. The author argues that such evolution is important. This supports the argument for continued implementation and improvement/revision of programs. The article suggests future research needs to focus on specific populations (e.g. gender, age) when evaluating programs.

GABOURY, A.; AND LADOUCEUR, R. (1993).
Evaluation of a prevention program for pathological gambling among adolescents.
Journal of Primary Prevention 14 (1): 21-28.

This study sought to evaluate a gambling prevention program consisting of an overview of the legality of gambling, the commercial nature of gambling, automatic gambling behaviors, pathological gambling and coping skills. 289 high school students in Quebec completed pre- and post-intervention questionnaires; 134 subjects were in the experimental group while 155 remained in the control group. The results of the study showed that while the program improved subjects' knowledge of gambling and their coping skills, gambling attitudes and behaviors were not significantly modified.

GIESBRECHT, N.; AND FERRIS, J. (1993).
Community-based research initiatives in prevention.
Addiction 88 (Supplement): 83S-93S.

This article presents a discussion of community-based research approaches in the area of substance abuse prevention. The authors suggest that community-based prevention programs are likely of most benefit since most drug-taking behaviors are embedded in the community context. The article goes on to present the necessary steps which must be undertaken in order to conduct community-based action research on prevention programs. The paper ends with some discussion about policy implications of these types of initiatives.

> *The authors suggest that community-based prevention programs are likely of most benefit since most drug-taking behaviors are embedded in the community context.*

GUINOIS, P. (1994).
À la toxicomanie des femmes, une solution toute feminine!
L'Intervenant 11 (1): 7.

The intent of this article was to advertise and promote the opening of a new substance abuse treatment center in Quebec, called Pavillon Raymonde Peladeau. This treatment center was designed for exclusive use by female

patients, and its programs were accordingly designed to address the personal, social, emotional and rehabilitative needs of female addicts and alcoholics. Specific qualities inherent in this treatment environment include interaction and group discussions with female peers, and treatment offered by female-only staff. This creates an environment which is more open, non-judgmental and conducive to personal reflection and identification of one's personal recovery issues. In addition, since many women arrive in treatment at much later stages of the addiction process than men, they are often more physically fatigued and emotionally vulnerable than men. One of the goals of this new center is to offer women an environment to regain not only mental but physical strength and a renewal of their energy. An additional goal of the center was to improve women's self-esteem and acceptance of self by offering them a venue for exploring their spirituality and a safe milieu for discussion and personal reflection. Lastly, although most women are discharged from the center after a period of three weeks, they are encouraged to return on a weekly basis. They can then benefit from the relaxing and female-affirming environment offered by the center, ensure their continued sobriety and facilitate their reintegration into society.

Since many women arrive in treatment at much later stages of the addiction process than men, they are often more physically fatigued and emotionally vulnerable than men.

HALL, S. M.; MUNOZ, R. F.; AND REUS, V. I. (1994).
Cognitive-behavioral intervention increases abstinence rates for depressive-history smokers.
Journal of Consulting and Clinical Psychology 62 (1): 141-146.

The authors initially designed a cognitive-behavioral intervention to prevent the dysphoria in clients seeking treatment for smoking. Based on this design, they set up a primary hypothesis that such intervention would be effective for smokers with a history of major depressive disorder (MDD). Of the 149 subjects, 46 were diagnosed with MDD; 79 were assigned to mood management treatment and 70 were assigned to standard treatment. On average, subjects smoked 24.9 cigarettes a day. The primary hypothesis was confirmed. The results varied from previous studies in that no strong correlation was found between history of MDD and smoking treatment failure. Acknowledging the methodological limitations of their study, the authors conclude that subjects with a history of MDD are best served with a cognitive-behavioral approach.

HAWKINS, J. D.; CATALANO, R. F.; AND MILLER, J. Y. (1992).

Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: Implications for substance abuse prevention.

Psychological Bulletin 112 (1): 64-105.

This paper outlines the risk and protective factors associated with adolescent substance use and how these may influence the development of intervention programs. Issues discussed include contextual factors related to substance use, individual and interpersonal factors, current prevention programs and strategies that attempt to address these various early risk factors, and methodological concerns regarding research evaluating these interventions. The authors indicate that greater understanding is needed of the relationship between risk and protective factors and their influence on substance use and abuse with respect to programs that foster life skills, particularly intra-personal and interpersonal skills. This would be useful in combating the isolation and lack of self-efficacy felt by many young drug abusers. However, current strategies have been shown to have at least short-term effects on substance use by this age group and should continue to be implemented and improved.

Greater understanding is needed of the relationship between risk and protective factors and their influence on substance use and abuse with respect to programs that foster life skills, particularly intra-personal and interpersonal skills.

HEALTH AND WELFARE CANADA. (1986).

Ottawa Charter for Health Promotion.

Ottawa: Minister of Supply and Services.

The Ottawa Charter is a joint statement of the World Health Organization, Health and Welfare Canada, and the Canadian Public Health Association, defining health promotion as a concept, and the processes needed to foster health. It emphasizes public policy, supportive environments, and community action as critical elements to the realization of "health for all by the year 2000".

HEALTH AND WELFARE CANADA. (1992).

Lifeskills Programs for Schools: An Inventory of Substance Abuse Prevention Curricula.

Unpublished manuscript prepared for authors.

This inventory provides content and bibliographical information on 31 different substance abuse prevention programs originating in Canada and the U.S. All of the programs reviewed take a lifeskills approach, centering on social skills, decision making, communication and assertiveness, and/or intra-personal skills such as self-esteem.

JOHNSON, C. A.; PENTZ, M. A.; DWYER, J. H.; BAER, N.; MACKINNON, D.; HANSEN, W.; AND FLAY, B. (1990).

Relative effectiveness of comprehensive community programming for drug abuse prevention with high-risk and low-risk adolescents.

Journal of Consulting and Clinical Psychology 58 (4): 447-456.

This article evaluates a comprehensive program to prevent drug abuse implemented in eight communities in the United States. The authors use a psychosocial model emphasizing peer refusal skills, and an approach involving elements of the whole community. The program ran for three years, and at the end of the third year significant reductions in onset of drug use were noted. These results held true for both low-risk and high-risk teens. The authors offer the study in support of a community-wide approach to health promotion in the realm of drug use and abuse.

KHANTZIAN, E. J. (1985).

The self-medication hypothesis of addictive disorders: Focus on heroin and cocaine dependence.

American Journal of Psychiatry 142 (11): 1259-1264.

This study reviews clinical observations that suggest drug-dependent individuals are predisposed because they frequently suffer from mood or other psychiatric disorders. While acknowledging other causes of addiction, Khantzian discusses the idea of self-medication of psychiatric problems as one root of addiction. He points to the fact that drug types do not appear to be chosen at random. The drug(s) of choice of different individuals tend to combat the particular psychic pain with which those individuals struggle. For example, opiates mute rage and oppression, and cocaine "relieves" depression and hyperactivity. Clinical vignettes are cited to support this contention. While Khantzian's discussion centres on illicit drug use, applications can be made to licit drugs and to misuse/abuse of over-the-counter and prescription medications.

The drug(s) of choice of different individuals tend to combat the particular psychic pain with which those individuals struggle.

LEIGHTON, A. H. (1990).

Community mental health and information underload.

Community Mental Health Journal 26 (1): 49-67.

This paper discusses the community health movement's effort to increase awareness of mental health issues and to promote mental health in general. Several problems are cited in the success and spread of the movement, however. First, there is a lack of information among key decision and

policy makers, administrators, and even workers. Second, the terms *community* and *mental health* are not understood in the same way by different people. Research is lacking in community mental health. The author offers two illustrations of ways to improve community health promotion, including the encompassing of primary prevention, and the creation of a common target: reducing the prevalence of mental health problems.

MANGHAM, C. (1989).
Free Standing and Embedded Substance Abuse Prevention Curricula: An Analysis of Selected Programs.
Unpublished report prepared for Kaiser Substance Abuse Foundation.

This content analysis reviews several provincial and state health education curricula with an eye to determining substance abuse content. Several free-standing substance abuse curricula are also reviewed. All curricula include substance abuse as a key topic area, and generally take a combined life skills and information approach in recommending objectives. On the other hand, mental health issues are often not mentioned or are included obliquely as a part of other content. The most common mental health issues mentioned are self-esteem and stress management.

MCDANIEL, S. A. (1993).
Challenges to mental health promotion among working women in Canada.
Canadian Journal of Community Mental Health 12 (1): 201-210.

The purpose of this literature review was to examine what is currently known about work and mental health issues as they relate to women. Although available research indicates that women experience positive mental health gains as a result of their paid work, some aspects of their work can in fact be detrimental to both physical and mental health. Lower pay, less job security, sexual harassment and the difficulty of combining home and work responsibilities, can create situations resulting in depression and anxiety. The importance of developing work-based mental health programs is discussed, and the authors suggest that although programs that emphasize physical fitness, nutrition, active living and reduction in the use of alcohol and tobacco can be useful, these programs were originally designed for use by male employees whose realities and sources of daily stress differ markedly from those of female co-workers. More emphasis must be placed on addressing the structural and social pressures faced by women in the workforce in order to more accurately define and address their mental health needs.

More emphasis must be placed on addressing the structural and social pressures faced by women in the workforce.

MONTAGNE, M.; AND SCOTT, D. M. (1993).
Prevention of substance use problems: Models, factors, and processes.
The International Journal of the Addictions 28 (12): 1177-1208.

This paper reviewed the available information concerning the issue of substance abuse, and provides an overview of a variety of prevention strategies. The nature of prevention programs is discussed, and descriptions of the various models and strategies for preventing substance use problems are offered, such as life skills training, peer modelling, and mass media campaigns. Concerns regarding the development and evaluation of prevention programs are discussed, such as lack of effectiveness, weak interventions, or inadequate use of theory. The authors conclude by suggesting that the current trend toward dichotomizing substances into categories such as "good" vs. "bad" or "dangerous" vs. "non-dangerous" seems to imply that certain drugs are more harmful than others and that prevention programs should emphasize avoiding the use of drugs rather than addressing the problems and issues which result in the excessive or abusive use of any substance with harm reduction. (Baer)

Concerns regarding the development and evaluation of prevention programs are discussed, such as lack of effectiveness, weak interventions, or inadequate use of theory.

NADEAU, L. (1994).
Le traitement de la toxicomanie avec une référence particulière à l'anxiété et son étiologie.
L'Intervenant 10 (3): 12-13.

This paper examined the issue of substance abuse treatment, paying particular attention to the problem of anxiety and its ramifications on the treatment process. The author first emphasizes that persons who use substances, especially illicit drugs, are often quite likely to be alcoholics or abusive drinkers. Therefore, the issues and problems that must be addressed in treatment are different for multi-substance users than for those who have only one drug of choice. Secondly, it is suggested that many persons seeking treatment suffer from a number of possible psychological and/or emotional problems, such as depression or personality disorders. It must be recognized that some of these disorders were experienced prior to the onset of addiction, others began during the course of or in response to the addiction process. Therefore, the etiology of the individual's mental difficulties must be understood in order to understand their relationship to the addiction and to offer appropriate interventions. Finally, the author addresses the various phases of the treatment and recovery process, and although it is recognized that the experience of every individual is different, the following stages are suggested. First, the individual experiences a period of denial, where s/he is unable or unwilling to recognize the existence or the severity

of the addiction problem. If s/he remains in treatment and recognizes the problem, then s/he is likely to experience a period of extreme guilt and anxiety, loss of self-confidence, fear, and great sadness; s/he is likely to alternate between feelings of great rage, hopelessness and overwhelming guilt. As treatment progresses, the client will eventually begin to learn new, more effective coping skills and methods of communication; s/he will likely try to develop more positive social habits, resume familial ties and friendships, and attempt to reenter the mainstream as a substance-free individual. It is acknowledged that each stage brings with it new problems and fears, and so it is important for clinicians to recognize and address the emotional and psychological problems and limitations of each client while not allowing his/her recovery to become immobilized by these limitations.

> *As treatment progresses, the client will eventually begin to learn new, more effective coping skills and methods of communication.*

OETTING, E. R.; AND BEAUVAIS, F. (1991).
Critical incidents: Failure in prevention.
The International Journal of the Addictions 26 (7): 797-820.

Published evaluations of substance abuse prevention programs tend to report successes; in this article the authors argue that we can learn much from that which is never published — aspects of "failure" of programs. Three types of program failure are discussed. *Failure to initiate* occurs when plans are made but are grandiose or require resources beyond those that are available. *Failure to be effective* relates to inability of programs to meet lofty objectives. *Failure to thrive* commonly occurs in program implementation, when it is assumed a program will continue to be used without support and updating. The authors cite these reasons for the failure of prevention efforts.

PALOMARES, U.; AND BALL, G.
The Magic Circle — Human Development Program.
Edmonton: EDUCOM.

This well known school-based mental health program is designed for elementary classrooms. The program seeks to foster social and emotional growth, and a sense of responsibility to others. A theory manual accompanies the program, and describes how the program addresses key developmental tasks. The program is based on the assertion that the experience and growth aspects of life follow three themes: awareness, social interaction, and mastery.

PERRY C.; AND JESSOR, R. (1985).
The concept of health promotion and the prevention of adolescent drug abuse.
Health Education Quarterly 12 (2): 169-184.

This article describes a health promotion model extended to community-based prevention programs. The authors describe four domains of health — physical, social, psychological, and personal (realization of personal potential). These are applied to three spheres of preventive intervention: personality, environment, and behavior. Goals are twofold: 1) to reinforce and foster health-enhancing behaviors in the four domains, and 2) to weaken or eliminate health-compromising behaviors. The model is applied to a community-wide initiative — the Minnesota Heart Health Program. Specific strategies are listed within each of the three spheres of intervention.

SANCHEZ-CRAIG, M.; WILKINSON, D. A.; AND WALKER, K. (1987).
Theory and methods for secondary prevention of alcohol problems: A cognitively-based approach.
In *Treatment and Prevention of Alcohol Problems: A Resource Manual*, ed. W. M. Cox, 287-331. New York: Academic Press, Inc.

This book chapter provides an overview of secondary prevention programs, which presumes an alternative concept to the disease model of addictions. It proposes that excessive drinking is to a large extent a learned behavior, which can be modified by application of methods based on the principles of learning. By this theory, abstinence is a possible, but not a necessary objective of treatment, and is more readily accomplished when the level of learning is at an early stage. It is therefore appropriate for clients experiencing alcohol abuse rather than dependence. The authors present in detail the development and evaluation of a cognitive-behavioral treatment model, that emphasizes cognitive coping methods. It has been applied with considerable success in moderating the drinking consumption of problem drinkers who have tended to refuse traditional abstinent-oriented treatment. Application of these methods to other substance abusing groups is also given.

It proposes that excessive drinking is to a large extent a learned behavior, which can be modified by application of methods based on the principles of learning.

SECOND NATIONAL WORKSHOP ON WOMEN AND TOBACCO. (1995).
Women and tobacco: Background discussion paper and literature review.
Unpublished working document.

This working document provides an extensive literature review on women and smoking. It covers issues of prevalence, onset, continuance, prevention

and cessation programs, and public policy regarding tobacco. Most of the discussion centers on recent Canadian research, programs, and policy initiatives.

SKINNER, P. T. (1984).
Skills not pills: Learning to cope with anxiety symptoms.
Journal of the Royal College of General Practitioners 34: 258-260.

The author describes a British program aimed at teaching anxiety management skills to patients attending General Practice. Patients were provided with educational materials and were given assignments to complete over a six week period. Two thirds of the 35 patients were female, average age 44, range 33-77, mostly of lower social class. After one year, almost all patients reported reduction of anxiety, none reported an increase, and 24 (73%) were no longer taking medication for their anxiety problems. No statistical comparisons are given.

TOEWS, J.; AND EL-GUEBALY, N. (1989).
A call for primary prevention: Reality or Utopia.
Canadian Journal of Psychiatry 34: 928-933.

In light of the federal document *Mental Health for Canadians: Striking a Balance*, the authors argue that psychiatrists must reconsider issues of primary prevention. Psychiatrists themselves, the authors first tackle the problem of defining primary prevention, health promotion, and mental health. They then outline the evolution of primary prevention beginning in the 1960s. They consider the 1960s and 1970s single-focus models of Public Health and Crisis Intervention and the 1970s and 1980s multiple-foci models of Social Change and Enrichment, and Risk Factors and Markers. They briefly note the philosophical changes of this period that include shifts from primary prevention to health promotion, from populations at risk to the population at large, from risk factors research to resiliency research. The authors then propose a conceptual model of their own that encompasses these paradigm shifts. They note the continuing problems of research in this area, but challenge psychiatry to become actively involved in "the search for optimal strategies and the promotion of health."

WORLD HEALTH ORGANIZATION. (1993).
European Alcohol Action Plan.
Copenhagen: Regional office for Europe, p.34.

The aim if this booklet is to help member states prevent the health risks and social consequences arising from alcohol use. It publishes current consumption data from member European states. Based upon the statement that Europe has the highest alcohol production, export trade, and consumption in the world, the policy "Health for All" aims to have a significant reduction in consumption of alcohol, tobacco and psychoactive drugs in all 26 member states by the year 2,000. Policies and practices for achieving this goal are discussed.

B. CLINICAL ISSUES

1. Addiction *or* Mental Illness

COMMITTEE OF THE INSTITUTE OF MEDICINE. (1990).
Broadening the Base of Treatment for Alcohol Problems.
Washington, D.C.: National Academy Press.

This book evaluates the present state of treatment for alcohol problems in the U.S., compiled by a group of internationally known specialists in alcohol treatment research. Treatment is depicted on a triangle, as a spectrum of responses of the U.S. population. The base of the triangle reflects the large proportion who do not manifest alcohol problems, for whom primary prevention programs are appropriate. As consumption increases, a segment experiences mild to moderate symptoms, problem drinkers for whom secondary prevention programs are appropriate. A small segment at the apex of the triangle experiences substantial to severe problems, for whom tertiary treatment is recommended. The book covers a wide range of topics, for example, who is treated, how much it costs, whether treatment works, whether treatment is necessary, the community role, and treatment matching. Special populations are considered, including the dually-diagnosed psychiatric patient.

CORMIER, D. (1990).
Vers de nouveaux modèles d'approche des toxicomanies.
Psychotropes 6 (1): 31-37.

This paper examines the current trend toward holistic prevention and rehabilitation of substance abusers. In the past, the emphasis has primarily rested on the medical model of substance abuse, which believed the abuser suffered from an illness. Substance abuse, especially alcoholism, was felt to be a genetically predetermined physiological disposition that could not be altered. It was believed that the only way to "cure" this sickness was to engage in total abstinence from psychotropic substances. Greater research has indicated that while 40% of cases of substance abuse can be attributed to genetics, 60% related to the individual's psychological condition and/or situation. The lifestyle model of substance abuse emerged in the late 1970's, and suggested that factors such as loneliness, low self-esteem, poor life satisfaction, need for immediate gratification, the emergence of the "disposable" society, and so on, precipitate the onset of substance abuse problems. The goal of treatment and education programs, therefore, is the prevention of further substance abuse by reeducating the individual to act for his/her total optimal physical and mental health. These programs include teaching individuals how to best control their personal situations for their benefit. They learn to determine what is most important in their lives and ensure these goals for themselves (especially leisure and recreation). They also learn how to drink responsibly so that they may benefit from some of the positive effects of alcohol while not becoming dependent on it.

The goal of treatment and education programs, therefore, is the prevention of further substance abuse by reeducating the individual to act for his/her total optimal physical and mental health.

DAHLGREN, L.; AND WILLANDER, A. (1989).
Are specialized treatments for female alcoholics needed? A controlled 2-year follow-up study from a specialized female unit (EWA) versus a mixed male/female treatment facility.
Alcoholism: Clinical and Experimental Research 13: 499-504.

This study, conducted in Sweden, compared outcome of treatment of women with alcohol problems at a centre catering especially to women (EWA) with that of a control group being treated at a male/female facility. The sample of 200 women were treated with complete detoxification and further treatment consisted of medical care, groups, and occupational therapy. The authors concluded that women with alcohol problems hesitate to seek treatment at traditional facilities because they fear hostile confrontation with male patients, being labelled alcoholic, and being noticed by social services, especially when they have children. The EWA surpassed the traditional treatment facility in virtually every aspect: a) mortality rate was

lower in EWA (one) compared to the control (three); b) 16% of the EWA subjects relapsed compared to 31% of the control; c) 4% of EWA women lost their jobs compared to 17% of the control and more control subjects were judged as having lower stamina; d) more EWA subjects managed to drink socially without problems than the controls. The authors also found that the EWA attracted a large number of gainfully employed women who were otherwise hidden alcoholics, thus initiating early treatment planning. On a concluding note, the authors state that the results of their study were an exception and that more EWA programs should be started.

EL-GUEBALY, N.; AND HODGINS, D. C. (IN PRESS).
Drinking situations, mood and depression as predictors of alcohol relapse.
Proceedings of the IX World Congress of Psychiatry.

This study addressed the issue of alcohol relapse, taking into account the complex relationship between mood disorders and alcohol consumption. Clients were 84 alcohol dependent subjects seeking outpatient or residential treatment. Of these, 23% met the criteria for current depression, using structured interview (SCID); an additional 57% had experienced past depression. An inventory of drinking situations (IDS-42) showed heavy substance use most likely to be associated with social pressure and unpleasant emotional states. These negative states were the most frequently reported precipitants of relapse, but the type of drinking situation did not predict likelihood of relapse. Currently depressed clients were more likely to relapse earlier (median 42 days vs. 91 days) than non-depressed clients.

GORDON, V. C.; AND LEDRAY, L. E. (1985).
Depression in women: The challenge of treatment and prevention.
Journal of Psychosocial Nursing 23 (1): 26-34.

This literature review examines the prevalence of depression in women and the various theories which have been used to explain the reason women are twice as likely to be diagnosed with and seek treatment for depression. Of particular interest is the fact that marriage appears to be a protective factor in the development of depression for men, while it is a risk factor for women; single, divorced or widowed women have significantly lower rates of depression than their married peers. The impact of genetics and endocrinological factors is explored, and overviews of the behavioral, cognitive, and learned helplessness theories of depression as they relate to women are discussed. Finally, the importance of early diagnosis

Of particular interest is the fact that marriage appears to be a protective factor in the development of depression for men, while it is a risk factor for women.

and treatment is emphasized, as women often seek treatment only in the final and most severe stages of their depression. Additionally, new interventions which do not call upon women to adopt a passive, submissive and therefore negative self-image (as has been the traditional method in the past) must be developed so that women can become more aggressive and self-determining, not only in their treatment, but in their lives, to avoid future episodes of depression.

HOLSTEN, F. (1985).
The female drug abuser: Has she a shorter way out?
Journal of Drug Issues ---: 383-392.

The author focuses attention on sex differences in background, affect and prognosis between male and female drug users. Based on a population drawn from a psychiatric facility in western Norway, the sample comprised 95 experimental and 95 control subjects. The experimental group consisted of persons who had received treatment for drug use. The author reported that female drug users have a more difficult social background than male abusers, especially with regard to relationships and school records. Fewer females used hard drugs at the time of treatment, and they also had a better prognosis than males. The way out for the female patient was characterized by social variables such as marriage and pregnancies; male abusers had a longer course to establish themselves socially. According to the author, treatment for the female abuser should focus on the patients' sexual role.

HOLT, S.; SKINNER, H. A.; AND ISRAEL, Y. (1981).
Early identification of alcohol abuse, II: Clinical and laboratory indicators.
Canadian Medical Association Journal 124: 1279-1295.

This article is a companion to Skinner, Holt & Israel (1981), Sect. I-A, p.30. It suggests that drinking problems often remain undetected, although clinical and laboratory indicators are now available to screen for abnormalities associated with alcohol. The authors provide a list of clinical symptoms, the stage of alcohol abuse or dependence at which they are useful, and their diagnostic value. Laboratory markers are listed and explained, together with the caution that they are insufficient by themselves, but can be used to complement and ratify interview data. At that time, there were no specific clinical markers of alcoholism, and "true" biochemical markers of alcohol abuse await development.

The authors provide a list of clinical symptoms, the stage of alcohol abuse or dependence at which they are useful, and their diagnostic value.

HUGHES, J. R. (1993).
Treatment of smoking cessation in smokers with past alcohol/drug problems.
Journal of Substance Abuse Treatment 10: 181-187.

This study is a group comparison of nicotine replacement/behavior therapy in smokers with a history of alcohol/drug abuse. Based on the brevity of the smoking problem, the population was divided in two groups; 1) those with a serious smoking dependence problem were referred to as negative history smokers, 2) those with a less dependent smoking problem were referred to as positive history smokers. Positive history smokers drank slightly more coffee, smoked more cigarettes per day, and began smoking three years earlier than negative history smokers. Positive history smokers also said that they had more difficulty refraining from smoking than negative history smokers. Prior to smoking cessation, positive history smokers reported more irritability and overall discomfort than negative history smokers. Smokers with a past history of alcohol/drug problems are more behavior dependent but not physically dependent. Behavior therapy increased quitting rates in positive history smokers more than negative history smokers, suggesting that nicotine might be beneficial to recovering alcoholics. The biggest asset of this analysis is that comparisons were both cross-sectional and longitudinal over a period of time.

Behavior therapy increased quitting rates in positive history smokers more than negative history smokers, suggesting that nicotine might be beneficial to recovering alcoholics.

KAUFMAN, E.; AND MCNAUL, J. P. (1992).
Recent developments in understanding and treating drug abuse and dependence.
Hospital and Community Psychiatry 43: 223-236.

This review updates research progress on factors influencing drug abuse and dependence, summarizing the progress made towards understanding issues relevant to treatment. The amount of research directed towards this area indicates the seriousness of drug abuse for psychiatrists and other mental health practitioners.

LIGHTFOOT, L.; ADRIAN, M.; LEIGH, G.; AND THOMPSON, J. (IN PRESS).
Substance abuse treatment and prevention for women.
In *Women's Use of Alcohol and Other Drugs in Canada*, ed. M. Adrian. Toronto: Addiction Research Foundation.

This chapter provides a literature review of SA treatment and prevention for women, together with an analysis of women's treatment programs and resources using the National Alcohol and Drug Survey. The authors conclude

there are few established facts about outcomes for treating female substance abusers. The chapter contains many statistical tables of demographic indices, use of prescription and over-the-counter drugs, health status, and use of treatment services. In addition it points out the lack of treatment services specifically for women across Canada.

LITT, M. D.; BABOR, T. F.; DELBOCA, F. K.; KADDEN, R. M.; AND COONEY, N. L. (1992).
Types of alcoholics, II: Application of an empirically derived typology to treatment matching.
Archives of General Psychiatry 49: 609-614.

This study looks at the success of different treatment options with the different sub-types (type A and type B) of alcoholics. The investigators hypothesized that type B alcoholics would respond better to coping skills training and type A to the interactional approach. The sample was drawn from an inpatient alcoholic treatment program and comprised of only male subjects who were assigned in cohorts to either coping skills training or interaction therapy. Both groups received aftercare, blending coping skills training with interactional training. Treatment effectiveness was compared, using pre-treatment inpatient data and a follow-up conducted 26 weeks after the clients left the aftercare program. The number of heavy drinking days was the primary outcome measure. Repeated measures analysis of variance (ANCOVA) was used to detect the difference in pre-treatment drinking attributable to alcohol subtype (A or B) and treatment style (Coping skills vs. Interaction group therapy).
Treatment style was a significant factor. Also, unmatched patients (type A-coping skills and type B-interactional group therapy) proved to be at a greater risk of relapse.

MARLATT, G. A. (1985).
Coping and substance abuse: Implications for research, prevention, and treatment.
In *Coping and substance abuse*, eds. S. Shiffman and T. A. Wills, 367-386. California: Academic Press, Inc.

This book chapter summarizes and provides theoretical background for discussion of a shift in perception of the addiction model. This shift, the author suggests, moves the addictions treatment field from the "addiction as a disease" model to an "addiction as a maladaptive way of coping with stress" model. The chapter presents information about stress, high-risk situations, expectancies, decision making, coping, self-efficacy, and motivation, suggesting that these issues are critical components of this new, more effective model of addictions treatment.

This shift, the author suggests, moves the addictions treatment field from the "addiction as a disease" model to an "addiction as a maladaptive way of coping with stress" model.

MARLATT, G. A.; LARIMER, M. E.; BAER, J. S.; AND QUIGLEY, L. A. (1993).
Harm reduction for alcohol problems: Moving beyond the controlled drinking controversy.
Behavior Therapy 24: 461-504.

This review article provides an overview of a disease model approach (implying abstinence) along with a secondary prevention model (implying moderate drinking treatment goals), and seeks to integrate the two approaches into a model of harm reduction. This model is based upon the assumption that habits can be placed along a continuum ranging from beneficial to harmful consequences. It aims to facilitate a movement along a continuum from greater to lesser harmful effects of drug use, where any movement along this continuum is encouraged and supported. Reporting treatment outcomes from brief treatments for problem drinkers, and a "stepped-care" model for college students, the authors develop an integrative approach based upon harm reduction. A comprehensive reference list is provided.

MCINTYRE, K. O.; LICHTENSTEIN, E.; AND MERMELSTEIN, R. J. (1983).
Self-efficacy and relapse in smoking cessation: A replication and extension.
Journal of Consulting and Clinical Psychology 51 (4): 632-633.

This study was conducted on 74 smokers who participated in a treatment program which focused on developing strategies to cope with situations that might lead to a desire to smoke. The impact of this type of intervention (commonly referred to as a social learning approach) was evaluated through the degree to which the subject reported confidence in their ability to cope with high-risk situations and whether the subject had maintained abstinence. The findings suggest that self-efficacy measured at the end of the program was a good predictor in short-term (3 months) smoking abstinence but was a less effective predictor of long-term abstinence. It was found that end-of-treatment smoking status was a better predictor of future abstinence than the measure of self-efficacy, which suggests that behavior which is supportive of abstinence is a better predictor of future abstinence than beliefs about ability to cope with high-risk situations.

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MOOS, R. H.; FINNEY, J. W.; AND CRONKITE, R. C. (1990).
Alcoholism Treatment. Context, Process, and Outcome.
Oxford: Oxford University Press, 291pp.

This book encompasses more than a decade of research into the effectiveness of alcoholism treatment. Its aim was to "learn more about the nature and course of alcoholism" by examining the implementation process and effects of residential alcoholism treatment, and how patients' functioning after treatment was influenced by factors such as family and work environments. The methods contrasted with traditional treatment evaluation studies, by seeking to understand the relative influences of demographic and life functioning of clients before treatment, program quality and components, and life stressors and coping strategies in the follow-up period. Of particular interest were ways of coping as a dynamic model which emphasizes ongoing change and maturation in personal and environmental factors, and the current forces which affect the individual's adaptation. A client's life context and coping skills were found to explain as much or more of the variance in treatment outcome as demographic variables.

PEELE, S. (1991).
What works in addiction treatment and what doesn't: Is the best therapy no therapy?
The International Journal of the Addictions 25: 1409-1419.

The author notes that there exists a large body of research on treatment efficacy, and presents the findings from three different surveys. He concludes that all three surveys stress similar points: a) treatment identifying drug use as an internal individual problem is likely to fail; b) most U.S. treatments assume this individual-deficit medical model. He suggests that successful treatments teach people skills for dealing with the real world, confront the negative value system of the addict, and concentrate on families, social groups and communities as the cause of and solution to addictions. The author concludes that community-based treatment is likely to be preferred and more cost effective.

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PEPPER, H.; KIRSHNER, M. C.; AND RYGLEWICZ, H. (1981).
The young adult chronic patient: Overview of a population.
Hospital and Community Psychiatry 32: 463-469.

This paper presents a profile of young people who have a variety of diagnoses, but a common syndrome of social breakdown. The authors suggest

these young people differ from their older counterparts because they no longer have the protection of institutional care. They are better described by their functional inabilities, than by their diagnoses. It is suggested that a variety of services are needed, particularly crisis intervention, case management, and residential services.

ROSS, H. E. (1989).
Alcohol and drug abuse in treated alcoholics: A comparison between men and women.
Alcoholism: Clinical and Experimental Research 13: 810-816.

Gender differences were compared in a sample of 501 patients (260 males and 241 females) who were registered for assessment or treatment at Addiction Research Foundation, Toronto; 427 (85%) clients met the DSM-III criteria for alcohol abuse or dependence, and 78% of the diagnosed sample agreed they had a drinking problem. The results showed that men tended to: a) have started drinking earlier than women (the mean age of first alcohol problem in males was 22 years, for females 25 years); b) drank more heavily than women; and c) had more serious impairments in their social and vocational functioning. Men also had a longer history of problems (13.5 years) compared to females (9.5 years). Women had more pronounced withdrawal symptoms such as shakes and blackouts when sobering up. Both sexes were equally likely to have abused other drugs, but more women reported difficulties related to use of barbiturates, sedatives, and tranquilizers, while men reported difficulties with use of cannabis and tobacco.

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SEES, K. L.; AND CLARK, H. W. (1993).
When to begin smoking cessation in substance abusers.
Journal of Substance Abuse Treatment 10: 189-195.

The authors discuss the importance of smoking cessation in treatment communities by highlighting the health consequences of smoking, the predictive nature of smoking, and the situational cues that trigger smoking. They question the dogma that it is much too difficult to give up all addictions at the same time. Smoking often falls in the category of addictions that medicine specialists advise patients not to give up. Although most program directors (72%) believe that nicotine dependence should be treated as an addiction, very few (11%) actually implement nicotine treatment as part of their programs. Presenting results of their survey, the authors validate that substance abusers are interested in smoking cessation. All alcoholics, 72% of cocaine addicts, and 70.5% of heroin addicts expressed a desire to stop smoking.

SHADEL, W. G.; AND MERMELSTEIN, R. J. (1993).
Cigarette smoking under stress: The role of coping expectancies among smokers in a clinic-based smoking cessation program.
Health Psychology 12 (6): 443-450.

This study examined the impact of two types of expectancies on return to smoking. The study explored the relationship between the belief that smoking was a good way to cope with stress and the belief that the individual had the skills to cope with stress without smoking. The subjects were 83 participants in a smoking cessation program. A variety of information was collected regarding the participants' smoking behaviors, lifestyles, and expectancies. Findings indicate that regardless of the strength of the smoking habit, the expectancies the individual had regarding coping under stress were clearly related to future smoking behaviors. In particular, the belief about stress coping skills and their effectiveness in various situations appears to be a strong predictor of future smoking in stressful situations.

Findings indicate that regardless of the strength of the smoking habit, the expectancies the individual had regarding coping under stress were clearly related to future smoking behaviors.

SHAFFER, H. J.; AND ZINBERG, N. E. (1993).
Denial, ambivalence and counter-transference hate.
In *Alcoholism: Dynamics and Treatment*, eds. J. D. Levin and R. Weiss. New Jersey: Jason Aronson Inc.

The authors present a model of stages of addiction, built upon theories of change concepts and their previous study in which the natural process of quitting was described by cocaine quitters. The model describes stages of initiation and positive consequences, leading to ambivalence when adverse consequences are experienced. Turning points towards quitting occur when the individual recognizes that the abuse is responsible for negative life events. This leads to the beginning of active quitting. Relapse prevention represents maintenance of a new lifestyle. The authors suggest failure in treatment programs derive less from client "traits" than from poor treatment-client matches which do not recognize the stage of change the client has reached.

SPOTTS, J. V.; AND SHONTZ, F. C. (1991).
Drugs and personality: Comparison of drug users, non-users, and other clinical groups on the 16PF.
The International Journal of Addictions 26 (10): 1019-1054.

This study examines the relationship between drug use and personality characteristics. The article presents a comprehensive review of studies

completed using the Cattell 16 Personality Questionnaire (16PF) which examined the relationship between personality characteristics and drug use. The sample in this study consisted of 45 males, 36 of whom indicated a strong commitment to the use of either cocaine, barbiturates/sedative hypnotics, amphetamines, or opiates, and nine of whom were committed non-users of hard drugs. The methodology was described as a representative case method, which involved an in-depth, holistic exploration of the issues for each individual. The results indicated that there were significant differences between drug users and non-users on the personality measures. However, there were no significant differences found between the users of specific drugs. In fact, chronic drug users were found to be very similar in terms of their 16PF results. The authors indicated that this lack of differentiation was quite surprising in that past studies had indicated significant differences between users of different types of drugs. They go on to suggest that the lack of significant findings in this area may be due to inadequacy of the 16PF in measuring subtle personality differences or that the 16PF may be highly sensitive to respondent manipulation.

STEPHENS, R. S.; ROFFMAN, R. A.; AND SIMPSON, E. E. (1993).
Adult marijuana users seeking treatment.
Journal of Consulting and Clinical Psychology 61: 1100-1104.

The authors look at the characteristics of adult users who were screened to participate in marijuana-specific treatment programs. In a total sample of 382 (290 males and 92 females), 94% reported self-control and health concerns as the main motive for quitting. Although 79% of the sample had a diagnosable psychological problem, only 9% sought help before the current treatment despite chronicity of abuse and psychological distress. Fifty percent of the sample reported poly-drug use. The authors probed further to study the distinction between and the prevalence of "pure" marijuana abuse (MAO, n=144), marijuana abuse with concurrent poly-drug use (CPA, n=75) and lifetime prevalence (LPA, n=165). CPA and LPA subgroups reported more adverse consequences of substance use than MAO group. MAO subgroup scored significantly lower in the Symptom Checklist-90-R (SCL-90-R) than the other two subgroups. Psychological distress was significant and substantial in all sub-groups but the degree of distress was greater in poly-drug users.

Although 79% of the sample had a diagnosable psychological problem, only 9% sought help before the current treatment despite chronicity of abuse and psychological distress.

WILLIAMS, R. J.; AND SCHMIDT, G. C. (1993).

Frequency of seasonal affective disorder among individuals seeking treatment at a northern Canadian Mental Health Center.

Psychiatry Research 46: 41-45.

This study investigates the prevalence of Seasonal Affective Disorder (SAD) in individuals receiving treatment for recurrent mood disturbances in a northern Canadian site. The study spanned a two-year period of clients at a mental health facility in a catchment area of 23,000. Of these, 123 were treated for a recurrent mood disorder. One fifth (41) of the clients had SAD. This prevalence rate, although low, fell within the range of other studies reported in existing literature. However, the latitude of the area where this study was conducted is considerably higher than the latitudes of other studies. The authors offer three suggestions as to why the prevalence rate was so low: 1) self-selection in migration patterns, that is, people who find it uncomfortable and distressing in high latitudes tend to move south; 2) a large proportion of people with seasonal health problems tend to be seen by general practitioners in private practice; 3) differences in assessment techniques and statistical analyses result in varied prevalence rates. The authors also found that individuals with SAD tend to have been born farther south than individuals without SAD.

WOOGH, C. M. (1990).

Patients with multiple admissions in a psychiatric linkage system.

Canadian Journal of Psychiatry 35: 401-406.

The author used a data base in Kingston, Ontario to provide an index of service utilization to determine the characteristics of clients with multiple admissions. Clients were grouped by low (1-100), moderate (101-300) and high (>300 contacts) service utilization over a 3-year period. Only clients with 3+ admissions were used (n=467, or 6.5% of all admissions). Patients with multiple admissions tended to be young, poorly educated, and living alone. Those with major functional disorders were most vulnerable. One-third of the total cohort who had multiple admissions, and one-quarter of those with major functional disorders had received a diagnosis of substance abuse on at least one occasion. The author concluded these clients were treated at multiple facilities, and neither psychiatric and mental health services, nor community-based services were equipped to serve seriously ill psychiatric patients who also abuse drugs.

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WORLD HEALTH ORGANIZATION. (1993).
European Alcohol Action Plan.
Copenhagen: Regional office for Europe, p.34.

The aim of this booklet is to help member states prevent the health risks and social consequences arising from alcohol use. It publishes current consumption data from member European states; based upon the statement that Europe has the highest alcohol production, export trade, and consumption in the world, the policy "Health for All" aims to have a significant reduction in consumption of alcohol, tobacco and psychoactive drugs in all 26 member states by the year 2,000. Policies and practices for achieving this goal are discussed.

2. Addiction *and* Mental Illness

ALFS, D. S.; AND MCCLELLAN, T. A. (1992).
A day hospital program for dual diagnosis patients in a VA medical center.
Hospital and Community Psychiatry 43: 241-244.

This article describes a 6-8 week day hospital program for patients with dual diagnosis which is in group format, non-confrontational, and sets goals of reduction in use of psychoactive substances. Patients are offered an aftercare program. They have a wide variety of psychiatric diagnoses and types of substance abuse. The authors report better daily attendance compared to other programs, and present three case studies to illustrate the variety of dual disorders. They conclude that these clients respond over time to a non-confrontational therapeutic group approach.

ANTHENELLI, R. M.; AND SCHUCKIT, M. A. (1993).
Affective and anxiety disorders and alcohol and drug dependence: Diagnosis and treatment.
Journal of Addictive Diseases 12: 73-87.

This discussion paper examines the relationships between anxiety and depressive disorders, and drug abuse or alcoholism. The authors stress the importance of distinguishing between symptoms of anxiety and depression arising from drug and alcohol abuse, and independent affective disorders. Complex interactions occur at different phases of intoxication and withdrawal, and observation over time is necessary, to re-evaluate the patient’s condition.

BERNADT, M. W.; AND MURRAY, R. M. (1986).
Psychiatric disorder, drinking and alcoholism: What are the links?
British Journal of Psychiatry 148: 393-400.

The authors studied the drinking habits of 371 non-psychiatric individuals and 371 psychiatric admissions. With regard to the amount of drinking, and the change in drinking pattern in periods of illness, the authors found no significant differences between the two groups. Secondary diagnosis was not more common in the alcoholic population.

BLAND R.; ORN, H.; AND NEWMAN, S. C. (1988).
Lifetime prevalence of psychiatric disorders in Edmonton.
Acta-Psychiatrica Scandinavica 77 (Supp. 338): 24-32.

The prevalence of lifetime psychiatric disorders was assessed in 3,258 Canadian adults, using the Diagnostic Interview Schedule. The three most common lifetime disorders were alcohol abuse/dependence, phobia and major depressive episode. Men were more frequently diagnosed with alcohol abuse/dependence, and antisocial personality disorder, and women with phobias and major depressive episodes. Marriage, and senior age (65+ years) were both associated with lower incidence of lifetime psychiatric disorders.

Men were more frequently diagnosed with alcohol abuse/dependence, and antisocial personality disorder, and women with phobias and major depressive episodes.

BRADY, K.; ANTON, R.; BALLENGER, J. C.; LYDIARD, R. B.; ADINOFF, B.; AND SELANDER, J. (1990).
Cocaine abuse among schizophrenic patients.
American Journal of Psychiatry 147: 1164-1167.

The authors compared 17 male schizophrenic patients, who started using cocaine after diagnosis of schizophrenia, with 22 male patients matched for age and duration of illness. Student's t-test was used to compare the groups with respect to age, duration of illness, number of prior hospitalizations, neuroleptic dosage, and psychometric tests. Chi-square analysis was used to compare subtype of schizophrenia, current depression, suicide attempts, employment status, and number of hospitalizations in the year before interview. There were no significant differences between the groups in age, duration of illness, or employment history, but cocaine-abusing patients had significantly more hospitalizations, were more likely to be of paranoid subtype, and were more likely to meet the criteria for a current major depressive episode at time of interview. Patterns of cocaine use varied considerably. The authors conclude that cocaine use may worsen the course of schizophrenia and contribute to relapse.

BRADY, K. T.; AND LYDIARD, R. B. (1992).
Bipolar affective disorder and substance abuse.
Journal of Clinical Psychopharmacology 12: 17S-22S.

This article presents a concise review of Epidemiological Catchment Area studies addressing substance abuse disorders and concurrent psychiatric disorders. The authors conclude that substance abuse or dependence is far more common in patients with bipolar disorders than in the general population. Also, the authors found that manic-depressive clients with substance abuse have a worse course of illness than clients with other dual diagnoses.

BRADY, K. T.; LYDIARD, R. B.; MALCOLM, M. D.; AND BALLENGER, J. C. (1991).
Cocaine-induced psychosis.
Journal of Clinical Psychology 52 (12): 509-512.

This study examined the experience of psychotic episodes in cocaine users. The sample consisted of 55 individuals in treatment for cocaine dependence. These individuals were interviewed with a standardized semi-structured interview which examined their experience of psychosis while intoxicated. The authors found that over half of the individuals admitted for treatment of cocaine dependence had experienced cocaine-induced psychosis. Those individuals who had experienced psychosis had used greater amounts of cocaine than the other individuals and had typically used the intravenous method of ingestion. The subjects also reported increased frequency of psychotic episodes with continued drug use.

BRESLAU, N.; KILBEY, M.; AND ANDRESKI, P. (1991).
Nicotine dependence, major depression, and anxiety in young adults.
Archives of General Psychiatry 48: 1070-1074.

The National Institute of Mental Health Diagnostic Interview Schedule revised to cover DSM-III-R diagnoses was used to study a random population of 1,007 young adults between 21 and 30 years old. Subjects were divided into well-defined categories of lifetime and 1-year prevalence of smoking and nicotine dependence and non-dependence, and then classified according to lifetime prevalence of other substance dependencies, major depression, or anxiety disorder. Results showed that persons with nicotine dependence had higher rates of alcohol and other drug dependencies, major depression, and anxiety disorders. These associations increased with increased levels of nicotine dependence. Compared with persons who

Results showed that persons with nicotine dependence had higher rates of alcohol and other drug dependencies, major depression, and anxiety disorders.

had never smoked, non-dependent smokers had significantly higher rates of other substance dependencies, but not of major depression or anxiety disorder.

BROCHU, S. (1986).
La prévention de l'alcool chez les femmes.
L'Intervenant 3 (3): 4-5.

This paper discussed the issue of alcohol abuse among women, and the treatment and recovery issues which are specific to women. Although little literature focuses specifically on the phenomenon of women's drinking, some research evidence suggests that the experience of women alcoholics is different than that of men. First, women are more likely to experience greater social and familial criticism as a result of their alcohol abuse, and are less likely to receive support from these traditional sources once they have sought help for their problem. Second, women's physiology causes them to experience adverse physical effects related to their drinking more quickly and more severely than their male peers. In addition, the children of women who drink while they are pregnant are likely to suffer from Fetal Alcohol Syndrome, and may incur a number of physical, emotional and psychological difficulties and defects as a result. With regard to treatment strategies, it has been shown that methods successful in treating male alcoholics are less effective among women. It may be necessary to offer different programs which are designed specifically for women, and which emphasize physical and mental health, the development of new friendships and sources of emotional support, relaxation techniques and greater emphasis on recreational and leisure activities to help manage daily sources of stress.

With regard to treatment strategies, it has been shown that methods successful in treating male alcoholics are less effective among women.

BUCKNER, J.; BASSUK, E.; AND ZIMA, B. (1993).
Mental health issues affecting homeless women: Implications for intervention.
American Journal of Orthopsychiatry 63 (3): 385-399.

A review of literature on this topic includes prevalence of problems like mental illness, substance abuse, comorbidity and other related issues. Recommendations for possible solutions are considered.

CAREY, K. B. (1991).
Research with dual diagnosed patients: Challenges and recommendations.
The Behavior Therapist 14: 5-8.

The author discusses the challenges that impede research with dually-diagnosed clients under four broad categories: 1) lack of existing literature and consistent descriptive labels, 2) accessing clients, 3) heterogeneity of the population, 4) inaccurate diagnosis. The author offers general recommendations to overcome these challenges, to assist in an enhanced understanding of the problem, and to encourage more research.

CHAMBLESS, D. L.; CHERNEY, J.; CAPUTO, G. C.; AND RHEINSTEIN, B. J. G. (1987).
Anxiety disorders and alcoholism: A study with inpatient alcoholics.
Journal of Anxiety Disorders 1: 29-40.

In order to clarify issues relating to sequence of onset of anxiety disorders and alcoholism, the authors compared inpatient non-organic alcoholics (n=90) on standardized self-report inventories (Michigan Alcoholism Screening Test, Beck Depression Inventory), a structured interview (Schedule for the Affective Disorders — Life) and demographic indices. Twelve social phobic and 128 agoraphobic outpatients were also used to compare diagnosis and demographic information. In the alcoholic group, the average of onset was 23 years, with 80% indicating that anxiety disorders preceded alcoholism; however, the patients as a whole did not consider anxiety to be a significant factor in the development of alcoholism, but did admit that once substance abuse was established, they used alcohol to self-medicate. Compared with the outpatients, patients with anxiety disorders did not differ on demographics.

CLARKIN, J. F.; AND KENDALL, P. C. (1992).
Comorbidity and treatment planning: Summary and future directions.
Journal of Consulting and Clinical Psychology 60: 904-908.

Kendall and Clarkin introduced and concluded a special section of 6 papers addressing issues surrounding comorbidity. They stress that comorbidity is the norm rather than the exception, is an empirical outgrowth of semi-structured interviews on patient populations, and challenges the assumption of DSM-III-R discrete disorders. Comorbidity is

usually addressed as cross-sectional, the occurrence at one point in time of two disorders; it is less often considered longitudinal, one disorder followed by the occurrence of a second disorder. This second approach could assist in understanding cause-effect relations. The authors caution that comorbid conditions mandate multiple treatments, sequentially or concurrently depending on the history of comorbidity in the patient.

COMTOIS, K. A.; RIES, K.; AND ARMSTRONG, H. E. (1994).
Case manager ratings of the clinical status of dually-diagnosed outpatients.
Hospital and Community Psychiatry 45: 568-572.

The authors developed an experimental clinical measure for 20 case managers to rate the clinical status of 302 clients on psychiatric symptoms, substance use, treatment non-compliance, and overall level of dysfunction.

COOPER, G.; AND KENT, C. (1990).
Special needs of particular populations: Dual disorders.
In *Alcohol and Drug Problems: A Practical Guide for Counsellors*, eds. B. A. Howard and L. Lightfoot. Toronto: Addiction Research Foundation Press.

This review provides a useful overview of the problems which arise in defining this population, in estimating prevalence, in understanding etiology, and in determining appropriate treatment. The authors supply a "recipe for success in planning for dual disorders (treatment) interventions", garnered from current reports in the treatment literature. This includes: a) the need for complete detoxification, b) a comprehensive assessment, including laboratory measures, c) a provisional diagnosis and individual treatment plan, d) a review of the provisional diagnosis during treatment, e) concurrent treatment for both disorders, f) treatment staffed by both mental health and addictions counsellors, g) open-ended treatment and encouragement to use self-help, h) ongoing education for staff, and i) input by clients and significant others at program level.

COHEN, E.; AND HENKEN, I. (1993).
Prevalence of substance abuse by seriously mentally ill patients in a partial hospital program.
Hospital and Community Psychiatry 44: 178-180.

This pilot study reported on drug and alcohol use in a random sample of 25% (n=43, 13 female, 30 male) of the patients in a partial hospital program, 70% of whom had been diagnosed with schizophrenia, 30% with

major affective disorder. They were poor and belonged to minority groups. Data were collected by a Drug and Alcohol structured interview, and by unstructured interview. Substance abuse was significant: 72% reported using alcohol, and 65% stated they currently used illicit drugs. In order of use, these were marijuana, alcohol, crack cocaine and cocaine.

COTTROL, C.; AND FRANCES, R. (1993).
Substance abuse, comorbid psychiatric disorder and repeated traumatic injuries.
Hospital & Community Psychiatry 44: 715-716.

In this discussion column, the authors discuss the relationship between trauma re-injuries and substance abuse and comorbid psychiatric disorders. They report results from the study conducted at the trauma service that examined whether trauma patients with a history of injury have a higher likelihood of reporting substance abuse on current admissions than those with no injuries. Secondly, they examined the relationship between Post Traumatic Stress Disorder (PTSD) and substance abuse. In a total sample of 58 subjects, 58% reported that they had abused substances at the date of injury and 72% reported alcohol abuse. 66% of the PTSD clients reported substance abuse on admission, compared to 28% with no PTSD. These figures highlight the need for intervention and for better psychiatric assessment and treatment of the physically injured person.

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COVEY, L. S.; GLASSMAN, A.; AND STEINER, F. (1990).
Depression and depressive symptoms in smoking cessation.
Comprehensive Psychiatry 31 (4): 350-354.

This study re-examined data on smoking cessation from a previous investigation that suggested people with a history of depressive symptoms were less likely to succeed in smoking cessation programs. The analysis of 36 individuals showed that during the first week of quitting, persons with a history of depression experienced a re-occurrence of symptoms. This reappearance of depression, in turn, had a negative effect on cessation. The authors suggest that depression needs to be diagnosed and treated during the withdrawal period, if these individuals are to succeed in quitting smoking.

DALEY, D. C.; MOSS, H.; AND CAMPBELL, F. (1987).
Dual Disorders: Counselling Clients with Chemical Dependency and Mental Illness.
Hazelden Foundation Press, 141pp.

This book addresses, chapter by chapter, alcoholism treatment issues in relation to major mental disorders and personality disorders. It is based upon a disease concept approach, provides assessment criteria for each disorder according to DSM-III-R, treatment issues, and emphasizes inclusion of family members in different phases of treatment. It presents examples of disorders through case histories.

DAVIS, D. I. (1984).
Differences in the use of substances of abuse by psychiatric patients compared with medical and surgical patients.
Journal of Nervous and Mental Disease 172: 654-657.

This study compared 300 psychiatric patients with 3,000 medical-surgical patients on quantity and frequency of alcohol and/or other drug use, and related social consequences, using a self-assessment questionnaire (Substance Use Abuse Survey). The psychiatric cohort was screened to exclude patients with alcoholism or drug abuse. A greater percentage of psychiatric patients reported higher incidence of alcohol, single drug, poly drug, and prescription drug use, with greater amounts of alcohol consumption. A higher percentage of psychiatric females experienced negative social consequences of drug or alcohol use. The author speculates that patients with psychiatric conditions more readily turn to psychoactive drugs for self-treatment, and these same patients' disturbances are more likely to be compounded by problems associated with psychoactive drug use, than are medical or surgical patients.

A greater percentage of psychiatric patients reported higher incidence of alcohol, single drug, poly drug, and prescription drug use, with greater amounts of alcohol consumption.

DECKER, K. P.; AND RIES, R. K. (1993).
Differential diagnosis and psychopharmacology of dual disorders.
Psychiatric Clinics of North America 16: 703-718.

The interactions of substances of abuse with common therapeutic psychiatric medications are examined for clients with dual disorders. Major disorders are identified, using case study examples, and psychotropic medications are presented by class, including their usefulness and drawbacks for clients with dual disorders. The interactive process in particular is examined.

DEYKIN, E.; LEVY, J.; AND WELLS, V. (1987).
Adolescent depression, alcohol and drug abuse.
American Journal of Public Health 76: 178-182.

This study attempted to correlate the prevalence of major depressive disorder and substance abuse using a sample of 424 college students in Boston, Mass. Alcohol and other substance abuse (specific drugs not identified) were based on either a pattern of pathological use or impairment of social and occupational functioning. The American Psychiatric Association criteria for major depressive disorder was used to classify this variable. The authors' findings were similar to those of other studies with a lifetime prevalence of major affective disorder (6.8%), alcohol abuse (8.2%), and drug abuse (9.4%) in their sample. Alcohol abuse was associated with major depressive disorder, but no other psychiatric diagnoses. Other substance abuse was also associated with major depressive disorder, and to other psychiatric diagnoses. The authors found that the onset of depression almost always preceded alcohol or other substance use.

DIXON, L.; HAAS, G.; WELDON, P.; SWEENEY, J.; AND FRANCES, A. (1990).
Acute effects of drug abuse in schizophrenic patients: Clinical observations and patients' self-reports.
Schizophrenia Bulletin 16: 69-79.

Several models are used to explain the high prevalence of drug abuse in populations with schizophrenia. The acute effects of psychoactive substance use are reviewed in studies utilizing clinical reports and client self-reports, to evaluate the usefulness of self-medication, dopamine dysfunction, etiologic, socializing effects and independence models. It is concluded that the relief of dysphoria may explain drug use for many clients, but the probable reason so many schizophrenic clients use drugs lies in a combination of models.

DRAKE, R. E.; ANTOSCA, L. M.; NOORDSY, D. L.; BARTELS, S. J.; AND OSHER, F. C. (1991).
New Hampshire's specialized services for the dually-diagnosed.
New Directions for Mental Health Services 50: 57-67.

This article describes two substance abuse treatment groups for clients who have difficulty using traditional alcohol and drug treatment programs and self-help groups. They correspond to persuasion and active treatment phases of substance abuse treatment. Persuasion groups are weekly, non-confrontational groups, which are educational, and which avoid AA ideology.

Active treatment groups are based on behavioral principles of addiction treatment, developing lifeskills such as assertiveness.

DRAKE, R. E.; OSHER, F. C.; AND WALLACH, M. A. (1991).
Homelessness and dual diagnosis.
American Psychologist 46: 1149-1158.

This paper clarifies distinctions between living arrangements and treatment. Dually-diagnosed individuals are particularly vulnerable to housing instability and homelessness, because their substance abuse and treatment non-compliance lead to disruptive behaviors, loss of supports and housing instability. The problems these individuals encounter are discussed, with the conclusion that the provision of structured communities and residences is of primary importance, before treatment for mental illness and substance use is begun.

Dually-diagnosed individuals are particularly vulnerable to housing instability and homelessness, because their substance abuse and treatment non-compliance lead to disruptive behaviors, loss of supports and housing instability.

DUNN, G. E.; PAOLO, A. M.; RYAN, J.J.; AND FLEET, J. V. (1993).
Dissociative symptoms in a substance abuse population.
American Journal of Psychiatry 150: 1043-1047.

This study was designed to 1) evaluate the base rate of dissociative symptoms; 2) assess the impact of demographic and clinical variables on the Dissociative Experience Scale (DES). 265 subjects were included in this study of which 69% were alcohol abusers, 57% substance abusers, and 43% dual disordered. 41.5% of the subjects had a score of >15 on the DES suggesting that dissociative symptoms are common and routine screening for such problems should be considered in the chemical-dependent subject. Among demographic and clinical factors in the dissociative phenomenon, psychological distress was positively correlated with dissociation. I.Q. was negatively correlated to the dissociative phenomenon. The fact that this negative correlation exists may be because low I.Q. interferes with reading ability. The authors acknowledge the demerits of the study. Firstly, a male population only was used and secondly, the validity of the self-report measure is questioned.

DURRELL, J.; LECTENBERG, B.; CORSE, S.; AND FRANCES, R. J. (1993).
Intensive case management of persons with chronic mental illness who abuse substances.
Hospital and Community Psychiatry 44: 415-416.

This report describes an intensive case management program for 84 severely mentally ill clients, of whom 43 were substance abusers. Using two case

vignettes as examples, the authors report reduced substance abuse in those who had intensive case management.

ELANGOVAN, N.; BERMAN, S.; MEINZER, A.; GIANELLI, P.; MILLER, H.; AND LONGMORE,W. (1993).
Substance abuse among patients presenting at an inner city psychiatric emergency room.
Hospital and Community Psychiatry 44: 782-784.

Looking at the problems faced by clinicians to correctly identify alcohol problems, this study compared two techniques of assessment — a standardized self-report questionnaire (SCID) and toxicological screening to determine the prevalence of substance use. Traditional barriers to standardization such as age, sex, gender and time of presentation were discarded, making this study different from others. The toxicological screens showed that of 218 subjects, 34.4% tested positive for at least one substance. Cocaine use was most frequently detected, and alcohol least. When the SCID was used, substance use was detected in only 13.3% of the subjects. However, alcohol abuse was detected in 11.9% of the subjects using the SCID compared to only 1 detection with the toxicological screen. The authors attributed this low rate of detection through urine tests to the fact that alcohol use usually does not appear in urine, making the tests ineffective. There is a warning note that cocaine use in 70% of schizophrenics and 57% of patients with mood disorders was not identified by the SCID which could lead to inappropriate case management. Thus, the authors strongly recommend routine toxicological screens in addition to systematic questioning about drug use.

EL-GUEBALY, N.
Substance abuse and mental disorders: The dual diagnosis concept.
Canadian Journal of Psychiatry 35: 261-267.

This paper examines the renewed interest in dual disorder, which refers to two overlapping but discernible subgroups: a) both a major substance abuse disorder and another major psychiatric disorder, and b) use of alcohol and other drugs which affect the course and treatment of mental illness. The author discusses why substance abuse is often neither assessed nor fully documented, when prevalence rates are from 20-75%. Clinically, substance abuse can affect psychiatric diagnosis, development and expression of psychiatric disorders, and chronicity over time. Several treatment strategies are proposed.

The author discusses why substance abuse is often neither assessed nor fully documented, when prevalence rates are from 20-75%.

EL-GUEBALY, N.; AND HODGINS, D. C. (IN PRESS).
Drinking situations, mood and depression as predictors of alcohol relapse.
Proceedings of the IX World Congress of Psychiatry.

This study addressed the issue of alcohol relapse, taking account of the complex relationship of mood disorders to alcohol consumption. Clients were 84 alcohol-dependent subjects seeking outpatient or residential treatment. Of these, 32% met the criteria for current depression, using structured interview (SCID); an additional 57% had experienced past depression. An inventory of drinking situations (IDS-42) showed heavy substance use most likely to be associated with social pressure and unpleasant emotional states. These negative states were the most frequently reported precipitants of relapse, but the type of drinking situation did not predict likelihood of relapse. Currently depressed clients were more likely to relapse earlier (median 42 days vs. 91 days) than non-depressed clients.

An inventory of drinking situations (IDS-42) showed heavy substance use most likely to be associated with social pressure and unpleasant emotional states.

EVANS, K.; AND SULLIVAN, J. M. (1990).
Dual Diagnosis: Counselling the Mentally Ill Substance Abuser.
New York: Guilford Press, 191pp.

This book offers an introduction to service providers who are trying to meet the challenge of treating chemical dependency coupled with a psychiatric disorder. It provides an overview of models of treatment and difficulties associated with integration of different approaches. It contains useful tables for each major psychiatric disorder and its relation to chemical use. It addresses working with adolescents and families, and preparing clients for relapse.

GALBAUD-DU-FORT, G.; NEWMAN, S. C.; AND BLAND, R. C. (1993).
Psychiatric co-morbidity and treatment seeking: Sources of selection bias in the study of clinical populations.
Journal of Nervous & Mental Disease 181: 467-474.

Prevalence studies may be biased by the fact that clients with multiple diagnoses may seek treatment for either one of these disorders. A second source of bias occurs when a person is more likely to seek treatment for one disorder because he/she also has a second disorder.

Glass, I. B.; and Marshall, J. (1991).
Alcohol and mental illness: Cause or effect?
In *International Handbook of Addiction Behavior*, ed. I. B. Glass. London: Tavistock/Routledge.

This publication is a text book in the United Kingdom, and contains both theoretical and clinical perspectives. The chapter cited is in Section III: health risks and the addictions. It provides brief overviews of alcoholism as it relates to different psychiatric disorders, using case studies to illuminate clinical situations. Each section pursues the nature of the link between alcoholism and the disorder. Eating disorders and pathological jealousy are both included.

Glassman, A. H.; Helzer, J. E.; Covey, L. S.; Cottler, L. B.; Stetner, F.; Tipp, J. E.; and Johnson, J. (1990).
Smoking, smoking cessation, and major depression.
Journal of the American Medical Association 264 (12): 1546-1549.

This study used a population-based sample to investigate the relationship between smoking and depression. Specifically, it examined the relationship between a diagnosis of major depression and both frequency of smoking, and relapse after attempts to stop. The sample consisted of 3,213 individuals who participated in a National Institute of Health study between 1980 and 1983. Data were collected through the use of the Diagnostic Interview Schedule which included questions related to demographics, cigarette smoking, and major depressive disorder. The findings indicated that depressed individuals were more likely to have smoked than non-depressed individuals, and the depressed subjects were less likely to have been successful in their efforts to quit smoking. In addition, the gender differences which are often found in a non-clinical population (more male smokers than female) were not found in the depressed group (approximately equal numbers of female and male smokers). The authors go on to suggest that when individuals with a history of depression stop smoking, the result may be increased depressive symptoms or an actual episode of major depression.

The authors go on to suggest that when individuals with a history of depression stop smoking, the result may be increased depressive symptoms or an actual episode of major depression.

Group for the Advancement of Psychiatry, and Committee on Alcoholism and the Addictions. (1991).
Substance abuse disorders: A psychiatric priority.
American Journal of Psychiatry 148: 1291-1300.

This paper reviews selective issues in the area of assessment of dual disorders and substance abuse (SA) disorders including etiological factors, relationship between SA and suicide, organic brain syndromes and SA, and

AIDS and SA. The role of the psychiatrist in treatment of SA disorders is discussed. The group concludes that although the psychiatrist has a crucial role to play in the diagnosis and treatment of SA disorders, lack of sufficient training thwarts proper treatment. The need to restructure existing training programs is discussed, as well as the introduction of new programs to help psychiatrists adequately face the challenges of this disorder and its treatment.

KAHN, M. W.; HANNAH, M.; KIRKLAND, S.; LESNIK, S.; CLEMENS, C.; AND CHATEL, D. (1992).

Substance misuse, emotional disturbance, and dual diagnosis in a meal line population of mixed ethnicity.

The International Journal of the Addictions 27: 317-330.

The authors determined the extent to which mental illness was associated with substance misuse in a homeless population. Subjects were 163 (89% male) homeless/near homeless individuals from a soup kitchen meal line. Demographic descriptive data, substance misuse level, and emotional disturbance (assessed using MMPI-168) were collected. The authors used objective criteria to classify participants as homeless, severe substance misusers, and with severe mental illness. Data was analyzed descriptively, and clustering applied to 99 subjects with both MMPI scores and alcohol-drug scores. Alcohol and/or drug use was reported by 93%, and severe substance misuse in 39% of the population; 54% were found to have severe mental illness, and 29% had dual diagnoses. A 3-cluster solution found 3 types: 24.3% dual diagnosis, 39.3% serious substance abuse and personality disorder, and 37.3% with no severe disorder. Ethnicity was not a significant factor.

Alcohol and/or drug use was reported by 93%, and severe substance misuse in 39% of the population; 54% were found to have severe mental illness, and 29% had dual diagnoses.

KENDLER, K. S.; HEATH, A. C.; NEALE, M. C.; KESSLER, R. C.; AND EAVES, L. J. (1993).

Alcoholism and major depression in women: A twin study of the causes of comorbidity.

Archives of General Psychiatry 50: 690-698.

The article presents the findings of a twin study on the causes of comorbidity between alcoholism and major depression (MD). 2,163 female twins (mean age=30 years) were drawn from a population-based twin registry. The structured interview was used to assess lifetime psychopathology. Alcoholism was diagnosed in three levels: 1) narrow (alcoholism with dependence or tolerance), 2) intermediate (alcoholism with or without dependence/tolerance), 3) broad (alcoholism with or without dependence/tolerance, or

problem drinking). Results indicated a lifetime prevalence rate of 31% based on the DSM-III-R. The odds ratio ranged from 2.7 to 6.0. A significant positive correlation (+.4 - +.6) between MD and alcoholism suggested substantial comorbidity. Since the study found no evidence for familial environmental factors for either MD or alcoholism, it appears that the high comorbidity is largely a result of genetic factors. Also, genetic factors have more impact on "narrow" forms of alcoholism. However, common environmental risk factors also contribute and cannot be ruled out.

KLINE, J.; HARRIS, M.; BEBOUT, R. R.; AND DRAKE, R. E. (1991).
Contrasting integrated and linkage models of treatment for homeless dually-diagnosed adults.
New Directions for Mental Health Services 50: 95-105.

The authors describe a program to integrate services for clients with dual disorder: substance abuse groups tailored specifically to their needs within the mental health centre setting. The program contains two types of groups to correspond with two phases of persuasion and active treatment. These integrated services are contrasted with a linkage treatment model, in which clinical case management principles are applied to the special needs of the dually-diagnosed homeless population. The authors view residential services as an essential component, with modifications for these special clients in terms of safety and security, setting realistic standards, and providing both transitional and permanent housing.

KOFOED, L. (1993).
Outpatient vs. inpatient treatment for the chronically mentally ill with substance use disorders.
Journal of Addictive Diseases 12: 123-137.

The variable most predictive of poor substance abuse treatment outcome is overall severity of psychiatric symptoms. The author discusses changing treatment needs for these dual disordered clients, depending upon the phase the client has reached. Stages of stabilization, engagement, persuasion, active (primary) treatment, and relapse prevention or aftercare are discussed in terms of assessment and treatment.

KOLODNER, G.; AND FRANCES, R. (1993).
Recognizing dissociative disorders in patients with chemical dependency.
Hospital & Community Psychiatry 44: 1041-1043.

Comorbidity of dissociative disorders and substance abuse can hinder accurately diagnosing one of the two. This paper discusses 26 patients (23 women, 3 men) whose treatment for substance abuse was disrupted because of a dissociative disorder. The small number of men may be explained by the fact that there is a lower incidence of dissociative disorders in men and because comorbidity is significantly higher in homosexual men who often have access to separate programs. When dissociative disorder was diagnosed immediately on entry to the program, patients did more poorly than those for whom the diagnosis was delayed. The explanation offered for this is that the overwhelming defenses of dissociation were so visible that it made the existing treatment structure insufficient. The authors discuss the problems of treating this population, as it can be very discouraging. Atypical relapses and unusual intense pain in pattern in chemical dependency should trigger clinicians to the possibility of co-morbid psychiatric disorders.

Atypical relapses and unusual intense pain in pattern in chemical dependency should trigger clinicians to the possibility of co-morbid psychiatric disorders.

KUSHNER, M. G.; SHER, K. J.; AND BEITMAN, B. D. (1990).
The relation between alcohol problems and the anxiety disorders.
The American Journal of Psychiatry 147: 685-695.

This paper reviews and synthesizes the literature addressing the relation between specific anxiety disorders and alcohol problems. Past researchers had a tendency to group all clients with any anxiety disorder. Moreover, it is likely that anxiolytic properties of alcohol are more specific to some anxiety disorders than to others. The authors examine the comorbidity of different anxiety disorders, family co-dependence, and order of onset, and conclude that the various anxiety disorders should not be treated as a homogenous group in relation to alcohol problems. Evidence for a unidirectional causal relation between alcohol problems and clinical anxiety is unlikely to be established. It appears more likely that alcohol has the potential to interact with clinical anxiety in a circular fashion, resulting in an upward spiral of both anxiety and problem drinking.

LEHMAN, A. F.; MYERS, C. P.; AND CORTY, E. (1989).
Assessment and classification of patients with psychiatric and substance abuse syndromes.
Hospital and Community Psychiatry 40: 1019-1022.

This paper targets treatment providers. It looks at the extent of the problem of disorders, and the various approaches to assessment and classification, including pitfalls which may affect the course of treatment. In conclusion, the authors discuss four clinical hypotheses about how dual diagnosis conditions develop, along with treatment implications.

LEHMAN, A. F.; MYERS, C. P.; DIXON, L. B.; AND JOHNSON, J. L. (1994).
Defining subgroups of dual diagnosis patients for service planning.
Hospital and Community Psychiatry 45: 556-561.

In this treatment study, 10 subgroups were categorized as priority according to 3 questions: a) has the client suffered a mental disorder, and if so is it current?, b) has the client suffered substance abuse, and if so is it current? and c) what is the relation of the mental disorder to substance abuse? The Structured Interview (SCID) and the Addiction Severity Index (ASI) were used to diagnose psychiatric disorders. This process resulted in 6 groups, 4 of which were dual disordered (n=109, 71, 74, 78) and 2 (28%) had a single diagnosis (n=89, 40). 58% of the groups were male, mean age 33 years, 61% African American. In group I, clients with current definite dual diagnoses, X or chi square tests showed that schizophrenia was significantly more prevalent, and major depression significantly less prevalent. Alcohol was the most commonly abused substance. Treatment implications for each group are discussed sequentially in relation to type of substance abused and psychiatric disorder.

LINSZEN, D. H.; DINGEMANS, P. M.; AND LENIOR, M. E. (1994).
Cannabis abuse and the course of recent onset schizophrenic disorders.
Archives of General Psychiatry 51: 273-279.

This study examined the relationship between cannabis use and the recent onset of schizophrenia and related disorders. A comparison was made between 24 cannabis abusing patients and 69 non-using patients. The results indicated that cannabis abuse and intensity of use played a significant role as a stressor which elicited relapse in schizophrenia, where 42% of abusers relapsed compared to 17% of the non-users.

LOOSEN, P. T.; BESS, D. W.; AND PRANGE, A. J. (1990).
Long-term predictors of outcome in abstinent alcoholic men.
American Journal of Psychiatry 147: 1662-1666.

The authors of the above study looked at the long-term predictors of outcome in abstinent alcoholic men. Of 29 males studied, 16 had been sober for less than 5 years and 13 for more than 5 years. The authors found that comorbidity with depression and length of abstinence determined length of sobriety. A personal history of depression was negatively associated with the length of abstinence and decrease in relapse rate. The data also supported previous findings that relapse was not uncommon after stable abstinence. After 2 years of abstinence, relapse rate was still 38% but fell to 0% after 5 years of abstinence.

A personal history of depression was negatively associated with the length of abstinence and decrease in relapse rate.

MARSHALL, J. R. (1994).
The diagnosis and treatment of social phobia and alcohol abuse.
Bulletin of the Menninger Clinic 58 (2): Supplement A/A58-A66.

This article examines the possible reasons for the relationship of social phobia and alcohol abuse. Patients with alcohol problems have a ninefold probability of having social phobia, compared with the general population, and social phobia ranks first in almost all studies relating anxiety disorders to excessive alcohol intake. The author uses self-reports of clients who describe the deliberate use of alcohol to reduce social anxiety, which is consistent with a self-medication hypothesis, and he notes that social phobia occurs prior to alcohol abuse. Suggestions for treatment based upon this theory are given.

MCLAUGHLIN, P.; AND PEPPER, B. (1991).
Modifying the therapeutic community for the mentally ill substance abuser.
New Directions for Mental Health Services 50: 85-93.

The authors describe a therapeutic community program which originated in the substance abuse system and has been modified for clients with dual disorder. Specialist staff are cross-trained. Clients have to be drug and alcohol free to remain in the program. A 5-year comparative treatment outcome study is underway to confirm current findings that this treatment model is effective as an integrated structural response to the dual needs of these clients.

MERCIER, C. (1986).
L'évaluation du traitement pour les femmes: sortir de l'impasse.
L'Intervenant 3 (3): 12-13.

This paper identifies some of the salient issues in the study of women and addiction. Until recently there has been a paucity of literature examining the phenomenon of women and substance use. Women are often underrepresented in studies where both sexes are included in the sample population. Recent studies have begun to rectify this situation, and have yielded some very interesting results. These new studies have also discovered new links concerning the relationship between mental health and substance use among women, indicating that positive life events and changes in workplace and living environments have positive effects on women's rehabilitation. Factors that positively affect women's sobriety include new love relationships, new friendships, birth of a child, access to better housing, access to more rewarding work, death of a drinking companion, and religious affiliation. These findings have definite implications for the treatment needs of women and can help in the design and application of rehabilitation programs. Although the population of women from which future studies are to draw is small, this may lead to more qualitative designs that gain greater insight and understanding into the phenomenon of women's addiction.

These new studies have also discovered new links concerning the relationship between mental health and substance use among women, indicating that positive life events and changes in workplace and living environments have positive effects on women's rehabilitation.

MILLER, N. S. (1993).
Comorbidity of psychiatric and alcohol/drug disorders: Interactions and independent status.
Journal of Addictive Diseases 12: 5-16.

The author proposes that dual diagnosis refers to two independent disorders, and that if this fundamental point is accepted the role of alcohol and drugs in interactions with psychiatric disorders is clarified. He enumerates a variety of other ways in which it can be conceptualized in clinical psychiatric practice, including different terminology, positing causal links between addiction and psychiatric disorders, and self-medication hypotheses. Issues of training of practitioners and suggestions for new concepts and terminology in dual diagnosis is given.

MINKOFF, K. (1989).
Program components of a comprehensive integrated care system for seriously mentally ill patients with substance disorders.
New Directions for Mental Health Services 50: 13-27.

The author presents a conceptual framework which compares the course of substance disorders with other major psychiatric disorders, according to a disease-recovery model. He then presents program elements to meet the needs of patients in each phase of recovery for each illness. Key elements include: continuity over time, comprehensiveness to include programs within both addictions and mental health, and a period of acute stabilization of symptoms of both disorders. Engagement of the patient in treatment, and ongoing stabilization and rehabilitation in the community after treatment are important components of the treatment program.

MUESAR, K. T.; BELLACK, A. S.; AND BLANCHARD, J. J. (1992).
Comorbidity of schizophrenia and substance abuse: Implications for treatment.
Journal of Consulting and Clinical Psychology 60: 845-856.

The effects of substance abuse on schizophrenia are reviewed, and based upon the review, the principles of treatment for drug-dependent schizophrenics are outlined.

OKIN, R. L.; AND PEARSALL, D. (1993).
Patients' perceptions of their quality of life 11 years after discharge from a start hospital.
Hospital and Community Psychiatry 44: 236-240.

The authors undertook a long-term follow-up study of 53 clients with chronic mental illness, who were previously interviewed 8 months after being discharged from hospital to community programs. All clients expressed satisfaction with living in the community, and some improvements were evident which had not been found after 8 months. However, no positive changes were found in mood and self-esteem, even though clients perceived the move to community living to be an improvement in their quality of life.

All clients expressed satisfaction with living in the community.

POLDRUGO, F.; AND FORTI, B. (1988).
Personality disorders and alcoholism treatment outcome.
Drug and Alcohol Dependence 21: 171-176.

This study evaluated the frequency and patterns of alcohol use and alcohol-related problems among 717 male psychiatric clients in Trieste, Italy. In this group, 404 were alcoholics, and 282 had personality disorders, according to DSM-III. Groups were compared with the control group, using chi square analysis. Clients varied in the onset and course of alcohol abuse depending on their personality disorder diagnosis: "antisocials" started continuous drinking before 20 years of age, had a variety of problems, and had high (above 300 ml absolute alcohol/day) consumption levels; "dependents" began problem drinking in their thirties, with lower levels, and had psychological problems; "borderline" clients used alcohol intermittently with few dependence symptoms, with personal and familiar problems; "paranoid" clients reported high consumption levels but began drinking later than antisocial clients. For group aftercare therapy, antisocials showed the worst, while dependent clients showed the most improvement.

Quality Care and Outcome Indicators in the Mental Health Field: A Guide to the Literature.
Ottawa: Health Canada Programs and Services Branch.

This report provides a useful guide and reference list to current literature on mental health quality care and quality assessment programs. Difficulties in evaluating programs include diversity of constructs and therapeutic approaches, diagnostic consensus, definition of achievable outcomes, variety of contributing factors, chronicity of mental illness, clients' use of multiple services, and developing reliable tests and indicators of care and outcome.

REGIER, D. A.; FARMER, M. E.; RAE, D. S.; LOCKE, B. Z.; KEITH, S. J.; JUDD, L. L.; AND GOODWIN, F. K. (1990).
Comorbidity of mental disorders with alcohol and other drug abuse.
Journal of American Medical Association 264: 2511-2518.

This article assesses the comorbidity of alcohol and/or drug abuse and other mental disorders based on estimated prevalence rates of mental disorders. The data for this study was drawn from the Epidemiological Catchment Area study (n=20,291). The authors conclude that substance abuse treatment should be a core part of treatment of psychiatric disorders, because 53% of all clients diagnosed with a substance abuse problem have

at least one other psychiatric diagnosis. The study found that 47% of all schizophrenics, 83.6% of all clients with an antisocial personality disorder, 14.6% of anxiety disorder populations, and 32% of clients diagnosed with an affective disorder, met the criteria of some substance abuse disorder. Anxiety was the most prevalent disorder associated with specific substance abuse disorders.

Anxiety was the most prevalent disorder associated with specific substance abuse disorders.

RIES, R. (1993).
The dually-diagnosed patient with psychotic symptoms.
Journal of Addictive Diseases 12: 103-122.

This discussion paper examines different manifestations of psychotic symptoms arising from drug induced (alcohol, cocaine, marijuana, hallucinogens and other agents) and non-drug induced psychoses (schizophrenia, mania, depression, brief reactive psychoses, dissociate disorders, and organic brain damage). Self-medication issues are discussed. Treatment is proposed on a low/high severity model, and is based upon diagnosis of source of psychotic symptoms, and resolution of acute condition. Uses of medications are discussed.

RIES, R.; MULLEN, M.; AND COX, G. (1994).
Symptom severity and utilization of treatment resources among dually-diagnosed inpatients.
Hospital and Community Psychiatry 45: 562-567.

The authors studied 104 patients admitted to a voluntary psychiatric unit with a dual disorder treatment program. Most patients had been treated at least five times previously. For comparison, patients were grouped according to current status of substance abuse. Structured interviews and standardized self-report checklists were used. Those patients with current dual disorder had more severe symptoms, were more likely to have a mood disorder, and had used more treatment resources than those with past substance abuse.

RIDGELY, M. S. (1991).
Creating integrated programs for severely mentally ill persons with substance disorders.
New Directions for Mental Health Services 50: 29-41.

This paper discusses the need for hybridizing (integrating) treatment for severely ill mental health clients with substance dependence. Four programs are described which serve this population in the U.S., and common

elements are extracted to propose principles of integrated programming. Recognized phases of treatment are: engagement, motivation, assessment, concomitant treatment, relapse prevention, and linkage.

RILEY, D. (ED.).(1993).
Dual Disorders: Alcoholism, Drug Dependence and Mental Health.
Ottawa, Canada: Canadian Centre on Substance Abuse, 59pp.

This publication collects five authors' comments on theoretical, conceptual and treatment issues in dual disorder.

J. Blackwell presents a sociological perspective, questioning the historical reasons for classifying substance abuse as a mental illness, and proposing a new perspective of social deviance for substance abuse.

J.E. Helzer and T. R. Pryzbeck review lifetime prevalence data from the ECA Survey, presenting odds ratios for comorbidity with alcoholism and other disorders, data showing that alcoholics are much more likely than the general ill population to have a double diagnosis, and information on how the presence of other diagnoses affects treatment.

J.C. Negrete considers the significance of psychiatric comorbidity findings in substance abusers. A significant proportion of clients in treatment show an increased psychological vulnerability, and associated psychopathology. This requires informed use of diagnostic methods, and an awareness that accuracy of findings depends upon the length of time since taking psychoactive substances.

N. El-Guebaly provides a Canadian perspective on managing substance abuse and mental illness. Statistics compare with the U.S. About one-third of mentally ill individuals experience substance abuse, and about one-third of alcohol dependent and one-half of drug dependent individuals will have a psychiatric diagnosis. Type of treatment depends upon the network approached, with a clear separation between mental health and addiction agencies. A parallel or coordinated approach requires multidisciplinary team work, and self-help networks are expanding. Program components are identified, and the author stresses the need for lifelong management.

F.B. Glaser reminds readers that the concept of dual diagnosis has a long history, where individuals with drug and alcohol problems have met the contemporary criteria for psychiatric disorders. The author cautions that the concept of dual diagnosis may be artificial, considering the high correlation between severity of substance use disorders and psychiatric symptoms; the recent interest in this concept may be promoted more by turf battles than the emergence of a new condition.

ROMANI, O.; AND COMELLES. (1991).
Les contradictions liées à l'usage des psychotropes dans les sociétés contemporaines: automédication et dépendance.
Psychotropes 10 (3): 39-57.

This discussion paper describes how the importance placed upon the medical model of disease and illness prevention has led to the increase in substance dependency problems related to self-medication. The authors contend that in the past, and in present day societies where there are more holistic approaches to mental and physical health, addiction due to self-medication is almost unheard of. It is only recently, with the advent of the medical model — in which medical professionals are seen as the experts and medications are seen as scientific cure-alls — that the overuse and misuse of drugs, especially prescription medication, have become prevalent. The authors contend that only a move away from the medical model toward a more global approach wherein individuals are made responsible for their own mental and physical health, and are given the appropriate knowledge and tools to do so, will serve to diminish our unwavering trust in the safety and effectiveness of medication and so reduce our potential for chemical dependency.

The authors contend that in societies where there are more holistic approaches to mental and physical health, addiction due to self-medication is almost unheard of.

ROSS, H.; GLASER, F.; AND GERMANSON, T. (1988).
The prevalence of psychiatric disorders in patients with alcohol and other drug problems.
Archives of General Psychiatry 45: 1023-1031.

Lifetime and current prevalence of mental disorders is measured in 501 addiction outpatients at the Clinical Institute of the Addiction Research Foundation in Toronto. The sample contained 78% with a lifetime psychiatric disorder and 65% with a current disorder. Most common were antisocial personality disorder, phobias, psychosexual dysfunctions, major depression, and dysthymia. Multiple drug users were the most psychiatrically impaired. Other specific findings are reported.

ROSS, H. E.; AND GLASER, F. B. (1989).
Psychiatric screening of alcohol and drug patients: The validity of the GHQ-60.
American Journal of Drug and Alcohol Abuse 15: 429-442.

The authors assess the usefulness of the General Health Questionnaire (GHQ) as a screening instrument for psychiatric disorders among clients attending treatment facilities for addiction problems. The criterion measure

of mental disorder was the Diagnostic Interview Schedule, which was given to 501 clients presenting for assessment or treatment for alcohol and drug problems at the Addiction Research Foundation, Toronto. The GHQ was found to have moderate usefulness, if the cutoff score is raised to 23/24.

ROSS, H. E.; GLASER, F. B.; AND STIASNY, S. (1988).
Sex differences in the prevalence of psychiatric disorders in patients with alcohol and drug problems.
British Journal of Addiction 83: 1179-1192.

Gender differences in specific substance use and other psychiatric disorders are reported in a sample (n=501) drawn from patients attending assessment or treatment at Addiction Research Foundation, Toronto. This study contradicts previous findings which suggest that women are more likely than men to experience concurrent psychiatric disorders. Lifetime and current diagnoses were made according to DSM-III-R criteria, using the Diagnostic Interview Schedule. Males and females both had high (84-85%) lifetime prevalence of psychiatric disorder other than substance use, and two-thirds had a current psychiatric disorder. More females were found to have anxiety, psychosexual problems and bulimia while men were more likely to be diagnosed with anti-social personality, gambling disorders and ego-dystonic homosexuality. Both males and females who abused drugs and alcohol were at a higher risk of psychosexual dysfunctioning compared to patients who abused only alcohol or only drugs. The study also found that alcohol disorders increased with age while drug disorders decreased with age. Women were more addicted to barbiturates, sedatives and anti-anxiety drugs, while men abused cannabis and tobacco. Men also tend to use/abuse illicit drugs while women use/abuse prescription drugs. Married patients were at lowest risk and the unemployed at highest risk of psychiatric disorders.

The study also found that alcohol disorders increased with age while drug disorders decreased with age.

ROSS, H. E.; SWINSON, R.; LARKIN, E. J.; AND DOUMANI, S. (1994).
Diagnosing comorbidity in substance abusers: Computer assessment and clinical validation.
The Journal of Nervous and Mental Disease 182: 556-563.

This study compared DSM-III diagnoses in 173 substance abusers (143 male, 30 female, mean age 36, range 18-72), using a computerized version of the Diagnostic Interview Schedule (C-DIS), with clinical diagnoses, using the Structured Clinical Interview (SCID). Subjects were 135 volunteers recruited from the Addiction Research Foundation's outpatient treatment programs and 38 men from a residential treatment program run

by the Salvation Army. Agreement between the initial C-DIS and SCID was assessed by Kappa coefficients, and the validity of the C-DIS in screening for psychopathology was assessed for sensitivity, specificity, positive and negative predictive value by consensus diagnoses. The two methods showed good agreement on lifetime DSM-III diagnoses for substance abuse disorders (Kappa agreement .26 - .81) but not for other disorders (-.04 - .57), except for antisocial personality disorder. Disagreement cases of specific disorders are examined. The authors conclude that consensus diagnosis is important to gain an accurate diagnosis, using repeated interviews and the utilization of all available information.

SAFER, D. J. (1987).
Substance abuse by young adult chronic patients.
Hospital and Community Psychiatry 38: 511-514.

The cases of 41 young adult chronic outpatients were reviewed, aged 19-39 years, unemployed, and on social assistance. They were grouped according to their substance abuse patterns of 1) no record of appreciable substance abuse (27%), 2) more than a 2-year history but no present abuse (29%), and 3) ongoing and current abuse (44%). Group 3 recorded an annual rate of psychiatric hospitalization more than 2.5 times the rate of subgroups 1 and 2. For patients diagnosed as "psychotic", those who used LSD, PCP or amphetamines had the highest rate of psychiatric hospitalization, and 3 of the psychoses induced by substance abuse were misdiagnosed as schizophrenia or a bipolar disorder. The group was also compared with 27 older chronic adults, aged 40-49, also on social assistance. Substance abuse was the characteristic that most distinguished the younger from the older group. The author concludes with treatment recommendations focussed on controlling factors associated with substance abuse.

SANGUINETTI, V. R.; AND BROOKS, M. O. (1992).
Factors related to emergency commitment of chronic mentally ill patients who are substance abusers.
Hospital and Community Psychiatry 43: 237-240.

Urine toxicology screens for alcohol and other drugs were used to identify substance abusing patients at a psychiatric emergency department in Philadelphia. About two-thirds of the 247 patients were men. Patients who screened positive for substance abuse were more likely to live alone or be homeless, to suffer from an organic mental disorder or a psychoactive substance abuse disorder, and to have a history of drug abuse. Their previous drug abuse was associated more with suicidality than criminality, a

Patients who screened positive for substance abuse were more likely to live alone or be homeless, and to have a history of drug abuse.

finding different from previous studies. The authors suggest that prompt drug screening in emergency rooms assists in understanding the interplay between a patient's substance use and psychiatric symptoms.

SCHMIDT, L. (1992).
A profile of problem drinkers in public mental health services.
Hospital and Community Psychiatry 43: 245-250.

This study examines the differences between problem and non-problem drinkers by comparing their clinical and demographic profiles. Of the 406 study clients, 143 or 35% were diagnosed as problem drinkers, with 53% of these under 30 years old. Most were of low socio-economic status and were more likely to believe they needed help. The problem drinkers had a greater median score on all nine subscales of the BSI (Brief Symptom Inventory). They also had used illicit drugs more often. The paper concludes that problem drinkers are a greater strain on the health system, since they seek both clinical and social services, involving a greater number of community services. Although a holistic approach to improving services has already been called for, the author suggests an even broader approach is needed.

Although a holistic approach to improving services has already been called for, the author suggests an even broader approach is needed.

SCHNEIER, F. R.; MARTIN, L. Y.; LIEBOWITZ, M. R.; GORMAN, J. M.; AND FYER, A. J. (1989).
Alcohol abuse in social phobia.
Journal of Anxiety Disorders 3: 15-23.

This study investigated the relationship between social phobia and the development of alcoholism. The sample consisted of 98 out-patients with a diagnosis of social phobias using DSM-III-R criteria. Patients who had a recent history of drug or alcohol abuse (within the past three months) were excluded from the sample. A structured interview used to collect data included the following instruments: The Schedule for Affective Disorders and Schizophrenia — Lifetime Version, the DSM-III-R criteria for social phobia, and the Research Diagnostic Criteria (to assess alcoholism). The findings indicated that individuals with social phobias who were also alcoholics tended to have more severe social phobia than non-alcoholics. In addition, it was found that for the vast majority of alcoholics in the sample (15 of 16), the social phobia preceded the development of alcoholism. Most of these individuals reported using alcohol as a means to cope with the social phobia (self-medication).

SCHNEIER, F. R.; AND SIRIS, S. G. (1987).
A review of psychoactive substance use and abuse in schizophrenia. Patterns of drug choice.
Journal of Nervous and Mental Disease 175: 641-652.

The authors review 18 studies conducted between 1967 and 1986 that compared substance abuse patterns in schizophrenics and control groups. Broadly speaking, all studies agree that the schizophrenic groups' use of amphetamines, cocaine, cannabis, caffeine and tobacco was greater than or equal to the control group while use of alcohol, opiates and sedatives was less than the control group. The authors conclude that substance use provides relief from some aspects of pathology, and may be viewed as a special case of operant conditioning in which substances stimulate neural systems in a reinforcing manner. The existing literature also clearly suggests that substance use and schizophrenia commonly co-occur but treatment for such groups is either uncertain or inappropriate.

SCHWARTZ, L. S.; LYONS, J. S.; STULP, F.; HASSAN, T.; JACOBI, N.; AND TAYLOR, J. (1993).
Assessment of alcoholism among dually-diagnosed psychiatric inpatients.
Journal of Substance Abuse Treatment 10: 255-261.

This study used an original 42-item survey instrument to conduct a retrospective review of 50 charts from an urban medical centre. The purpose was to evaluate the extent to which alcohol assessment and treatment planning were included in psychiatric inpatient admissions. More than 70% of the admissions gave evidence of alcohol dependence, of which 12 were diagnosed primarily alcohol dependent, 12 had alcohol related psychosis, 19 were diagnosed with schizophrenia, and 19 with major affective disorder. The chart review revealed that: a) an alcohol dependence history was often not obtained; b) diagnosis was not made as often as expected, and c) more emphasis was put upon acute symptoms rather than long-term planning to treat the alcohol problem.

SHER, S. J.; AND TRULL, T. J. (1994).
Personality and disinhibitory psychopathology: Alcoholism and antisocial personality disorder.
Journal of Abnormal Psychology 103: 92-102.

The authors review studies on the relationship between alcohol abuse/dependence and antisocial personality disorder (APD). It looks at different

methodological issues pertaining to research in this area. It also discusses the personality characteristics of pre-alcoholics, alcoholics, and antisocial personalities using three broad-band dimensions of personality. The authors conclude that there is a high comorbidity between alcohol and APD, with drug dependence, and other Axis I and II disorders. Finally, the authors present models of relationships between alcohol and personality, and APD and personality. In conclusion, the authors suggest that the usefulness of personality variables is enhanced when they are "conceptualized in relation to other etiological variables than just static trait descriptions".

The authors suggest that the usefulness of personality variables is enhanced when they are "conceptualized in relation to other etiological variables than just static trait descriptions".

SCHUCKIT, M. A.; IRWIN, M.; AND SMITH, T. L. (1994).

One-year incidence rate of major depression and other psychiatric disorders in 239 alcoholic men.

Addiction 89: 441-445.

This paper investigates the association between alcohol dependence and major depressive disorder, by the one-year incidence of new episodes of major depression in 239 primary alcohol dependent men in San Diego, California. The men had not experienced a major psychiatric disorder independent of heavy drinking in the past. They were interviewed particularly about events which had occurred during the year, using a time-line method to determine sequence of alcohol intoxication and major depressive symptoms. In these men, the small number of depressive episodes independent of drinking, and the higher rate for new depressive episodes in those subjects who went back to drinking, indicated low-risk for depression and a greater likelihood for alcohol-induced mood disorder. Means, standard deviations, and percentages only are reported.

SIACCA, K. (1991).

An integrated treatment approach for severely mentally ill individuals with substance disorders.

New Directions for Mental Health Services 50: 69-84.

The author distinguishes mentally ill chemical abusers from chemically-abusing mentally ill clients, by listing the main characteristics of both groups. She then provides a treatment program overview for mentally ill chemical abusers by describing in detail individual phases of treatment. Programs available (e.g. self-help) to support these clients are also described. The author identifies a need to test the usefulness of this program, and states she is addressing this need in her current research.

SMITH, E. M.; NORTH, C. S.; AND SPITZNAGEL, E. L. (1993).
Alcohol, drugs, and psychiatric comorbidity among homeless women: An epidemiologic study.
Journal of Clinical Psychiatry 54 (3): 82-87.

The purpose of this research paper was to examine the factors associated with the increasing prevalence of homelessness among North American women. 251 women seeking refuge at homeless shelters and hospitals were interviewed over a 12-month period. The prevalence of psychiatric disorders was higher in the homeless population than for women in the general population, with schizophrenia, bipolar affective disorder and depression being the most commonly cited illnesses. Although substance use by homeless women is lower than for men, it was nonetheless higher than for women in the general population and was especially prevalent in homeless women who reported psychiatric illness. The researchers note, however, that at least half of the sample reported having neither substance abuse nor current psychiatric problems, demonstrating the women's resiliency in the face of overwhelming stresses. Therefore, more research is needed to examine the differences between substance users and non-users, as well as the factors which contribute to some women's resiliency.

Although substance use by homeless women is lower than for men, it was nonetheless higher than for women in the general population.

STEPHENS, R. S.; ROFFMAN, R. A.; AND SIMPSON, E. E. (1993).
Adult marijuana users seeking treatment.
Journal of Consulting and Clinical Psychology 61: 1100-1104.

The authors look at the characteristics of adult users who were screened to participate in marijuana-specific treatment programs. In a total sample of 382 (290 Males and 92 females), 94% reported self-control and health concerns as the major motives for quitting. Although 79% of the sample had a diagnosable psychological problem, only 9% sought help before the current treatment despite chronicity of abuse and psychological distress. Fifty percent of the sample reported poly-drug use. The authors probed further to study the distinction between and the prevalence of "pure" marijuana abuse (MAO, n=144), marijuana abuse with concurrent poly-drug use (CPA, n=75) and lifetime prevalence (LPA, n=165). CPA and LPA subgroups reported more adverse consequences of the substance use than MAO group. MAO subgroup scored significantly lower in the Symptom Checklist-90-R (SAL-90-R) than the other two subgroups. Psychological distress was significant and substantial in all sub-groups but the degree of distress was greater in poly-drug users.

THOMPSON, A. H.; BLAND, R. C.; AND ORN, H. T. (1989).
Relationship and chronology of depression, agoraphobia and panic disorder in the general population.
Journal of Nervous & Mental Disease 177: 456-463.

This report examines the relationships between three psychiatric disorders: agoraphobia, panic disorder and depression. Agoraphobia appeared to have earlier onset than the other two disorders, in early teens. This finding questions the theory that panic disorder is an integral component of agoraphobia, since both panic disorder and depression had a later mean onset by about 20 years. It also suggests that panic disorder is more closely associated with depression.

TONER, B. B.; GILLIES, L. A.; PRENDERGAST, M. B.; COTE, F. H.; AND BROWNE, C. (1992).
Substance use disorders in a sample of Canadian patients with chronic mental illness.
Hospital and Community Psychiatry 43: 251-254.

This paper presents the pattern of substance use disorders among 43 chronic mentally ill patients in Toronto. A total of 108 patients completed the Structured Clinical Interview for DSM-III-R (SCID). Of these, 65 were diagnosed with schizophrenia, 21 with mood disorders, 9 with schizo-affective disorder, 3 with a psychotic disorder, 2 with delusional disorder, and 8 with non-psychotic disorders. 43 of these patients also had a substance use disorder, 19 of which had more than one substance of abuse. This finding reflects prevalence rates in U.S. and British samples. The difficulty of diagnosing personality disorders in patients with substance abuse or a major mental illness is discussed. This study did not find these patients to have a higher prevalence of substance abuse than those without an Axis II disorder.

The difficulty of diagnosing personality disorders in patients with substance abuse or a major mental illness is discussed.

TURNBULL, J. E.; AND GOMBERG, E. S. L. (1988).
Impact of depressive symptomatology on alcohol problems in women.
Alcoholism: Clinical and Experimental Research 12 (3): 374-381.

The study examined the relationship between two aspects of depression (low self-esteem and mood) and both the onset of alcohol use and the consequences of alcoholism for women. The sample consisted of 301 female alcoholics who had been in treatment for alcoholism for at least one week. The data was collected during two-hour interviews. The interview contained

questions about depression, including items related to self-esteem and items related to current mood. There were also questions related to drinking behavior, including age of onset, age of loss of control, drinking habits, consequences of drinking (including social withdrawal, sexuality, early effects, maternal role, accidents, symptoms, work, illness, and relationship conflict). Further questions measured early psychosocial vulnerability, including family history of alcohol problems, negative relationships while growing up, early life events, and positive relationships. When compared to a nonalcoholic group of women, the alcoholic group scored significantly higher on all measures of depression, and lower on self-esteem and current mood. Both self-esteem and current mood were associated with earlier onset and earlier loss of control of drinking, and were related to consequences of alcohol. The authors indicate that depression impacts all aspects of women's lives and that the more depressed the alcoholic woman is, the more serious the consequence of her alcoholism. The authors also suggest that there is a relationship between early family environment and increased levels of depression in alcoholic women.

WARNER, R.; TAYLOR, D.; WRIGHT, J.; SLOAT, A.; SPRINGETT, G.; ARNOLD, S.; AND WEINBERG, H. (1994).

Substance use among the mentally ill: Prevalence, reasons for use, and effects on illness.

American Journal of Orthopsychiatry 64: 31-39.

This study examines the prevalence of Substance Abuse (SA), reasons for use, and the effects on illness among an outpatient psychiatric population with a long-standing history of mental illness (duration mean=16.1 years). Out of the 388 open cases examined, 55 subjects agreed to be interviewed. Lifetime prevalence rate for the use of alcohol to the point of intoxication was the highest (92.7%) followed by marijuana (89.1%). Sixty percent of the subjects who were classified as being moderate to severe users had a family history of substance abuse. Subjects who were not involved in a structured day activity attributed boredom as the most significant reason for substance use, although there was no relationship between severity and lack of activity. Amount of SA had no relationship to hospital admissions and baseline psychopathology. The most striking result of the study was a marked decrease in the current rate of SA (35%) from the lifetime prevalence rate (76%). The authors conclude that this may be because the mental illness is better controlled, and that the positive and extensive case management techniques used help in controlling substance use. Judging by subjects' responses, the authors conclude that moderate substance use may not necessarily have an adverse effect on the course of psychiatric illness.

The most striking result of the study was a marked decrease in the current rate of SA (35%) from the lifetime prevalence rate (76%).

WESTERMEYER, J.; NEIDER, J.; AND WESTERMEYER, M. (1992-93).

Substance use and other psychiatric disorders among 100 American Indian patients.

Culture, Medicine and Psychiatry 16 (4): 519-529.

This study is concerned with the prevalence of dual diagnosis among American Indians. One hundred Native inpatients and outpatients at the American Indian Alcohol Drug Treatment Program in Minnesota were asked to respond to interviews, and to allow the results of their clinical and psychiatric evaluations and diagnoses to be accessed. The results indicated that the majority of the subjects received a dual diagnosis of substance use and other psychiatric disorders. Forty-one of the subjects reported familial precedence of dual diagnosis as well. Over fifty of the subjects also reported having previously sought clinical help or having been hospitalized, indicating that while many American Indians experience a variety of problems resulting from substance use and/or other psychiatric disorders, they are also using the treatment resources available to them. The fact that most return for successive treatments indicates that current programs and services may not be effective, and more research must be performed in order to offer more effective interventions.

The fact that most return for successive treatments indicates that current programs and services may not be effective.

WOOGH, C. M. (1990).

Patients with multiple admissions in a psychiatric linkage system.

Canadian Journal of Psychiatry 35: 401-406.

The author used a local data base in Kingston, Ontario to provide an index of service utilization to determine the characteristics of clients with multiple admissions. Clients were grouped by low (1-100), moderate (101-300) and high (>300 contacts) service utilization over a 3-year period. Only clients with 3+ admissions were used (n=467, or 6.5% of all admissions). Patients with multiple admissions tended to be young, poorly educated, and living alone. Those with major functional disorders were most vulnerable. One-third of the total cohort who had multiple admissions, and one-quarter of those with major functional disorders had received a diagnosis of substance abuse on at least one occasion. The author concluded these clients were treated at multiple facilities, and neither psychiatric and mental health services, nor community-based services were equipped to serve seriously ill psychiatric patients who also abuse drugs.

Yesavage, J. A.; and Zarcone, V. (1983).
History of drug abuse and dangerous behavior in inpatient schizophrenics.
Journal of Clinical Psychiatry 44: 259-261.

Dangerous behaviors (physical and verbal assaults and episodes of seclusion and restraint) were examined as correlates of a history of drug and alcohol use in a sample of 85 male schizophrenic inpatients. 98% of respondents reported using alcohol at least once per week, and 98% reported having used illicit drugs at least once. A stepwise multiple regression was used to determine the relative importance of drug use factors in relation to dangerousness. The best predictor of inpatient assaults was a history of blackouts and assaultiveness when taking drugs, particularly PCP, while the best predictor of seclusion or restraint was a history of becoming "loud" on drugs or alcohol. The findings suggest that different histories of drug use behavior are correlated with different aggressive behaviors.

EXPLORING THE LINKS BETWEEN SUBSTANCE USE AND MENTAL HEALTH

SECTION
II

A Detailed Analysis

Co-authored for Health Canada

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BACKGROUND

This analysis of literature is part of a Health Canada funded project to explore the links and relationships between mental health and substance use. It is the second phase of a three-part contract. The first phase involved researching pertinent literature and creating an annotated bibliography. This bibliography covered a wide selection of articles exploring relationships between substance use and mental health and mental disorder. It was broken into five sections or divisions, each including annotations of articles and other documents focusing on common ideas and issues. This detailed analysis discusses the literature within each section, with the purpose of identifying key themes and issues in the literature. These issues and themes will form the basis for the final phase of the project, a discussion paper identifying key issues for consideration by mental health and substance use practitioners, researchers, and policy makers.

This detailed analysis discusses the literature within each section, with the purpose of identifying key themes and issues in the literature.

The Analysis is broken into several sections, some of which correspond to those in the Annotated Bibliography, some of which are different. Several of the sections in the Annotated Bibliography have been combined to facilitate discussion of the issues. The sections included in the Detailed Analysis are as follows:

1. **General Overview of Substance Use.** In this section, several caveats are included which must be incorporated into any discussion of risk and protective factors for substance use. The preponderance of substance use literature reviewed deals with adolescents; however, some substance use literature is also included that addresses the population sub-groups of women, seniors, and aboriginal peoples.

2. **General Overview of Mental Health.** This section provides an overview of mental health and of the issues discovered in the literature search dealing with mental health. The focus of the literature search was on individual and environmental influences, as well as psychosocial risk factors related to mental health and mental disorder.

3. **Literature on the Possible Links, Interactions, and Relationships Between the Range of Mental Health and Substance Use.** In this section literature exploring risk and protective factors related either to substance use, mental health or both is examined. Particular attention has been paid to gaining an overview of the vast literature on factors in substance use and mental health, with an emphasis on psychosocial risk factors. A brief discussion of literature on compulsive gambling as a process addiction is also included. The section ends with an overview of documents that explore the links between substance use and emotional health and the role that substance use plays as a coping mechanism.

Additionally, this summary discussion includes substance use as a causal or risk factor in mental or emotional problems, and vice-versa.

4. **Literature Pertaining to Prevention and Treatment Modalities.** This section examines two major areas: prevention and treatment. First, the concepts of prevention and health promotion in both substance use and mental health are discussed, with an emphasis on identifying key themes common to both. Second, documents describing treatment of substance abuse or mental disorders, or both (i.e. dual disorders), are discussed, taking into account how links between the two major health areas have been addressed in treatment.

SCOPE OF THE LITERATURE SEARCH

The search for materials included CD-ROM and reference follow-up searches for review papers, discussion papers, research reports, and books. Information was also obtained from an informal panel of experts. Documents produced in or having relevance to Canada were sought. Literally thousands of documents could have been covered. However, in most topic areas the intent was to give adequate data to address key purposes of the project, rather than cover all literature available.

GENERAL PARAMETERS OF THE DETAILED ANALYSIS

1. An important note to consider is the impact of the volume of literature on mental health, substance use and links between the two, on this document and the Annotated Bibliography. Decisions were made as to the relevant search terms used and the articles included. Invariably the authors have missed certain pockets of information or have made decisions to focus on particular issues over others. In addition, the search was limited primarily to published material. It is acknowledged that excellent material likely exists, particularly Canadian, that is not published or easily accessible.

2. In most studies, factors linked to substance use and/or mental health are correlational. That is, the relationship is determined by whether or not associations between factors and either substance use or mental health problems are statistically significant. It is virtually impossible in most cases to establish clear causation between risk factors and outcome. Risk, as used in health and health promotion, has been used traditionally to describe the correlation between the existence of a set of conditions or qualities and the subsequent occurrence of a health problem. It comes directly from the epidemiological concept of risk, which is a statistical concept measuring the strength of the relationship between possible causal or risk factors and disease. It is a useful concept in chronic degenerative disease, mental illness, and in the array of syndromes for which no clear

pathogen is implicated and in which human ethics preclude experimentation to establish causality with complete certainty. Because risk is almost always based on correlation, we cannot say that risk factors are necessarily direct causes of health problems, nor can we predict that a problem will occur for any given individual or family just because they are "at risk." Likewise, we cannot say with absolute certainty that problems will not occur if an individual or family are deemed at low risk due to the absence of risk factors, or existence of protective factors — the conceptual counterpart of risk factors.

This does not prevent us, however, from using the concept of risk in health promotion, nor does it disaffirm the value of promoting qualities associated with reduced risk. It is an accepted practice to base preventive interventions on risk reduction, provided that the relationship between the risk factor and the problem have certain characteristics (Morton, Hebel and McCarter, 1990).

These are:

a. Time-ordered relationship: The risk factor precedes the occurrence of the problem.

b. Strength of the association: The relationship or correlation between the risk factor and the problem is strong.

c. Consistency of the association: The relationship is confirmed in various settings and in repeated studies, and is not just a spurious relationship.

d. Cohesiveness of the association: The relationship makes some sense, based on common experience or existing psychological or sociological theory.

Many of the recommendations of health professionals as to lifestyle changes, and certainly many health education or health promotion programs are based on the acceptance that given conditions such as these, interventions to address the risk factors or to promote the protective factors are warranted.

3. In this review, factors are discussed by specific populations — adolescents, women, seniors, aboriginal peoples, high risk youth and ethnic minorities. In fact, the majority of literature in the substance use area relates to experiences of adolescents and the majority of the literature in the mental health area relates to adolescents and women. However, the authors have attempted to include literature pertaining to the other groups noted.

Moreover, it is important to note that in reality the Canadian population is not neatly broken into segments; these groupings have considerable overlap. Nor are they mutually exclusive. For example, adolescents of one ethnic group could well have more in common with other adolescents than with older persons in their own ethnic group. Therefore, when discussing risk factors for women, one could assume many of the factors at play for

it is important to note that in reality the Canadian population is not neatly broken into segments; these groupings have considerable overlap.

other groups affect them as well. Because adolescent studies are far and away the most common in the substance use area, the majority of the discussion in this section will be devoted to them.

4. Protective factors, in the context of this review, are most often discussed as the inverse of risk factors. Few studies have examined the factors specifically associated with being at low risk. More often they appear without significant discussion, the main discourse being on the population at risk. These "low risk factors" should not be confused with the protective factors associated with *resiliency* — the capacity to cope successfully in the face of significant risk. A person can be at low risk for substance abuse and yet not be resilient. For example, personal religiosity, and abstention from drug use are definitely factors that reduce risk, but are not necessarily associated with resiliency. A discussion of protective factors associated with resiliency has been produced recently for Health Canada (Mangham, McGrath, Reid and Stewart, 1994).

GENERAL OVERVIEW OF SUBSTANCE USE/ABUSE

A large body of literature exists describing the factors associated with the onset and progression of substance use, especially in adolescent populations. Research in this area was particularly intense in the 1980s, and numerous reviews have been produced on the subject (e.g. Hawkins, Catalano and Miller, 1992). The discussion of substance use/abuse in this document will focus primarily on the risk and protective factors associated with substance *abuse*, and particularly on those that relate directly or indirectly to mental health.

Prior to discussing issues around substance use/abuse, it is important to first define terms. For the purposes of the Annotated Bibliography, the Detailed Analysis and the Discussion Paper, the following definitions have been adopted:

Substance use includes the use of any of a range of psychoactive substances including tobacco, alcohol, non-prescription and prescription drugs, illicit drugs, solvents and inhalants. This use may range from abstinence, to occasional or regular use, to frequent heavy use, to substance abuse. **Drug use** will be used as an alternate phrase.

Substance abuse, as defined in the World Health Organization's Lexicon of Alcohol and Drug terms, (1993) is:

> a maladaptive pattern of use indicated by ... continued use despite knowledge of having a persistent or recurrent social, occupational, psychological or physical problem that is caused or exacerbated by the use [or by] recurrent use in situations in which it is physically hazardous (p.4).

Process addiction implies compulsive engagement in a process (such as eating or gambling) that produces health or economic problems and/or becomes uncontrollable and creates discomfort on withdrawal.

Harm reduction implies reducing risk of harm in ways that may or may not include abstinence; for example, using substances in ways that are less harmful or implementing measures like needle exchanges for intravenous drug users, which reduce the likelihood of infection with contagious diseases.

When discussing factors in substance use/abuse, it is necessary to note several caveats, or cautions, in interpreting or making assumptions about these factors. First, the concept of substance abuse involves more

than simply the amount or frequency of use. Yet often — especially in the studies of teen populations and/or in the case of illicit drugs — use and abuse are treated synonymously. In fact, Paquin (1988) cautions us to keep in mind the significant differences between abstainers, exploratory users, occasional users, regular users, overusers, and abusers. This difference in the type of use should be remembered when considering factors in teen drug use.

Second, factors in initiation of substance use and factors in the continuation and escalation of use, may be very different (Beauchamp and Brunet, 1994). For example, peer influence is frequently noted as a factor in first use of substances, but may play quite a different role in continued use. Internal reasons, such as wanting to forget family problems, play a major role in the continuation of substance use. Often, this distinction is overlooked in the application of findings.

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Third, risk factors can vary among substances. For example, the discussion will show a relationship between socio-economic class and smoking, but not other drugs. Likewise, tolerance for deviance and lack of adherence to conventional norms pertain to illicit drug use, but much less so to alcohol. This is reasonable given that illicit drug use is viewed as deviant behavior, even if it is seen as normative within particular peer groupings.

As stated earlier, the primary population represented in substance use issues is adolescents. The factors addressed arising from substance use literature and providing a link between substance use and mental health are: alienation and lack of social bonding in the school context, social norms and expectations about substance use, family and peer influences, family violence, self-esteem, locus of control, drug-related expectancies, personality factors such as sensation seeking, tolerance to deviance, and stress-related issues and coping mechanisms. Many of these factors can be viewed as either a risk factor (if the factor has negative influence) or a protective factor (if the factor has a positive influence). Many function on a continuum (e.g. self-esteem) and, depending where individuals lie on the continuum, either places them at risk or protects them from future problems.

GENERAL OVERVIEW OF MENTAL HEALTH

Although mental health is often referred to in a massive body of psychosocial literature, it does not appear consistently as a clearly defined or commonly understood concept. Most scholarly research usually identifies it as a reference point for studying a particular mental disorder like depression, or as a set of conditions that describe a population group, such as the effect of unemployment on individuals.

There is no universally accepted definition of mental health. However, in a Canadian context under Health Canada's former name Health and Welfare Canada, *The Mental Health of Canadians: Striking a Balance* (1988) has been included in this annotated bibliography. It provides an excellent model and description of related issues for considering mental health as a subject, and can be used as a standard to judge the scope and relevance of any research or writing that makes reference to this topic. Consequently, the analysis of mental health literature will be based on a consideration of the issues and concepts described in this health promotion document.

According to *The Mental Health of Canadians: Striking a Balance* "current concepts of mental health reflect a number of themes: psychological and social harmony and integration; quality of life and general well-being; self-actualization and growth; effective personal adaptation; and the mutual influences of the individual, the group and the environment" (p.6). Mental health is then defined as:

> the capacity of the individual, the group and the environment to interact with one another in ways that promote subjective well-being, the optimal development and use of mental abilities (cognitive, affective and relational), the achievement of individual and collective goals consistent with justice and the attainment and preservation of conditions of fundamental equality (p.7).

This health promotion definition of mental health was not found in any of the cited research. No other definition of mental health could be commonly assumed from the cited literature except possibly that mental health is the absence of symptoms associated with recognized mental disorders.

The search of the literature in this area found several groups prominent as study populations. Adolescents, and to a lesser extent women, have dominated mental health research over the past 10 years. Other groups present in this literature are seniors, immigrants, aboriginal peoples, the homeless, street youth, and substance users.

The risk factors that are most represented in the literature reviewed are violence (especially family violence), depression, stress, and unemployment. All of these risk factors are also possible outcomes or consequences of problematic mental health states. Also present as either risk factors or outcomes related to mental health are poverty, work, peers, parental substance use, and homelessness. One outcome of particular concern discussed is the issue of suicide attempts and suicide.

Protective factors are least represented in this literature. However, there is some research on well-being, coping, hardiness, resiliency, and support systems or networks, e.g. family support. The emerging research on resiliency is particularly noteworthy.

LITERATURE ON THE

Possible Links, Interactions, and Relationships

Between the Range of Mental Health and Substance Use

The discussion of the links between mental health and substance use is a daunting task. In order to organize this huge body of literature, a long standing framework for categorizing factors in substance abuse (Zucker, 1978) will be utilized. This organizational framework places influences on substance use behavior in three classes: a) socio-cultural-community influences (e.g. religion, school, social and community norms); b) family and peer influences; and c) intra-individual influences (e.g. attitudes, self-esteem, personality factors or other personal/psychological attributes). Influences of the social, emotional, economic, or physical environments outside the family are added to the socio-cultural category. While socialization, personal attitudes, values, and religiosity all contribute as vital intra-personal factors in both substance use and abuse (see for example, Brown and Skiffington, 1987; Hawkins, Lishner, Catalano and Howard, 1985; Torabi and Veenker, 1986), they are not the focal points of this analysis. These deeply held attitudes and convictions comprise part of the "screen" so to speak, through which other influences are filtered and interpreted by individual experience. We start out with the assumption of their importance, and review some of the other influences and factors associated with substance use/abuse and mental health/illness using Zucker's structure.

SOCIO-CULTURAL-COMMUNITY INFLUENCES

Numerous studies have identified various social and environmental influences on adolescent drug use/abuse and mental health. For adolescents, the school is a particularly important part of the community environment, and we have chosen to discuss it independently. Other socio-cultural-community influences are grouped together in a second sub-category.

Research reviews have identified two aspects of school failure that are associated with increased risk of substance abuse in adolescence (Hawkins et al. 1992, 1985); Vitaro, F., Dobkin, P., Janosz, M. and Pelletier, D. 1992). These areas are alienation and lack of social bonding relative to school, and

academic failure itself. Both, according to Hawkins et al., are among the top four predictors of drug abuse. A similar trend was reported in Canadian teens by Boyle, Offord, Racine, Fleming, Szatmaria and Links (1993), who reported an association between substance abuse and conduct disorders, alienation from school, and grade failures. Allison (1992), in a study of academic streams in Ontario, found that academic success was negatively correlated with drug use. The review of risk factors in substance abuse by Vitaro et al. (1992) links behavioral and academic problems as going hand in hand. Moreover, it appears that the impact of problems with school spill forward into adulthood. In a nine year follow-up study of adolescents who had grown into young adults, substance abuse was highest among those who had experienced problems in school and a relative failure to succeed in entering the conventional roles of adulthood (Kandel, Simcha and Davies 1986).

In terms of mental health issues related to the school setting, it appears that the expectations associated with school act as significant stressors in adolescent's lives. Mitic, McGuire, and Neumann (1987) found in one study gender differences for those reporting frequent stress on several indices. Schoolwork and money dominated the boys' concerns, while personal appearance and schoolwork were consistently of concern to girls. Further, these authors also found that higher levels of perceived stress were related to increased levels of substance use.

Much caution should be used in drawing conclusions from these or similar studies. First, many adolescents who have miserable experiences with school do not abuse substances — measures of risk cannot predict outcomes for individuals, but are only useful in understanding risk factors in groups. Also, causation cannot be presumed. School failure could as easily follow as precede a predisposition to abuse substances arising from other sources. However, the consistency of the association between school alienation and/or academic failure and stress, and risk of substance abuse is clear, and warrants consideration in looking at the constellation of such factors.

Other socio-cultural-community factors arising in the review conducted for this analysis were social norms and expectations about substance use (e.g. Jessor, 1987), and socio-economic status, specifically as related to smoking (Boyle et al., 1993; LaForest, 1976; Millar and Hunter, 1992). In terms of social norms and expectations, Jessor, a leading researcher in adolescent development and substance use, attributes much of substance use behaviors to the learning from the broader culture of what is acceptable and expected, as determined by one's own experience and the expectations of one's peers. It seems clear that when discussing any issue related to substance use, one must keep in perspective the broader cultural beliefs about use and abuse.

It seems clear that when discussing any issue related to substance use, one must keep in perspective the broader cultural beliefs about use and abuse.

Socio-economic status is also related to mental health and substance use in the literature. Tousignant (1989), in a Canadian study, found a strong link between poverty and mental health problems. The author suggests that poverty creates certain contexts which make the maintenance of mental health difficult, including increased stress and difficult life situations; fewer social support networks; low self-esteem and self-efficacy; poorer coping skills; and greater likelihood of unemployment and inadequate housing.

In terms of substance use, smoking appears to have a distinct negative correlation with income, though it crosses all socio-economic classes. In Boyle and associates' analysis (1993), smoking among both adults and teens was highest among lower income Canadians. LaForest's study in Quebec, though dated, shows similar findings — smoking was linked to socio-economic status. Johnson and Jennison (1992) discuss the "drinking and smoking syndrome" in which the use of these two substances is correlated, beginning in adolescence. Using a national representative sample of U.S. adolescents, they found that tobacco use predicted drinking, and that smokers drank more than non-smokers. Johnson and Jennison note the synergistic effect of concurrent use of tobacco and alcohol, both on physical health and through social reinforcement — frequently situations involving heavy drinking also involve smoking. Torabi, Bailey and Majd-Jabbari (1993) examine smoking as a gateway drug, leading to other drug use. They found that daily heavy smokers were three times more likely to drink alcohol, seven times more likely to use smokeless tobacco, and 10-30 times more likely to use illicit drugs than nonsmokers. Moreover, when discussing smoking and its related issues, it is important to note the strong relationship between smoking and mental illness.

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The mechanisms of just how socio-economic status influences smoking behavior are unclear; however, it is known that lower income persons and families in Canada are at increased risk for health problems and perceive themselves as being less healthy in general than other groups (Health and Welfare Canada, 1990).

FAMILY AND PEER INFLUENCES

Family Influences

Family dynamics, environment, and in particular relationships, are discussed in the literature both as protective and risk factors in substance abuse and mental health. The function of the family as a protective mechanism for both mental health and substance use has been addressed in several large scale studies (Olson, McCubbin, Barnes, Larsen, Muxen and Wilson, 1985; Wills, Vaccaro and McNamara, 1992). Olson et al. (1985), in a national study of families, provided evidence to support the notion that

those families who were in the middle ranges of cohesion (family bonding, connection and communication) and in the middle ranges of adaptability (role delineation, rule making, and authority) experienced fewer problems and coped better with stress than did those families at either extreme. They suggested that adolescents in these families tended to be better adjusted and to achieve a better balance between family and peer expectations than did adolescents from families at either extreme. Rhodes and Jason (1990), in their discussion of a social stress model of substance abuse, suggest that the family is the single most influential childhood factor affecting the child's later adaptation to stress. This ability to cope with stress is seen as one of the most important protective factors in avoiding problems with alcohol and drugs.

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There are also studies that have shown a clear relationship between parental support and control, and reduced risk of substance abuse. Barnes and Farrell (1992), in a statewide study of teens and their families in New York, found the elements of support and control to hold true regardless of socio-economic class. Teens in families where parents consistently displayed warm support, accompanied by firm controls and expectations regarding leisure activities, tended to use alcohol less, and to abstain more frequently from illicit drug use, than their peers. Coombs and Landsverk (1992) found similar results in interviews with 443 U.S. teenagers and their parents, examining parenting style in relation to substance use and abuse. A firm but engaged (interested and involved) parenting style, including frequent praise and displays of support, was associated with the lowest substance use levels by teens. Denton and Kampfe (1994) reviewed eight studies of family and peer influences, finding parent/child relationships to be a significant protective factor, and also confirmed the generally held notion that both parent and (older) sibling attitudes and behaviors toward substances were predictors of adolescent use of substances.

This relationship as applied to tobacco use was examined by Newman and Ward (1989). In this study, teenage children of smokers were one and a half times more likely to be smokers themselves than children of non-smokers. This risk, however, was mitigated by parental attitudes toward smoking. Where parents actively disapproved of their teens smoking, the incidence of adolescent smoking was reduced, regardless of whether or not the parents were smokers themselves.

These and other studies establish a clear link between family dynamics and attitudes and the substance abuse patterns of adolescents. The findings bring to mind the work conducted and reviewed by Krohn, Akers, Radosevich, and Lanza-Kaduce (1982), who suggest that adolescents are profoundly influenced by the home and peer environment. These researchers suggest teens live in one of three normative climates, characterized by the attitudes, normative values, and behaviors of their parents, extended

family, their friends, and the informal and formal social support networks of which they are a part. These norm climates are described as being a) proscriptive — not approving or accepting of substance use; b) prescriptive — approving certain use with guidelines; or c) permissive — sanctioning use with no guidelines.

The risk-producing aspect of family functioning must be mentioned also. It has been suggested that family dysfunction (Paquin, 1988) and certain aspects of family functioning may be related to an increased risk for adolescent drug use. Newcomb, Maddahian, and Bentler (1986), in a five year study of adolescents, found that family factors associated with increased risk for drug use included poor relationships with family and perceived adult drug use. In addition, Newcomb and Bentler (1988) found that one of the factors associated with cigarette and illicit drug use was family problems.

A family history of drug and alcohol abuse has also been found to be related both to adolescent mental health problems and increased risk for drug-related problems (Boivin and Violette, 1994; Paquin, 1988; Vitaro et al., 1992). Though not emphasized in this analysis, the role of parental alcoholism or drug dependency should be mentioned as a risk factor. In terms of parental drug use and mental health, Greenfield, Swartz, Landerman and George (1993) found that exposure to parental alcoholism in childhood was related to a greater lifetime occurrence of psychiatric symptoms and, in adulthood, marital instability. Moos and Moos (1984) conducted a study on families of alcoholics in an attempt to understand the differences between alcoholic families and non-alcoholic families. The only major difference they found between recovering and non-alcoholic families was that the recovering families tend to avoid conflict and social situations more than non-alcoholic families. Families in which the alcoholic had resumed drinking reported higher levels of conflict and disorganization, lower family cohesion and fewer shared recreational experiences than either of the other groups.

Although it is commonly assumed that a family history of substance abuse is linked to mental health problems, two studies reviewed refute this notion. These two studies suggest that a family history of alcohol and drug problems does not always lead to future mental health problems. Latham and Napier (1992) found no relationship between parental drinking problems and self-esteem among their adult children. They suggested that it is possible for some children of alcoholics to develop a positive sense of self in spite of the family situation. Boivin and Violette (1994) indicate that in families where the alcoholic is constantly drinking, family members learn to anticipate behaviors and routines and as such seem to develop more effective coping strategies than family members in families with binge drinkers.

They suggested that it is possible for some children of alcoholics to develop a positive sense of self in spite of the family situation.

A family history of alcohol and drug problems is also linked to future drug and alcohol problems. Sher, Walitzer, Wood, Philip and Brent (1991) found that women who had grown up in alcoholic homes were at greatly increased risk for both psychological distress and substance abuse. Smart and Adlaf (1991), in their study of street youth, found that a disproportionate number of these teens came from homes with an alcoholic parent. Smart and Walsh (1993) also found that street youth frequently left home in response to parental substance use and had higher measures of depression than other youth. Clearly, the anxiety, role stresses, and uncertainties often present in alcoholic families may contribute to the kinds of emotional distress that lead to self-destructive escape behaviors such as substance abuse. It seems that a family history of alcoholism and drug abuse likely places individuals at greater risk for both mental health problems and substance use problems and that in fact, the mental health and substance use outcomes are interconnected.

Moving further down the continuum of family functioning, family violence has been found to have significant relationships with both mental health and substance use. The research reviewed was clear in showing that emotional, physical, and sexual abuse are linked with mental health and substance abuse problems later in life. Wolfe and Jaffe (1991) suggested that a history of family violence places children at risk for adjustment disorders and other developmental problems. Pelletier and Coutu (1992) in their study of violent Canadian adolescents, found that a family history of both physical and substance abuse was directly related to adolescent violence against family members, particularly younger siblings and mothers. Kingery, Pruitt and Hurley (1992) support this relationship between a family history of violence and adolescent participation in violent activities, also reporting that illicit drug use seems to place adolescents at risk for violence both as perpetrators and as victims. Finally, Moore, Pepler, Weinberg, Hammond, Waddell and Weiser (1990), in their Canadian study on family violence, discuss a variety of risk and protective factors for children from violent families. They suggest strongly that not all children from violent families experience problems and that we need to understand the factors that appear to protect these children from the negative impacts of violence.

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Family violence is also related to homelessness and drug abuse in adolescents. Smart and Adlaf (1991) found that street youth in Ontario frequently came from home situations involving such abuse, and had rates of alcohol use three times the rate of illicit drug use, and ten times that of their peers.

In addition, the overwhelming influence of family violence on adolescents and the links between family violence, mental health problems and substance abuse were discussed by Dembo, Williams, LaVoie, Schmeidler, Kern, Getreu, Berry, Genung and Wish (1990). These authors found

relationships between physical abuse, sexual abuse, psychological functioning and drug and alcohol use. They propose a cycle of events: a) physical and sexual abuse appears to lead to early onset of alcohol and drug use, leading to b) impaired psychological functioning, which is then c) linked to further alcohol and drug problems. It appears that family violence sets the stage for both future mental health problems and future drug and alcohol problems. Clearly, the mental health and drug use problems seem to intertwine, creating more risk for these adolescents.

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The final point that must be discussed with regard to family violence is the ongoing cyclic nature of family violence. Kingery et al. (1992) reported that adolescents engaged in violent behaviors were often the victims of violence in the home. It appears that violence in the home is an inter-generational phenomena which continues unless some form of intervention occurs.

A few areas of research related to the family are missing or underrepresented in the literature that should be mentioned. First, the positive outcomes of alcohol use for family relationships was noted by Newcomb and Bentler (1988). However, how alcohol use may enhance family relationships is not clearly understood. Finally, the impact of family dynamics and environment on *parental* substance use outcomes have hardly been studied. These multiple impacts must be examined in order to gain a full view of the family's role in substance abuse.

Peer Influences

The influence of peers as both a risk and protective factor in adolescent mental health and substance use is also well established in the research literature. Although the literature exploring the relationship between peers and mental health is not as extensive as that focusing on drug use, there is some evidence to link peer influence with mental health. Parker and Asher (1987) conducted an extensive review and examination of this issue and found that peer relationship difficulties were related to adjustment problems later in life.

Much of the literature examining the relationship between peer influences and mental health focuses on social support and relationships as important aspects of peer influence. Low social support and relationship problems are often seen as risk factors for mental health and substance use. Smart and Walsh (1993), in a study on Canadian street youth, found that low social support in combination with intra-personal factors such as low self-esteem were strongly related to depression in these teens. Bennett's (1988) study did not find social support to buffer stressful life events, as one might expect. However, he did find that social support was related directly to self-esteem, which then appeared to be related to coping with

stressful life events. Grover and Thomas (1993) suggested that social support networks were associated with increased coping with stress, depending on their size. Interestingly, large social networks often *increased* stress for women due to the amount of energy required to maintain these large networks. A link was also found between social support, stress and drug use, in that smaller social support networks were associated with more effective coping and reduced drug use.

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The role of friends and peers in influencing drug use behaviors was a central research theme in the 1970's and early 1980's, and was certainly one of the first factors studied in response to the so-called "drug boom". Kandel (1982) and Clayton and Ritter (1985) provide somewhat dated but exemplary reviews of literature illustrating the strong association between peer substance use patterns (especially of close friends) and personal patterns of use. Vitaro et al. (1992) suggest that the relationship between peers and substance is but one of several risk factors in adolescent substance use and is primarily a function of lack of resistance to peer pressure.

Other studies conducted in the past five years support these findings. Bertrand and Abernathy (1993), working with adolescents in Calgary, found peer influence to be the prime factor in teen smoking. This peer influence to smoke was proportional to *proneness* to peer pressure, an intra-personal quality. Mangham (1989) conducted a longitudinal study of abstinence from alcohol and the onset of drinking among high school students in two British Columbia school districts, and found that early onset drinkers (grade 9 or earlier) tended to have a large majority of drinking friends, while late-onset drinkers had a mix of drinking and non-drinking friends. Individuals still abstaining in grade twelve reported that all or almost all of their friends did not drink. Webster, Hunter, and Keats (1994) conducted a path analysis examining socio-demographic and personality influences on tobacco and alcohol use in a sample of U.S. teens. Among the findings: younger teens were more influenced by teens than their older peers, peer alcohol use had an indirect impact on drinking, and girls were more influenced by their peers to use tobacco than were boys. Finally, in a major synthesis of research studies to determine risk factors in adolescent substance abuse, Hawkins et al. (1992) identified peer use as a major determinant of risk.

Social support and relationships were discussed earlier with regard to mental health issues; social involvement has also been found to be related to drug and alcohol use. Tolone and Tieman (1990) found that adolescents who were considered more social and who were more involved in personal relationships tended to use substances more than loners. Interestingly, these social adolescents also had higher levels of involvement in more socially acceptable activities, such as religious and school-based activities, than loners. This finding suggests that a high number of social relationships,

and thus the potential for more peer influence, may predispose adolescents to experiment with drugs and alcohol, but also serves as a protective mechanism against substance abuse problems. This study, in addition to a study by Newcomb and Bentler (1988) which found that alcohol use was associated with stronger family and intimate relationships, is one of the few studies which acknowledge the potential positive outcomes of substance use.

Peer influences are important in considering links with mental health issues because of their interplay with intra-personal factors such as self-esteem, self-efficacy, locus of control, and the ability to use leisure time in a proactive rather than a reactive fashion. In summary, the role of peers may be subtle, or covert, and may serve the social or psychological needs to feel normal, accepted, and to experience a sense of camaraderie. Such an influence would strongly support the continuity of whatever drug use patterns are adopted within the peer group.

INTRA-INDIVIDUAL FACTORS

An abundance of psychological constructs have been studied as they relate to adolescent mental health and substance use. The ones included in this discussion are self-esteem, self-efficacy, locus of control, drug-related expectancies and sensation seeking, personality factors, tolerance of deviance, stress proneness and coping skills, and depression.

Self-esteem

Self-esteem, or the subjective judgment of ones own worth, has been studied in relation to both overall mental well being and substance use/abuse. We know that self-esteem forms early in life, and once formed is tenacious, even if it is so low as to cause great psychic pain. It is no wonder self-esteem underlies a number of drug abuse theories. Steffenhagen’s Self-Esteem Theory, for example, attributes substance abuse to an effort to protect the "self" within the social milieu (Carroll, 1993). Kaplan’s Self-Derogation Theory, a second explanatory model of drug abuse, holds that drug abuse stems from intense self-rejection and an inability to "forestall or lessen the self-devaluing implications of experiences in family, school, and peers" (Carroll, 1993, p.77).

A number of studies and research reviews propose self-esteem as a factor in substance abuse. However, one of the concerns about the use of self-esteem in explaining or understanding substance abuse is the lack of a clear definition or operationalization of the concept. Towberman and McDonald (1993) address this issue in their study. They identified four subscales in self-concept: Negative Image, Self-Confidence, Bonding, and Effectiveness. They found that high levels of Self-Confidence, Bonding,

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and Effectiveness were associated with lower levels of drug use and experimentation by adolescents. Additionally they found that adolescents who disagreed with the Negative Image items also had lower levels of drug use.

In addition, there are several studies that link a general global measure of self-esteem to drug use/abuse. Webster et al. (1994) offer a model of adolescent drug use suggesting that teens with low self-esteem are more vulnerable to act in ways that attempt to please other people and to gain approval. These actions, in turn, are believed to increase risk of harmful involvement with alcohol or other drugs. Results supporting this view were found in studies by Zuckerman, Amaro and Beardslee (1987), and Wills et al. (1992), which examined the effects of high self-esteem. In both these studies, a high degree of self-competence predicted low use of substances, apparently acting as a protective factor. Finally, a review by Vitaro et al. (1992) lists poor self-esteem as one of nine risk factors for adolescent substance abuse. Studies such as these provide evidence that a relationship exists between heavy use/abuse of substances and poor self-esteem.

There was one study reviewed which identified a positive relationship between alcohol use and self-esteem. Newcomb and Bentler (1988) found that individuals who used alcohol during adolescence had increased positive feelings about self in adulthood. Further, their study found no negative consequences of alcohol use in adolescence for adjustment in adulthood.

It appears that the exact nature of the relationship between self-esteem and substance abuse, is as yet somewhat unclear, and debate lingers about the practical significance of its role (Schroeder, Laflin and Weis, 1993). In fact, the direction of the relationship is still under discussion. Thompson (1989) suggests that self-esteem appeared to decrease as a consequence of drinking for adolescents. The only group of adolescents who did not display this relationship were those who perceived drinking to be a sophisticated, positive activity. Therefore it is still unclear whether low self-esteem precedes drug and alcohol abuse, or whether a lowering in self-esteem is a consequence of drug use, or both. Further, like many other risk and protective factors, this construct is probably interrelated with other elements and would not likely exert its influence in isolation.

It appears that the exact nature of the relationship between self-esteem and substance abuse, is as yet somewhat unclear, and debate lingers about the practical significance of its role.

Self-efficacy

Self-efficacy, or sense of personal power and effectiveness, also emerges as an intra-personal risk and protective factor for adolescent substance use. Self-efficacy is defined as the belief that the individual has the ability to enact certain behaviors which will assist them in coping with various situations. The Relapse Prevention Model (Marlatt, 1985) of substance abuse treatment relies heavily on the concepts of self-efficacy, postulating that a return to drinking is related to perception of inability to cope with

high-risk situations. Annis (1990) also suggests that a cognitive-social learning approach which incorporates issues related to self-efficacy shows much promise in the area of relapse prevention. Moreover, there is some evidence to suggest that the development of substance use problems is also related to similar perceptions of an inability to cope with various situations.

> *There is some evidence to suggest that the development of substance use problems is also related to similar perceptions of an inability to cope.*

The concepts of self-efficacy have also been used to explain drug and alcohol use in the context of leisure. The two studies reviewed dealt with leisure self-efficacy, or one's sense of control and power over one's free time (Bertrand and Abernathy, 1993; Carruthers and Hood, 1994). Both studies suggest that a lack of leisure related self-efficacy produces passivity and boredom, and subsequently leads to increased risk of substance use. Paquin (1988) also noted this link between boredom, lack of meaningful leisure experiences and substance use. Compared to other intra-personal constructs, self-efficacy is relatively new, particularly as targeted in risk reduction programs (Green and Kreuter, 1991). Its possible role as a causal factor in substance use, though logical, needs more study.

Locus of control

Locus of control has been suggested as a factor in both adolescent substance use (e.g. Webster et al., 1994; Carlisle-Frank, 1991) and mental health issues. External locus of control — the perception that one's choices and the results of those choices are externally controlled — appears to be related to substance abuse and loneliness (Sadava and Thompson, 1986), and substance use and depression (Zuckerman et al. 1987) for some adolescents. In such individuals there apparently exists a proneness to passivity and an inability to see oneself as in control of outcomes. In the Webster and associates' study, teens not abusing drugs more often possessed an internal locus of control as measured by a standardized scale, than their drug using peers. Conversely, Carlisle-Frank, in a review on the topic, indicates that research has been inconsistent in establishing locus of control as a factor in substance abuse. As a possible explanation, she points out the fact that locus of control is multifaceted. An individual, she argues, can possess an external locus of control in one area yet display an internal locus in other areas. Perhaps global locus of control scores are simply not accurate enough measures to use alone.

Drug-related expectancies and sensation seeking behavior

Drug-related expectancies and sensation seeking behavior comprise a fourth intra-personal factor in adolescent substance use (Baumann, Fisher, Bryan and Chenoweth, 1985; Brown, Christianson and Goldmas, 1987; Carruthers and Hood, 1994; Hawkins et al. 1985; Hughes, Power and Francis 1992).

Individuals having positive expectations of the results of using drugs appear more likely to both start and continue using them, than persons not having such expectations. When combined with a tendency toward sensation seeking (seeking stimulation), drug-related expectancies predict increased use of substances. Adolescent expectancies specific to alcohol were identified by Brown et al., including beliefs that using alcohol will produce a) global positive changes; b) positive changes in social behavior; c) improved cognitive and motor function; d) sexual enhancement and arousal, and e) reduction of tension. Carruthers and Hood linked expectancies to leisure; they suggested that some people, particularly those prone to alcohol abuse, anticipate alcohol use to enhance leisure experiences in a significant way (specifically, increase in positive affect, control, relaxation, sociability, and disengagement from life responsibilities). Hughes et al. found that problem drinkers differed from social drinkers in their expectations of the outcomes of alcohol use, reporting more frequently that drinking will relieve tension and anxiety. However, many individuals who use alcohol in a non-problematic way would also report certain expectations of use, so the relationship between expectancies and alcohol *abuse* needs further study.

When combined with a tendency toward sensation seeking (seeking stimulation), drug-related expectancies predict increased use of substances.

Stress, tension reduction and coping skills

Stress, tension reduction and coping skills were linked to mental health and substance abuse by several of the articles reviewed. Stress has clearly been linked to mental health issues in the literature. Buckner and Mandell (1990) found that stress combined with low self-esteem was a significant risk factor for depression. Adcock, Nagy and Simpson (1991) found that one of several issues associated with adolescent suicide attempts was difficulty in coping with stressful events at home and at school. Stressful life events and stress in general clearly place demands on individuals physically and psychologically, thus acting as a risk factor for both emotional problems and substance use problems.

Several other authors found a link between stress, coping and substance use. Rhodes and Jason (1990) propose a model of substance abuse based on the notion that adolescents begin using substances in response to an overwhelming level of stress in a variety of domains. This model suggests that substance use acts as a coping mechanism and is in fact one of few coping strategies for those individuals who end up experiencing substance abuse problems. Timmer, Veroff and Colten (1985) tested this model and found that high levels of stress, coupled with poor coping skills, were linked to higher levels of alcohol and drug use. They also suggested that two of the most important issues in substance use were a) the effectiveness of coping skills; and b) the individual's confidence in using those coping skills. The

problem drinkers in Hughes and associates' (1992) study were more likely to report stress relief drinking than other subjects. Additionally, Grade 10 students in Ontario interviewed in focus groups by Mates and Allison (1992) named substance use as a frequently used stress coping tool.

Stress and substance use have also been linked to gender. Grover and Thomas (1993) linked stress with anger for women, stating that the manifestations of stress could be seen in their overt displays of anger. They also found that both the stress and angry outbursts were linked to increased levels of alcohol use and over-the-counter drug use. Snell, Belk, and Hawkins (1987) also discuss the link between stress, gender and substance use. They suggested that gender-role expectations placed gender specific stressors on women which were then linked to increased substance use.

Stress has also been examined in its function as a precipitating or resultant factor in substance use. Skinner, Holt, and Israel (1981) list stressful life events as an important precipitating factor in substance abuse, as part of a causal matrix. Mitic et al. (1987) found that frequent inhalant users had higher stress scores than their non-using peers. However, they report that the inhalant use could be playing a causal role in the increased stress, rather than vice-versa. Substance use was also related to stress in terms of increasing perceptions of stress in one's life. Brown (1989) found that adolescent substance abuse was related to a perception of the presence of more negative life events, and a more negative rating of these events. Moreover, the presence of a family history of substance abuse increased the perceptions of negative life events.

The final area related to stress found in the literature is smoking. Several authors have explored the relationships between smoking and stress. Cohen and Lichtenstein (1990) found that while perceived stress was not correlated with smoking rates, it did seem to be related to failure at cessation attempts. The authors were not able to determine if failure at the cessation attempt caused higher levels of stress or if higher levels of stress caused the failure to stop smoking.

It is clear that there is a relationship between stress and coping, substance use, and mental health. The vast majority of the literature examined focused on the negative outcomes of substance use, particularly substance use as related to stress and mental health. However, it must be stated that substance use, in particular alcohol use, plays a very positive role in stress management and mental health for most Canadians. It appears that the truly important issue to examine is what precipitates the transition from non-problematic substance use as a coping mechanism to problematic use. Perhaps the relationship between the repertoire and efficacy of coping strategies and the role of substance use as one of these coping strategies needs to be further examined.

It appears that the truly important issue to examine is what precipitates the transition from non-problematic substance use as a coping mechanism to problematic use.

Loneliness

Loneliness is another intrapersonal factor which is related to substance use and mental health. Loneliness is linked with drug and alcohol use by several authors (Akerlind and Hornquist, 1992; Page, Allen, Moore and Hewitt, 1993; Sadava and Thompson, 1986; Tolone and Tieman, 1990). Akerlind and Hornquist found that loneliness was identified as an important factor in every stage of problematic alcohol use. In fact, loneliness was found by Sadava and Thompson to increase perceptions of the adverse consequences of drinking and to be related to fewer coping strategies. Page et al. point out the importance of loneliness in adolescent drug use, suggesting that loneliness, combined with drug use, is linked to increased feelings of hopelessness — indicating an increased risk for suicide. They also found that loneliness was highly correlated with hopelessness. The final concept to be of interest is the notion that adolescents often begin drinking and using drugs in order to increase their sociability (Brown, 1989; Carruthers and Hood, 1993) and if they progress to an abusive pattern of use, often end up feeling isolated and lonely.

Personality factors

Personality factors also appear to be an intrapersonal influence related to substance use/abuse. One important factor is the dual concept of tolerance for deviance and lack of conventionality. This quality emerged early on as a predictor of illicit drug use by adolescents, and is a key component underlying Jessor's Problem Behavior Theory. Within this theory, drug abuse stems from a lack of conformity to conventional norms or means of achievement, together with a tolerance for deviant behavior. These create a proneness to drug abuse, particularly when reinforced by the peer group. A recent study verifying the importance of this factor is that of Brook, Whiteman, Gordon, and Cohen (1989). In a longitudinal investigation, 653 American children and their mothers were interviewed separately at three points during childhood and adolescence. Rebelliousness and lack of conventionality emerged as the two strongest predictors of drug involvement over the course of the study.

One important factor is the dual concept of tolerance for deviance and lack of conventionality.

There have been several studies examining the relationship between various other personality factors and substance use. Brill, Crumpton and Grayson (1971) found that young adults who had higher scores on measures of stimulus seeking and psychopathic deviation tended to have higher levels of marijuana use. In addition, they found the infrequent users to be more similar to the experimenters or non-users than to frequent users, suggesting that those individuals who frequently use marijuana have different personality qualities than all other types of marijuana users. Cox

(1985) suggests that future substance abusers tend to be those persons with a disregard for social mores, independence, impulsivity, and an affinity for adventure.

In terms of substance use, mental health, and personality factors, Zuckerman et al. (1987) suggest that there are similar personality characteristics that place adolescents at risk for substance abuse problems and depression. These include: external locus of control, low self-esteem, greater tolerance for deviance, greater social criticism and alienation, and lower expectations for academic success. Pedersen (1991) also explored the relationship between sensation seeking, substance use and mental health in adolescents. The findings suggest that sensation seeking (measured as thrill and adventure seeking, disinhibition, experience seeking, and boredom susceptibility) was a stable predictor of substance use. The author also found that the above were quite unstable and thus were not good predictors of future drug use. Finally, Windle (1991) explored the relationship between difficult temperament in adolescence and substance use, finding that a greater number of difficult temperament factors were associated with increased substance use, lower perceived family support, higher levels of delinquent activity, and more depressive symptoms.

The findings suggest that sensation seeking (measured as thrill and adventure seeking, disinhibition, experience seeking, and boredom susceptibility) was a stable predictor of substance use.

Risk Factors in Other Selected Groups

As mentioned earlier, the vast majority of research on risk and protective factors in substance use/abuse and mental health pertains to adolescents. In this section, some of the risk factors are discussed that relate particularly to certain contextual groups, namely, women, aboriginal peoples, seniors, and persons within ethnic minorities. In so doing, it should be remembered that most of the factors identified in the section on adolescents also apply to these populations.

Risk Factors Specific to Women

Although most research attempts to sample both genders in examining any particular mental health issue, women have been the specific subject of numerous studies of risk and protective factors for mental health. Some of the notable cited works are Abu-Laban (1984), Gordon and Ledray (1985), Miller, Downs and Testa (1993), and McDaniel (1993). These authors consider respectively the topics of aging, depression, childhood victimization and later alcohol use, and employment.

With regard to women and mental health, there has been quite a focus on depression and the factors which may impact depression. In the literature examined, the factors which were found to be associated with increased depression in women included marriage (Gordon and Ledray,

1985), unemployment (Hall, Williams and Greenberg, 1985; McDaniel, 1993), spouse's unemployment (Penkower, Bromet and Dew, 1988) and aging issues (Abu-Laban, 1984).

The issue of marriage and it's relationship to depression for women is not clear. Gordon and Ledray (1985) found that married women tended to have higher levels of depression than unmarried women. Conversely, Hall et al. (1985) found marriage to be a protective factor for depression. This issue clearly needs further research and understanding.

McDaniel (1993) found that although working has positive gains for women, some women are seriously negatively affected by working due to experiences of lesser pay, lesser job security, sexual harassment, and balancing multiple roles. In terms of aging, Abu-Laban (1984) found women's ability to establish and maintain friendships and social networks to counterbalance some of the loneliness and alienation some aging women experience.

In terms of substance use, until relatively recently most research on drug abuse among adults centered on men. This is changing, and studies of alcohol, tobacco, and other drug use among women are showing that the contributing factors can differ markedly from their male counterparts (e.g. Nadeau, 1984). For example, Sharon and Richard Wilsnack (1992; 1991a; 1991b; 1990) suggest that among other things, relationships may play a more central role in the development of substance abuse for women than for men. Through longitudinal studies in the US, they linked problem drinking in women to relationship oriented issues significantly more than for men. In a separate review of the literature (1991b), they also identified connections between women's drinking and their social environments, especially drinking by co-workers and significant others; their 1992 article identifies employment as having a significant relationship to drinking. However, they go on to argue that, in fact, relationships play a much more important role in predicting alcohol use patterns than do the demand of multiple roles placed on many women.

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Another U.S. researcher, Judith Hibbard, studied women's health issues through statewide surveys in Oregon (e.g. Hibbard, 1993). She reported that for tobacco use, work roles and social support play important roles, especially in smoking cessation. Women reporting more job satisfaction and control over their work were more successful in quitting. On the other hand, women lacking social support, as is common among single parents, were less likely to give up cigarettes. Women's health issues were also examined by Bass (1981). The findings of this study suggest that women tend to seek treatment for health problems more often than men, are more likely to report emotional

problems and are less resistant to taking medication than men. This willingness of women to report and medicate emotional problems is clearly linked to higher use of tranquilizers and other prescription medications than men (Bass, 1981).

Problem drinking was also associated with sexuality and sexual violence, including sexual adjustment and sexual exploitation and abuse. Wilsnack and Chehola (1987) studied 917 American women at different stages of the life span and at different levels of alcohol use, examining risk factors in alcohol use. For women under 65, problem drinking increased with patterns of role deprivation, specifically loss of marital, employment, or child-rearing roles. Close role relationships with other drinkers were important markers of problem drinking after age 50. Similar findings were reported in a study of Quebec women by Chabot (1978), who coupled relationship disruptions such as death, divorce, or breakup to problem drinking and alcoholism among the women studied. In addition, Chabot suggested that women were much more likely to use alcohol to self-medicate emotional pain than were men.

Associated with sexual violence and abuse, physical abuse has also been found to be a major risk factor for substance abuse in women. For example, Bayatpour, Wells and Holford (1992) studied 352 pregnant teens in the U.S., and found illicit drug use prior to conception to differ significantly between girls reporting a history of sexual or physical abuse and girls who did not, drug use being higher in those reporting abuse. Miller et al. (1993) interviewed female alcoholics in the U.S. and found a common thread of family violence, victimization, and low self-esteem; in many cases the progression of drinking for these women appeared to stem from self-medication related to these experiences.

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The whole issue of violence for women, sexual, physical or emotional, is an important one to examine with regard to mental health problems and substance use. According to Miller et al. (1993), negative childhood experiences for girls that include parental abuse may result in lower self-esteem and feelings of alienation and may produce problem drinking as a coping technique. Mitic et al. (1987) found perceived stressors in adolescent girls to be most often associated with personal appearance. They also found those with high levels of perceived stress to be more likely to use drugs and experience negative consequences (Mitic et al., 1987, 1989, 1990). Groeneveld and Shain (1989) report the results of the Domestic Violence Research Project, carried out among Ontario women aged 18 and older. The highest prevalence of licit drug use (e.g. alcohol and/or prescription medications such as anxiolytic drugs) was reported among women currently experiencing or having experienced sexual or physical abuse.

In terms of other links between mental health issues and substance use, Nadeau (1990) examined these links with a focus on women. She found that many women in treatment began drinking in response to stressful

life events and that these life events often also triggered symptoms of depression. She also found that most women remained depressed after completing treatment for substance abuse, indicating that many treatment programs do not effectively deal with both issues. Marisette (1986) also identified the link between depression and alcohol use, indicating that many women identify depression reduction as a major reason for drinking. Mercier (1986) discusses the link between mental health and substance use for women, suggesting that positive life events such as new relationships, social support, and spirituality, to name a few, greatly enhance efforts to achieve and maintain sobriety.

Risk Factors in Aboriginal Peoples

Adolescent suicide is a mental heath issue of particular relevance in Aboriginal populations. In addition, it is an important mental health issue because it is the second leading cause of death among 15- to 24-year-olds. Suicidal ideation and behavior are reported to be unusually high among Aboriginals by the Task Force on Suicide (Health and Welfare Canada, 1987). On reserve suicide rates tend to be more than twice as high as non-aboriginal rates. Ross and Davis (1986) also discuss the high incidence of suicide and suicide attempts among First Nations people. They indicate that males tend to complete suicide more frequently than females, who tend to attempt more often than males.

Surprisingly, much of the reported research involving substance use by aboriginal peoples consists of prevalence studies. Studies examining the roots of drug use are much less common. Several distinct themes repeatedly emerge, however, from reviews of research on risk factors among aboriginal peoples.

Beauvais (1992) presents theories of substance use among natives in the U.S., citing membership in drug using peer clusters as an important factor for native adolescents. Family influence, according to Beauvais, is stronger among native than among non-native youths. Risk factors reported by Beauvais for native youth include early onset of use, family alcoholism, poor school adjustment, and overall family dysfunction. In other words, Beauvais points to many of the same risk factors present among non-aboriginal teens, except that many of the social conditions faced by aboriginal youth are far more acute.

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Adrian, Layne and Williams (1991) present a similar case among Canada's aboriginal peoples, naming four broad sociological risk factors. These are boredom, isolation, discrimination, and lack of leisure or entertainment opportunities. Likewise, Moncher, Holden and Trimble (1990) present four categories of risk for young aboriginal people: familial, social, economic, and scholastic. It is not surprising, given these factors and the

prevalent social and economic conditions, that co-morbidity (drug dependency and other mental disorders) reportedly are higher among aboriginal people than the rest of the population.

The array of risk factors above point to severe environmental distress among Canada's aboriginal peoples, and create quite a different profile of substance abuse than among the general population. Nowhere is the need for fostering healthy physical, social and economic environments more apparent than among aboriginal peoples.

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Risk Factors Among Seniors

Canada's senior citizens are very diverse, with equally diverse needs. When it comes to risk factors for substance abuse, these factors also vary. However, several things hold true for seniors in general: a) alcohol abuse and misuse of medicines form the predominant substance use problems (Carroll, 1993); b) seniors, more often than others, live in a world of shrinking social support networks; c) a disproportionate number of seniors have low and fixed incomes; d) many seniors, unlike younger people, do not start using substances until adulthood or later adulthood, a pattern that will likely change as children of the "baby boom" become older (Pelletier, 1976); e) seniors face more health problems, and live with more physical pain, than do younger people; and f) seniors currently live in a society which devalues older adults (Vermette, 1988). Several of these conditions themselves point to elements of risk for older people.

Several studies illustrate substance abuse risk factors peculiar to seniors. Pelletier (1976), in a dated study among seniors in Quebec, linked declining health and lack of leisure opportunities to alcohol abuse. Caroselli-Karinja (1985) reviewed research on risk factors for alcohol abuse among seniors. Loneliness, depression, loss of friends, and physical inactivity all emerged as risk factors. A similar Canadian study by Vermette (1988) identified, in addition to those factors cited above, society's emphasis on youth and independence, high cost of living, lack of activity and the resultant boredom, and increased number and magnitude of life changes as major risk factors for substance abuse by seniors. Morse (1988) reviewed the literature on substance abuse and seniors, concluding that seniors can become conditioned to self-medication through increasing use of prescription and over the counter drugs, and through encouragement by physicians and family members to seek chemical relief. As a result, the increasing use of alcohol by seniors as a form of self-medication is not surprising, according to Morse.

Graham, Carver and Brett (1995) examined substance use patterns among women aged 65 and over using the 1989 Canadian Alcohol and Other Drugs Survey (CADS). Among the women studied, use of alcohol

was more moderate than among younger women, and lower levels of use were associated with religiosity. Smoking was related to poorer health, fewer social supports, and use of other substances. Psychoactive prescription drug use was associated with being widowed, experiencing greater stress, having lower income, and having less social support. Use was highest among younger women in the age group studied. The findings suggest this group may be the gender-age group with the highest use of psychoactive prescription drugs.

It seems clear that the process of aging presents older adults with issues that may place them at risk for substance misuse and/or mental health problems. The incidence of these problems associated with seniors will likely increase as the current middle-aged cohort, who do not have the same cultural and normative prohibitions regarding substance use, begin to experience age-related problems.

It seems clear that the process of aging presents older adults with issues that may place them at risk for substance misuse and/or mental health problems.

Risk Factors Among Ethnic Minorities

Two Canadian studies involving ethnic culture and alcohol were reviewed. Legge and Sherlock (1990-91) interviewed 205 youth and their parents from the ethnic Chinese, Indo-Canadian, and Latin American communities of Vancouver, as part of a needs assessment for prevention programs. Among all three groups, drinking was viewed as predominantly a male activity, with women being discouraged from drinking. Family discord also emerged as a theme related to alcohol abuse, and there was a perceived resistance to entering treatment based on cultural taboos against drunkenness. In another study, Mangham (1989) interviewed 35 adolescents from within Asian and Indo-Canadian families, as part of a longitudinal study of the onset of drinking among 355 teens in the Vancouver area. Most of the 35 were first generation Canadians. These teens used alcohol in smaller amounts, drank less frequently, and were more likely to abstain than other students. Frequently given reasons for abstaining were related to cultural views of alcohol, and respect for parents.

Despite Canada's tremendous cultural diversity, very little research examines factors in substance use among visible minorities or immigrant populations. The concept of ethnic culture is extremely complex. Culture and ethnicity exist in many permutations based on geography, race, religion, and country of origin, just to name a few. In fact, Cheung (1990-91; 1993) argues that most research with ethnic groups is woefully inadequate, because it oversimplifies the concepts of ethnicity and groups ethnic cultures artificially. Cheung questions the criteria frequently used to identify ethnic groups, and argues for a "multi-intracultural" perspective that accounts for the diversity between and among groups.

Two key issues must be considered with regard to identifying the risk and protective factors (and the links between mental health and substance

abuse) among immigrants and ethnic groups. First, such terms as *ethnic culture* and *immigrant* must be clearly understood. Without clearly defined terms, differences in status and needs cannot be delineated. Second, language and cultural barriers that have contributed to the dearth of research must be overcome. More qualitative, participatory research is needed, and to facilitate this, links need to be established between persons and institutions with research skills and members of the groups themselves.

PROCESS ADDICTIONS: COMPULSIVE GAMBLING

In recent years, the concept of addictions has been expanded in many circles to include patterns of behavior involving compulsion and loss of control where the addiction is to a process rather than to a drug. The process may, in the view of proponents of expansion, be eating, gambling, or any number of other behavioral processes. Similarities exist between these process addictions and drug addiction; they appear to be progressive, to involve loss of control and to be continued even when they cause significant harm to self and others. One process addiction has been chosen for the purpose of this analysis — that of compulsive or pathological gambling. Several reasons exist for choosing gambling. First, it is controversial; there does not appear to be a consensus in Canada as to whether it should be treated as an addiction. Second, it is a very timely choice because of the trend among provincial governments to allow gambling establishments within their borders. Provincial addictions services are being called upon increasingly to provide treatment and prevention modalities to help compulsive gamblers. And, of course gambling is not new. Lotteries have long been a popular activity of many Canadians, and games such as bingo are well ensconced in Canadian culture.

Provincial addictions services are being called upon increasingly to provide treatment and prevention modalities to help compulsive gamblers.

Several studies have examined the prevalence of pathological gambling in Canada, producing varying estimates. Ladouceur (1991), a prominent researcher on gambling, estimates that 1.2% of the population are true compulsive gamblers, while 2.6% are "problem" gamblers. Bland, Newman, Orr and Stebelsky (1993), based on a study conducted in Edmonton, estimate that 1 in 200 persons in that region are pathological gamblers. As for adolescents, Ladouceur, Gaboury, Dumont and Rockette (1988) and Ladouceur and Mireault (1988), in a study of Quebec teens, found that 5.6% of the sample felt a desire to stop but reported being unable to do so, and 1.7% were pathological gamblers.

Compulsive gambling appears to be linked with substance abuse. Lesieur and Blume (1990) estimate that one in ten substance abusers also have a problem with gambling. This co-occurence rate is much higher than among the general population. Gambling has also been linked with emotional problems (Seaborn, 1992), including depression, lack of control, and paranoia.

The factors in pathological gambling suggest a combination of social and psychological influences, with some individuals being more vulnerable than others. Filteau, Baruch and Vincent (1992) identify several issues which may be related to the development of gambling problems, including a history of inappropriate family discipline, excessive familial values of materialism, and parental or spousal alcoholism. Brenner (1986) found that people who bought lottery tickets tended to buy them when they were faced with adverse situations over which they felt they had no control.

At the social level, camaraderie and social interaction appear to reinforce gambling behavior. For example, in a study of women bingo players in the U.K., Dixey (1987) found bingo to play a central social role. For these women, bingo provided the focal point of a "moral community" offering a strong support network and camaraderie that was itself in a way addictive. Ocean and Smith (1993) and Ladouceur and Gaboury (1989) argue that gambling establishments themselves reinforce compulsive gambling by providing a supportive environment of social reward through interaction with others. All of this suggests that the ambiance of "place" plays a role for the gambler, just as setting functions as part of the addiction in chemical dependency.

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At the intra-personal level, pathological gamblers appear to exhibit perceptual differences from other people. One major area is in making erroneous judgments of odds, or chances of winning (Sylvain and Ladouceur, 1992). For compulsive gamblers, the betting process produces a form of arousal. At the same time, these individuals exhibit the tendency to attribute the results of betting to other than chance, and exaggerate in their own mind the chances of winning. This cognitive misperception fuels the desire to continue betting.

Kusyszyn (1990) proposes a theory of pathological gambling, in which the act of gambling plays three roles: confirming one's existence, producing desired effects, and affirming worth. The compulsive gambler experiences pleasure and reward from his or her actions, and, like the addict, continues even in the face of substantial economic, social, and personal chaos.

In terms of prevention of pathological gambling, Gaboury and Ladouceur (1993) conducted a study which examined the efficacy of a prevention program. They found that the program was effective in changing knowledge and improving coping skills, but was not very effective in changing attitudes and behaviors. This finding is similar to the finding of early drug use prevention programs which focused on knowledge rather than attitude and behavior change. However, it does appear that the similarities in patterns of compulsive gambling and addiction are such that similar treatments may be effective for both (Murray, 1993).

TABLE 1

LINKS BETWEEN MENTAL HEALTH AND SUBSTANCE USE

Finding	Source
GENERAL LINKS BETWEEN MENTAL HEALTH AND SUBSTANCE USE	
Psychiatric distress related to frequency and intensity of alcohol use — authors suggest alcohol may be used to self-medicate symptoms of psychiatric distress.	Dryman and Anthony (1989)
Prescription drug use is higher in individuals with symptoms of mental disorder — authors suggest that individuals with mental disorders may be wrongly diagnosed and treated for physical illness *or* these individuals may perceive more physical complaints and thus seek physical treatment.	Takala, Ryynanen, Lehtovirta and Turakka (1993)
CHILDREN OF ALCOHOLICS	
Children of alcoholics have greater lifetime occurrence of psychiatric symptoms and marital instability.	Greenfield, Swartz, Landerman and George (1993)
SMOKING	
Nicotine dependence was linked (correlational) with higher levels of psychological vulnerability specifically, higher levels of neuroticism, greater negative affect, higher levels of hopelessness, and higher levels of general emotional distress than the general population.	Breslau, Kibley and Andreski (1993)
WOMEN	
Women were found to be more likely to use alcohol to self-medicate emotional pain and loss than men.	Chabot (1978)
Women tend to seek treatment more often, are more likely to report emotional problems, and are less resistant to taking medication than men; this leads to more prescriptions for and use of tranquilizers than men.	Bass (1981)
ADOLESCENTS	
Early psychopathology (including obsessive compulsive tendencies, hostility, paranoid ideation, and depression) predicted later drug use.	Friedman, Utaka, Glickman and Morrisey (1987)

Early drug use predicted later psychopathology.	Friedman, Utada, Glickman and Morrisey (1987)
Relationships exist between physical abuse, victimization, psychological functioning, and drug and alcohol use. Physical and sexual abuse seem to lead to early alcohol and drug use which then leads to impaired psychological functioning, which is linked to further drug and alcohol abuse.	Dembo, Williams, LaVoie, Getreau, Berry, Genung, Schmeidler, Wish and Kern (1990)
Cigarette and hard drug use related to health problems, psychosomatic problems, decreased emotional functioning, impaired romantic attachments and family problems in young adults.	Newcomb and Bentler (1988)
Alcohol use linked to three positive effects: positive self-feelings, improved family relations, and improved romantic attachments.	Newcomb and Bentler (1988)
All types of drug users reported more symptoms of mental disorders than non-users. Inhalant use was linked to the highest level of mental disorder in males; tranquilizer use was linked to the highest level of mental disorders in females; smoking was linked to mental disorder in both genders, while no relationship was found between alcohol use and mental disorder.	Lavik and Onstad (1986)
The relationship between adolescent emotional distress and drug use was found to be mediated by peer drug associations. Authors conclude by rejecting the self-medication hypothesis for adolescents.	Swaim, Oetting, Edwards and Beauvais (1989)
Adolescents engaged in violent behaviors were found to have similar risk factors: illicit drug use, peer group approval of drug use, unsafe behaviors, and being a victim of violence themselves. Older boys also engaged in more drug use and more aggressive, dangerous forms of violent behaviors.	Kingery, Pruiit and Hurley (1992)
HOMELESSNESS	
Homeless males and females report higher levels of substance abuse, primarily alcohol and tobacco, than the general population.	Breakey, Fischer, et al. (1989)
Homeless individuals have more psychiatric illness than the general population.	Breakey, Fischer, et al. (1989)

TABLE 2

COMMON RISK AND PROTECTIVE FACTORS FOR MENTAL HEALTH AND SUBSTANCE USE

Factor	Source
PERSONALITY CHARACTERISTICS	
Stimulus Seeking	Brill, Crumpton and Grayson (1971)
Psychopathic Deviate	Brill, Crumpton and Grayson (1971)
Disregard for Social Mores	Cox (1985)
Independence	Cox (1985)
Impulsivity	Cox (1985)
Affinity for Adventure	Cox (1985)
Greater tolerance for deviancy	Zuckerman, Amaro and Beardslee (1987)
Greater social criticism and alienation	Zuckerman, Amaro and Beardslee (1987)
Sensation Seeking thrill and adventure seeking disinhibition experience seeking boredom susceptibility	Pedersen (1991)
Difficult temperament activity level-general, sleep approach-withdrawal flexibility-rigidity rhythmicity-sleep, eating, daily habits distractibility persistence	Windle (1991)
STRESS	
Related to smoking and smoking cessation	Cohen, Schwartz, Bromet and Parkinson (1991); Cohen and Lichtenstein (1990)
Related to coping skills	Timmer, Veroff and Colten (1985)
Related to self-esteem and depression	Buckner and Mandell (1990)
Related to anger and use of OTC drugs and alcohol for women	Grover and Thomas (1993)
Related to presence of large social support network in women	Grover and Thomas (1993)

Related to a higher number and intensity of negative life events for adolescents	Brown (1989)
Related to inhalant use for adolescents	Mitic, McGuire and Neumann (1987)
Related to negative life events and drug use for seniors	Perodeau, King and Ostoj (1992)
SELF-ESTEEM (SE)	
Alcoholics in recovery had lower SE than nonalcoholics.	Bennett (1988)
Length of abstinence positively related to SE.	Bennett (1988)
Low self-esteem identified as a risk factor for adolescent drug use and depression.	Zuckerman, Amaro and Beardslee (1987)
Self-concept operationalized as negative image, self-confidence, bonding, effectiveness High levels of self-confidence, bonding, and effectiveness associated with lower levels of drug use and experimentation. High disagreement with negative image also related to lower drug use and experimentation.	Towberman and McDonald (1993)
LOCUS OF CONTROL	
Loneliness and alcohol problems related to external locus of control.	Sadava and Thompson (1986)
External locus of control seen as risk factor for adolescent depression and substance use.	Zuckerman, Amaro and Beardslee (1987)
Internal locus of control related to higher levels of adaptive functioning in health-related behaviors.	Carlisle-Frank (1991)
Alcoholics found to have an internal locus of control: author suggested that the concept of locus of control is not a global, generalized concept but is in fact domain specific.	Carlisle-Frank (1991)
SOCIAL SUPPORT	
Social support does not act as a buffer to stressful life events but has a direct impact on self-esteem.	Bennett (1988)

Smaller social support networks appear to be better in terms of coping with stress and reducing drug use than larger ones.	Grover and Thomas (1993)
SOCIABILITY/LONELINESS	
Adolescents who are considered more social tend to have higher involvement in substance use, delinquency and truancy than non-social or loner adolescents, however social adolescents are also more involved in socially acceptable activities than loners.	Tolone and Tieman (1990)
Loneliness identified as a factor in every stage of problematic alcohol use.	Akerlind and Hornquist (1992)
Correlations found between loneliness and adverse consequences of drinking; perception of being a problem drinker; presence of fewer coping strategies.	Sadava and Thompson (1986)
Relationship between hopelessness, loneliness, and adolescent illicit drug use. Loneliness combined with drug use results in greatly elevated hopelessness scores; author suggests an increased risk for suicide. Loneliness correlated with hopelessness. Frequent drug and alcohol users had higher hopelessness scores than did non-users	Page, Allen, Moore and Hewitt (1993)
RELATIONSHIP BETWEEN DEPRESSION AND SUBSTANCE USE	
Smoking linked to depression	
	Cohen, Schwartz, Bromet and Parkinson (1991); Anda, Williamson, Escobedo, Mast, Giovino and Remington (1990)
Positive correlation between smoking and depression; depression linked to failure at smoking cessation attempts.	Covey, Glassman and Steiner (1990)
Alcohol use linked to depression	
Increased alcohol use positively related to increased depressive symptoms in sober state.	Cohen, Schwartz, Bromet and Parkinson (1991)
Alcohol may have delayed or cumulative effects on depression: immediate effect of alcohol is to relieve depressive symptoms, but long-term effect is increased depression.	Parker, Parker, Harford and Farmer (1987)

High levels of depression linked to increased alcohol use (self-medication hypothesis).	Aneshensel and Huba (1983)
Substance use and depression	
Methaqaulone found to elevate depressive symptoms.	Parker, Parker, Harford and Farmer (1987)
Similar personality characteristics are identified as risk factors for both substance abuse and depression (external locus of control, low self-esteem, greater tolerance for deviance, greater social criticism and alienation, lower expectations for academic success).	Zuckerman, Amaro and Beardslee (1987)
Risk Factors for Depression	Buckner and Mandell (1990)
Negative life events and low self-esteem are risk factors for depression stressful life events and low levels of social support linked to depression.	Zuckerman, Amaro and Beardslee (1987)
Disability	
Men with disabilities report higher levels of drug and alcohol use and higher levels of depression than their non-disabled peers.	Motet-Grigoras and Schuckit (1986)

LITERATURE PERTAINING TO

PREVENTION AND TREATMENT MODALITIES

PREVENTION AND PREVENTION PROGRAMS

This section of the analysis will identify current themes in prevention and prevention programs, both in substance use and in mental health. Prevention approaches and strategies for each will be discussed, using program examples from the literature. Finally, it will discuss a few possible commonalities in prevention concepts and practice between the two areas.

Health promotion, as defined in the Ottawa Charter for Health Promotion (1986), is "the process of enabling people to increase control over their own health" (p.1). It involves "a combination of efforts to enhance awareness, change behavior, and create environments that support good health practices" (O'Donnell, 1989). Therefore, *prevention* , in the context of this analysis, includes in its scope the whole spectrum of policies and program strategies aimed at reducing risk, enhancing protective factors, and promoting healthy choices and actions at both the individual and systems levels. It is a term of convenience that has become a part of the fabric in the addictions field, coming into use well before the concept of health promotion was formalized. This discussion, while recognizing the importance and efficacy of public policy, will focus primarily on prevention approaches fostering changes in individual awareness, skills, attitudes, and behaviors within the contexts of schools, families, and communities.

Substance Abuse Prevention

Strategies to prevent substance abuse take many forms, depending on the target group and setting. Policy and legislative initiatives, although they have shown more immediate and significant behavioral impacts than voluntary programs (e.g. Eliany and Rush, 1992), are beyond the scope of this review, which will focus primarily on risk reduction approaches. Two overarching contexts for substance abuse prevention are covered in this analysis, and will be discussed in turn, These are a) school-based approaches; and b) community development and health promotion initiatives.

School-based approaches and programs

Like the research on risk factors, a preponderance of prevention programs have been aimed at children and youth, particularly within school settings.

An evolution in approaches has occurred, moving from a focus on providing factual information — often in the form of "scare tactics" — to the fostering of life skills, which remains the dominant core strategy in prevention programs for youth today (Bosworth and Sailes, 1993; Flay, 1985; Hawkins et al., 1992; Health and Welfare Canada, 1992; Perry, 1987). The principal aim of these programs is to delay or prevent the onset of drug use by fostering assertiveness and peer refusal skills (Flay, 1985). Over thirty such programs were described and catalogued through contract by Health Canada (1992). These school-based programs often incorporate additional themes addressing risk factors such as self-esteem, and in some cases still include cognitive components providing factual information.

Health education, and with its school-based substance abuse prevention, have struggled with inconsistent implementation in most provinces.

Another trend has been from isolated programs to comprehensive ones spanning many grade levels. In recent years, peer-led initiatives have emerged, in which older students lead sessions with younger students. Nova Scotia's *Peer Power* program, (Nova Scotia Department of Drug Dependency Services, 1991) is just one example of this genre of programs. Programs range from packaged curricula involving often costly materials and training (e.g. *Here's Looking at You 2000*), to programs developed by provincial Ministries of Education (e.g. Manitoba's *Tuning into Health*), to more grade specific programs, often developed by Health Ministries or community-based agencies (e.g. *Sense and Nonsense*, Alberta Alcoholism and Drug Abuse Commission.) Some programs have been developed for aboriginal children and youth (e.g. *Four Worlds Project; Sacred Tree Curriculum*). Programs designed for minority ethnic cultures to date have been targeted at families, such as those recommended by Legge and Sherlock (1990-91), and implemented for Cantonese and Punjabi speaking families in British Columbia.

The movement toward comprehensive school health education, at least in concept, has led to the incorporation of substance use programs or concepts into overall curriculum guidelines, as one of many theme areas. This takes the issues addressed within the programs and places them in the mainstream of the educational experience.

However, in spite of a seeming plethora of programs and some movement towards the recognition of school health education as a mandated subject area, both health education, and with it school-based substance abuse prevention, have struggled with inconsistent implementation in most provinces. Several reasons are offered for this. First, school health education as a whole has suffered from a "poverty cycle" in Canada. That is, a lack of both resources and trained cadre of practicing teachers of health education contributes to poor implementation. This leads in turn to less interest and advocacy from within schools, so the cycle continues. Secondly, evaluations of school-based substance abuse programs have generally failed to show significant impacts on student behaviors (e.g. Bangert-Drowns,

1988; Eliany and Rush, 1992). An exception appears to be in smoking prevention, where evaluations of primary prevention programs involving the life skills approach have shown some success in preventing the onset of smoking (Flay, 1985). This supposed lack of impact should not be interpreted, however, as an indictment of school-based prevention programs. Several researchers have pointed to poor implementation and maintenance, and unrealistic program goals, as guarantors of failure. For example, Oetting and Beauvais (1991) argue that three factors contribute to program "failure": a) *failure to initiate,* where the infrastructure for implementation is insufficient; b) *failure to be effective,* or the failure to attain goals for behavioral change that are often unrealistic; and c) *failure to thrive,* where the program stagnates for want of support, refreshing, and updating. A final factor contributing to poor implementation and maintenance of school-based programs could simply be that program advocacy and support, both essential forces, appear to have shifted to community-based approaches such as the Healthy Communities concept. This does not mean that school-based programs are dead; a great many people and organizations within and outside of the school system are making remarkable efforts to foster school-based health promotion, and school health promotion may yet become firmly entrenched.

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Community Programs

Community-based programs specific to risk reduction in substance abuse take several forms. Perhaps the most common of these are comprehensive community prevention programs, parent centered programs, and marketing and awareness programs.

Comprehensive community-based substance abuse prevention programs are more common in the U.S. than in Canada. As in many areas, Canadians seem to prefer a lower key approach. However, the fact that this review failed to find reports of such programs in Canada by no means suggests they do not exist. Many such efforts are never formally reported, many fewer are published. The concept of community-based prevention programs rests on the idea that schools alone cannot take on the task of prevention, and that in order to achieve lasting benefits, the whole community must be involved (Johnson, Pentz, Dwyer, Mackinnon, Hansen and Flay, 1990; Perry and Jessor, 1985).

A second strategy in community substance abuse prevention is parent education. These programs generally rest on the assumption that many risk factors for substance abuse, such as parenting styles, family support and cohesion, relationships, and stress coping skills, can be addressed through positive changes in family dynamics. Several programs have been developed in Canada, such as *Ready or Not!* (Health and Welfare Canada, 1988); *A Better Way* (Saskatchewan Alcohol and Drug Abuse Commission,

1988); *Kids and Drugs* (Golinoski and Paape, 1982), and *By Parents For Parents* (B.C. Alcohol and Drug Programs, 1992). All of these programs address such issues as communication, self-esteem, discipline, and alcohol and drug use. Only the approaches differ. *Ready or Not!* was developed specifically for parents of preteens who, for reasons of social, cultural, economic, and/or geographic isolation, or literacy, have limited access to information through mainstream channels. It has been used for low income, single, off-reserve aboriginal parents, and recent immigrants. *Kids and Drugs* and *A Better Way* exemplify programs built on the models of Adlerian psychology (e.g. *Systematic Training for Effective Parenting*, Dinkmeyer and McKay, 1976; and *Parent Effectiveness Training*, Harris, 1975). *By Parents For Parents* seeks to follow principles of empowerment, centering on parents generating their own solutions to common stressful situations. A common problem in programs for parents, as with many voluntary health promotion programs, is participation. Moreover, many parent programs are poorly evaluated (Health and Welfare Canada, 1984).

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For adults, brief treatments, by telephone, self-help manuals and one or two sessions providing guidelines for "sensible drinking" have met with considerable success. The pioneer of this work comes from Canada (see Sanchez-Craig, Wilkinson and Walker, 1989) and addresses both primary and secondary prevention issues. (Marlatt, Larimer, Baer and Quigley, 1993).

With the trend in health promotion moving toward community development and toward process rather than content centered approaches, we are likely to see less of the traditional formal programs in substance abuse prevention. We may see instead a much slower and more uncertain process, albeit one with more realistic and achievable goals, fewer time schedules, more community support, and a longer range view.

Mental Health Promotion Programs and Approaches

From the analysis of literature, it appears that mental health promotion has evolved somewhat differently than substance abuse prevention. For one thing, the stigma associated with mental illness has persisted in spite of efforts to educate the public. For many people, the concept of mental health is still associated closely with mental disorders and treatment concerns (Goering, Wasylenki and McNaughton, 1992). On the other hand, the concepts of substance abuse and addictions appear to have lost much of their former stigma, as the perception of addiction as a disease has been increasingly accepted in North America. Also, fewer programs appear to exist specifically focusing on mental health promotion than in substance abuse prevention, at least as far as discovered in this analysis. This disparity is not surprising; substance abuse prevention has enjoyed richer

developmental support in recent decades than most other health areas (at least in terms of educational programs and funding), probably due to the higher visibility of the negative outcomes of substance abuse.

In spite of the limited literature regarding mental health promotion programs, three general approaches in mental health promotion were drawn from the review. They are:

1. Social marketing programs aimed at increasing awareness and communication about issues, as well as increasing exposure to potential coping skills.

2. Competency-based programs, designed to provide skills in such areas as stress management and coping.

3. Approaches involving principles of community organization and empowerment.

Social Marketing Approaches

Several programs have used the media to address mental health issues. For example, Laurandau, Perreault, and Mongeon (1991) report on *Clip et vous*, a videotape package developed and circulated to schools in the Montreal area. The program follows a social marketing theme, and addresses two main concepts: social support and stress management. Barker, Pistrang, Shapiro, Davies, et al. (1993) developed a series of info-mercials in Britain promoting understanding of mental health problems. Whitehorn (1989) discusses the successful use of the media to promote mental health by boosting awareness of issues, increasing empowerment and acting as a trigger for action. Both of these programs report positive results in terms of awareness of issues.

Social marketing is a particularly appropriate strategy for mental health programs as its greatest impacts are to stimulate dialogue, bring attention to issues, and illustrate myths and prejudices; all of which are important needs in mental health promotion.

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Competency-based Programs

A second approach in mental health promotion is that of competency development. Four examples from the literature dealing with different populations illustrate this approach. Peters (1988) discusses competency development in children, and recommends three core concepts for such programs: social competence, problem solving skills, and the ability to cope with stress. These skills, according to Peters, typify mentally healthy children. Adam (1989) describes a mental health promotion program for French speaking women, focusing on assertiveness and stress coping skills. Positive impacts on levels of life satisfaction were reported. Fedorak and Griffin (1986) describe a mental health promotion program for seniors,

also based on assertiveness training. McDaniel (1993) and The American Psychological Association (1992) describe occupational health programs promoting mental health for employees. Health problems, they point out, are commonly stress-related. The goals of employee programs should be to foster knowledge and awareness of any stress-related problems, focus on increasing stress coping skills, and reduce work-related stresses.

School-based programs have also been developed specifically for mental health competencies. The *Living Colour* program developed by the Canadian Mental Health Association, Ontario Division (no date) is designed for use with preschool to grade six children and focuses on self-image, communication, and self-management skills. The *Magic Circle* program (Palomares and Ball, no date) is another example. It too is designed for use in elementary schools, and follows three themes: awareness, social interaction, and mastery. Besides free-standing programs such as these, aspects of mental health are incorporated in provincial health education curricula (Mangham, 1989). For example, in Alberta, mental health issues specifically enter the curriculum in the junior high grades, and in Manitoba, are found in the grade one to nine curriculum. In Saskatchewan and the Northwest Territories mental health/stress management are major content areas. However, these are curriculum guidelines; fewer *classroom ready* programs exist for mental health than for substance use. The most common themes within the mental health content area in school curricula appear to be stress management, self-esteem, and relationships.

Community Organization/Development Approaches

Community development is the process whereby the community gains the collective knowledge, skills, and other tools necessary to solve its problems and meet its needs (Green, Kreuter, Deeds and Partridge, 1980). Wallerstein (1992) defines *empowerment* as "people assuming control over their lives in the context of their social and political environment" (p.198). In recent years, community development has been coupled informally with the concept of empowerment under the health promotion umbrella. Although no discussion was found in the literature relating to empowerment or community development as mental health promotion strategies, the process of gaining power to affect ones choices and to alter the environment is certainly linked to mental well-being. In fact, the concept addresses much of the definition of mental health offered in the beginning of this analysis. This is particularly true where there is a *lack* of power. Certain competencies may be essential for empowerment to occur. For example, Fedorak and Griffin's (1986) study of a mental health program among seniors showed that among the seniors studied, assertiveness led to their giving more input and assuming more control in planning on issues that affected them. The dual concepts of community development and empowerment offer possible

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strategies for enhancing mental health through the process of health promotion.

Possible Issues Linking Substance Abuse Prevention and Mental Health Promotion

Many commonalities in issues addressed, approaches, and desired outcomes offer conceptual links between substance abuse prevention and mental health promotion, at least in the eyes of the authors. Brisson (1992) directly addressed the links between mental health promotion and substance abuse prevention, suggesting that a global approach to both issues is most effective. This approach would occur at both an individual and collective level and would focus on action.

Only discussion and debate will resolve the question of the validity of various prevention approaches, and in particular, whether, and how, they should be applied. The issues and commonalties in prevention are listed in broad terms and described briefly below.

1. **Both areas of health promotion face the same fiscal pressures.** Health promoters have always struggled for the fiscal means to enable interventions of sufficient magnitude and duration to make a difference. This is compounded by today's economic conditions and their implications both to public funding for programs and to overall impacts on health in both realms. In the face of these realities, the compartmentalization and splitting of prevention and health promotion resources make little sense, especially where so much is held in common.

2. **The commonalties in risk and protective factors are profound.** One could argue that a good mental health promotion program would also be a good substance abuse prevention program, encompassing most of the known non-biologic risk factors for substance abuse. In fact, mental health, defined positively, contributes significantly to *all* areas of health, arguably to a greater extent than it is influenced by other domains. This poses implications for health promotion program directions. Mental health — a core facet of well-being — may be a more appropriate central theme than substance abuse — a specific health issue.

3. **Families, schools and communities provide contextual links for programs.** The relatively long history of emphasis on substance abuse prevention, particularly among youth, has generated program infrastructures that could serve as a setting for combined efforts.

4. **A concern is shared for high risk populations.** Federal priorities in substance abuse prevention have shifted from the general population to populations at special risk. The need to generate effective strategies for these groups presents many opportunities for collaborative efforts.

TREATMENT ISSUES: MENTAL HEALTH OR SUBSTANCE ABUSE

In view of the extensive literature in both mental health treatment and substance abuse treatment, the discussion of treatment issues is restricted to literature related to the subject of the links between these two areas.

Substance Abuse Treatment

Probably the most researched treatment evaluations come from the field of addictions. One estimate is that more than 600 treatment outcome studies were reported in the 1980's, together with numerous reviews (Institute of Medicine, IOM, 1990). There have been many debates on what constitutes "success", how to measure drinking and drug use, how long to follow up a client, and which components of treatment are of the most value.

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Particularly in the past 10 years, there has been an emphasis on broadening the base of treatment needs for individuals with substance abuse problems. This new vision has been clearly summarized in the report of a study by a committee of the Institute of Medicine (Division of Mental Health and Behavioral Medicine) (IOM Committee, 1990). The authors of this report are prominent clinicians and seasoned researchers, who have attempted to make a critical analysis of the value of the past decades of treatment and to chart a view for the future. Particularly with regard to treatment itself, chapters are written on "does treatment work?" and "is treatment necessary?" which challenge the traditional acceptance of these questions. The committee suggests that a unitary or single view of treatment does not represent the current reality in addictions treatment. Typically, there are a variety of treatments which are offered in most programs and most individuals make multiple attempts at treatment during their lives. They suggest that the treatment process can be put into a more appropriate perspective by considering the fact that treatment is only one of many factors which contribute to outcome, along with the client's own characteristics, the presentation of the problem itself, and post-treatment experiences. The committee therefore proposes that clinicians and researchers recognize what is already happening, that alcohol treatments are many and varied, and, like the course of substance abuse itself, can be considered in relation to a continuum of symptom severity, from mild (requiring preventative and educational strategies) to moderate (requiring secondary, or brief interventions) to severe (requiring tertiary, inpatient, or more traditional treatments). In this context, individuals are matched with appropriate treatments according to the severity of their symptoms, but also with recognition of their own personal, social and environmental experiences.

Within this view, the IOM committee addresses dual disorder as one of several populations defined by functional characteristics, among whom

are homeless persons, college students, drinking drivers, and children of alcoholics. The committee concludes that the many differences found among individuals with alcohol problems suggest that it is difficult to identify which structural or functional characteristics should be used to determine which specialized treatment program is most appropriate. This is especially true where an individual can be a member of numerous special population groups, depending on the definitions and focuses used. The committee therefore concludes that the concept of special populations is a dynamic one and that it is necessary to consider all of the factors in an individual's life that may or may not contribute to a positive treatment outcome. They also advocate the development of treatment for specific populations, with research less on etiology and theory and more on treatment methods and outcome.

The concept of harm reduction is currently receiving a lot of attention in the addictions field. Marlatt, Larimer, Baer and Quigley (1993) provide an excellent review of this concept. They present a model based on the symptom severity continuum advocated by the IOM committee. This model seeks to move beyond the controversy over controlled drinking and abstinence as a treatment objective. Marlatt and colleagues (1993) view harm reduction as a concept which supports any behavior change from moderation to abstinence, and which seeks to reduce the harm of problems due to alcohol. Their model proposes a continuum of excess, moderation and abstinence, in which any steps toward decreased risk are steps in the right direction. These authors present a considerable body of literature to support their ideas, describing in detail positive outcomes for problem drinkers and high risk groups such as college students who would not accept traditional treatment options or the labels which accompany them.

Another relatively new concept in addictions treatment is that of stages of change through which an individual may move during the engagement, treatment, and rehabilitative process (Marlatt, 1985; Prochaska and DiClemente, 1983). This theory reflects the change in emphasis from outcome to context and process (Moos, Finney and Cronkite, 1990) in order to look at all the factors involved in an individual's recognition for, and involvement in, treatment. Based upon this theory, Shaffer and Zinberg (1993) described a process of change which was identified by cocaine abusers in a natural recovery process. The authors developed a new process model for addictions based on the themes described by the cocaine quitters. They include in their model treatment possibilities at each stage of emergence of addiction: a) the first stage in which the initial positive consequences are eventually replaced by adverse consequences which ultimately become too serious to ignore; and b) the second stage — the evolution of quitting, when active quitting begins and relapse must be prevented.

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Mental Health Variables in Substance Abuse Treatment

There were several studies reviewed which span the gap between mental health and substance abuse treatment. These studies illuminate links by evaluating substance abuse treatment outcomes with the inclusion of variables associated with mental health. Several of these studies focused on the relationship between depression and substance use. El-Guebaly and Hodgins (in press) examined the influence of depression on relapse in individuals in outpatient or residential treatment for alcohol. They found that individuals with a history of depression reported a relationship between heavy substance use and negative emotional states and conflict. In addition, they found that negative emotional states were the most frequently reported precipitants of relapse. Finally, they also suggested that current depression was a weaker predictor of relapse than other variables.

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Hall, Muñoz and Reus (1994) also examined depression in relation to substance use. They conducted a randomized clinical trial of mood management as compared to standard treatment for smoking cessation, in order to study the benefit of a cognitive behavioral intervention for smokers without a history of depression. In this carefully controlled study, the authors established that individuals with a history of depression achieved the best abstinence rates of any of the four treatment groups. Their data also suggested different pathways to abstinence for individuals with or without a history of depression, perhaps because mood was not an important predictor of treatment outcome in non-depressed individuals.

Loosen, Bess and Prange (1990), in their study of depression and alcohol use, found that a history of depression was associated with length of abstinence from alcohol. They discovered that having a history of depression was associated with shorter periods of abstinence and was thus predictive of a poorer outcome.

Schuckit, Irwin and Smith (1994) observed severe, temporary depressive episodes in the context of heavy drinking, in a group of alcohol dependent men, during the year following treatment. They found no elevated rates for major depressive disorders independent of alcohol-induced mood syndromes.

Schuckit et al. (1994) examined characteristics which might be significant predictors of psychiatric illness. They divided a group of men into those who responded to alcohol at a lower level (fewer signs of intoxication) and those who responded as expected. He found a fourfold risk of developing an alcohol disorder at a 10-year follow-up in those who were low-level responders. However, this low level responding was not a predictor of major psychiatric disorders, nor were any other such trends obvious in the data.

Annis and Davis (1988) conducted a study which examined the impact of self-efficacy based interventions on the prevention of relapse in alcoholic individuals. They found that in the six month follow-up visit, subjects maintained improved drinking-related self-efficacy measures, had markedly fewer adverse consequences associated with drinking, and reported a lower consumption level and frequency of drinking than at intake.

These studies indicate the importance of distinguishing independent mood or anxiety disorders from the symptoms associated with the alcohol or substance intoxication and withdrawal cycle. They appear to indicate that a history of depression predicts a poorer outcome from alcohol abuse treatment, but that incidence of depression is not elevated in alcoholics, when controlling for alcohol induced mood syndromes.

Mental Health Treatment

Models of treatment in mental health share similar foundations with models of substance abuse treatment. This is particularly true in the cognitive-behavioral field, which originally developed in the context of treatment for depression, and social skills and problem solving training. This approach has since been adapted for substance abuse treatment in relapse prevention and brief treatments for problem drinkers.

The development of the diagnostic system for classification of mental illness has facilitated the identification of discrete disorders according to specific criteria. This has helped to standardize diagnoses for purposes of investigating prevalence, developing disorder specific instruments and comparing treatment outcome data. There has been a great deal written about the Diagnostic and Statistical Manual (DSM) for each of its editions, including DSM IV, which was published in 1994. The DSM IV states that no definition adequately specifies precise boundaries for the concept of mental disorder, because the concept lacks a consistent operational definition that covers all situations. However, it is as useful as any other currently available definition. In the DSM IV each of the mental disorders is conceptualized as "a clinically significant behavioral or psychological pattern that occurs in an individual and that is associated with significant distress, or with increased risk of suffering, death, pain, disability, or an important loss of freedom" (DSM IV, 1994, p.__). It is a common misconception that a classification system targets people, when actually the classification concerns the disorders that people have.

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Depression is a disorder frequently addressed in the context of mental health and substance abuse. Gordon and Ledray (1985) provide an informative review of depression in women, in whom the disorder occurs about twice as often as in men. Surveys have indicated this statistic holds both in the U.S. and in most other countries, and is identified as a major

health problem in the world today. Marriage, in relation to depression, appears to have a detrimental effect for women and a protective effect for men. Seasonal depression is prevalent in countries with long periods of darkness. However, because of the concurrence of alcoholism with depression in northern countries such as Canada, these numbers may be masked by individuals attending for alcohol treatment (Williams and Schmidt, 1993).

Mental health treatment has also been approached in terms of the client's functional capacity rather than in terms of a particular disorder. This approach allows for consideration of general treatment issues instead of disorder specific issues. In individuals with chronic mental illness defined by functional capacity, substance abuse is a typical characteristic. For example, Woogh (1990) found those individuals with multiple admissions and other service utilization tended to be young, poorly educated, living alone, and diagnosed with a major functional disorder. These young adults carry a variety of labels but they share two characteristics: severe difficulties in social functioning and inappropriate use of mental health services (Pepper, Kirshner and Ryglewicz, 1981).

TREATMENT ISSUES: MENTAL HEALTH AND SUBSTANCE ABUSE

This section concentrates on individuals in treatment where dual disorder is the main focus of interest. Within this literature, a variety of terms are used that are interchangeable; comorbidity, dual disorder and dual diagnosis tend to refer to similar populations and are of psychiatric origin. All of these terms are generic and refer to the presence of two or more disorders in one individual at the same time. For clarity in this section, the term "dual disorder" will be used throughout.

The discussion of dual disorder has been divided into two parts: (1) studies and reviews which seek to understand a) the magnitude of dual disorders in special populations (i.e. prevalence), and b) how dual disorders develop (i.e. links, self-medication); and (2) studies and reviews which examine the treatment process, including a) assessment, b) treatment programs, and c) service issues.

Prevalence

Researchers have consistently noted a higher rate of substance use disorders among individuals with mental health problems than in general populations. The high incidence of psychiatric disorders among individuals with substance use disorders is noted less often.

The largest personal face-to-face interview survey of psychiatric disorder in the general population ever done was the Epidemiological Catchment

Area (ECA) study. From this study, Regier, Farmer, Rae, Locke, Keith, Judd and Goodwin (1990) reported estimates of prevalence of dual disorders in the United States. The ECA study used data from 20,291 respondents over 18 years of age, and reports dual disorder incidence both from a mental illness and from a substance abuse standpoint. Using conservative estimates, the authors estimated an individual with a mental disorder to have twice the risk of substance abuse or alcohol dependence compared with the general population. As expected, dual disorders were highest in psychiatric and substance abuse facilities, with antisocial personality, schizophrenia and bipolar disorder the most prevalent. The highest dual disorder rate was found for those with drug (other than alcohol) disorders, among whom 53% were found to have a mental disorder. However, Helzer and Pryzbeck (in Riley, 1993) caution that this study was conducted in 5 cities and is not necessarily representative of the entire United States.

Using conservative estimates, the authors estimated an individual with a mental disorder to have twice the risk of substance abuse or alcohol dependence compared with the general population.

Beyond estimating the prevalence of dual disorders in general, Regier et al. (1990) estimated prevalence in individual major disorders. For example, 47% of schizophrenics met the criteria of some form of substance abuse while 60% of individuals with bipolar disorder met this criteria. Antisocial personality disorder (APD) was also highly associated with substance abuse — 83% of individuals with APD met this criteria; however, substance abuse is one of the major diagnostic criteria for this disorder.

The incidence of psychiatric disorders among substance abusers is lower. Regier et al. (1990) found the most prevalent disorder among substance abusers to be anxiety (19.4%). However, due to the high prevalence of this disorder in general populations the odds ratio was only 1.5. Antisocial personality disorder carried the highest odds ratio of 21. This means that for each case of anxiety disorder in the general population, there were likely to be 1.5 cases among substance abusers; whereas for each case of anti-social personality disorder in the general population, there were likely to be 21 cases among substance abusers.

It is interesting to note that Regier et al. (1990) estimated that 18% of hospitalized patients with mental illness did not have either a lifetime history of substance abuse or a mental disorder. This means they must have been detained in psychiatric facilities for other reasons, perhaps for behavioral, physical, or developmental disabilities. For those individuals with no lifetime history of mental disorder, 11% reported lifetime history of alcohol abuse, 3.7% reported other drug abuse, and 13.2% reported either drug or alcohol abuse.

Many of the articles examining prevalence rates have used these ECA statistics as a point of departure for examining comparable populations. For example, Brady and Lydiard (1992) found estimates similar to the ECA findings for substance abuse treatment-seeking populations and bipolar disorder. Muesar, Bellack and Blanchard (1992) cautions that the

type of facility that the individuals attend will affect the rate of dual disorder reported, with acute care settings showing much higher rates.

Most of the prevalence reports in Canada have come from Toronto and estimates are comparable to those found in the United States. Toner, Gillies, Prendergast, Cote and Browne (1992) sampled a population of 108 chronic mentally ill patients, and found a 40% incidence of substance use disorder. Ross, Glaser and Germanson (1988) sampled 501 patients seeking assistance with alcohol and drug problems and found that 78% had a lifetime psychiatric disorder, and 65% a current psychiatric disorder in addition to their substance abuse problem. These estimates were comparable to prevalence rates in United States and British samples. The Ross et al. study cited only two reports (both from the 70's) which had previously addressed prevalence of dual disorders in Canada.

Smoking has rarely been considered a substance within the dual disorder concept in these studies. However, a particularly high prevalence of smoking with alcohol has been noted, regardless of other psychiatric complications. A more recent survey conducted in San Francisco (Sees and Clarke, 1991) point out that smoking is prevalent in all substance abuse — of a total of 272 patients in treatment, 74% of all alcoholics, 77% of cocaine addicts, and 85% of heroin addicts also smoked cigarettes.

Smoking has rarely been considered a substance within the dual disorder concept in these studies.

Using data independent of the ECA study, Schuckit et al. (1994) estimated prevalence of major depression in alcoholic men attending treatment. These authors determined that men with primary alcoholism did not show higher rates of major depression if one discounted the category of alcohol induced mood disorders. This study highlights the importance of separating symptoms associated with substance intoxication or withdrawal from symptoms which indicate a separate mental illness. In the Regier et al. (1990) study, this was accomplished by discounting hallucinations and delusions when they occurred only with alcohol or other drugs. Warner, Taylor, Wright, Sloat, Springett, Arnold and Weinberg (1994) suggest that one reason for the high prevalence rates found among the mentally ill may be due to the fact that any substance use may be labeled as abuse, either because they react more readily to the symptoms of intoxication, or their prescribed medication may interact with alcohol or other drugs.

Links

Treatment-related reports tend to view the association between mental illness and substance abuse as a negative one. The section of Table 4 which looks at these links within treatment populations generally supports the notion that using substances of any amount tends to worsen the course of the mental illness.

The most prominent hypothesis to account for the high rate of substance use in psychiatric populations is the "self-medication" hypothesis. According to this hypothesis, an individual with mental health problems abuses alcohol and drugs to overcome the negative symptoms of the disorder and/or to reduce the negative side-effects of certain antipsychotic medications.

Many researchers address this issue in relation to schizophrenia. However, on closer look, the discussion takes place primarily in reviews rather than in original research studies. Many suggest that individuals with schizophrenia abuse cocaine (a stimulant), or alcohol (a depressant), to overcome the social and personal difficulties experienced in schizophrenia. For example, Brady et al. (1990) found that individuals with schizophrenia who were abusing cocaine were also depressed, and were using cocaine to self-medicate the underlying depression.

Muesar et al. (1992) conclude that drug choice is often determined by availability rather than the effects that the drug has on the central nervous system. They state that alcohol is consistently the most abused drug, both in the general population and in the dual disorder population, due to its ready availability. Many individuals report that alcohol relieves their more persistent psychotic symptoms. Apart from alcohol, the drug of choice varies over time depending on availability to the population being studied. Muesar et al. suggest that despite the evidence from client self-reports, there is little to support self-medication as an explanation for why individuals with schizophrenia are more likely to abuse substances.

Ries (1993) also considers the self-medication hypothesis in detail, and sees it to be rather circular. From his review of existing literature he concluded that it serves as a rationalization for substance used by the therapist and\or client in order to avoid admitting and recognizing substance abuse as a problem requiring treatment. Self-medication appears to be an intriguing hypothesis and is likely to continue to be investigated.

Self-medication appears to be an intriguing hypothesis and is likely to continue to be investigated.

Related to the idea of self-medication is the positive experience individuals have with substance use. Reviews and clinical studies address this issue by questioning motivation for use, and effect on mental illness. However, most of the information comes from client self-reports, which are not usually considered as reliable as observational or laboratory findings (Dixon, Haas, Weldon, Sweeney and Frances, 1990). Many articles recognize this unreliability factor, and have dealt with it by either leaving it out (e.g. Bernadt and Murray, 1986; Linszen, Dingemans and Lenoir, 1994) or by commenting on the limitations (e.g. Warner et al., 1994) According to a report published by the Group (1991), substance abuse is a way of coping with prolonged stress which is seen by the client as being relatively permanent. According to stages of addiction theories (e.g. Shaffer and Zinberg, 1993),

initial use begins and establishes itself through increased positive affect, i.e. "getting high" and reducing stress. In the long run, prolonged drug use does not result in a positive outcome. It leads to increased stress, causes social problems, and prevents the development and practice of other ways of dealing with problems. When the client can no longer function well, "use" is defined as "abuse" and is diagnosed as "disorder".

The positive effects of illicit drugs such as opiates, cocaine and, marijuana have been studied. Opiates may calm the threatening feelings of rage and anger in narcotic addicts, while cocaine may relieve the distress associated with either over-excitement, or depression. Schizophrenic patients reported their main motivation for use of cocaine was to improve mood (feel more sociable and talkative). Cocaine was observed to worsen the course of schizophrenia and contribute to relapse (Brady et al., 1990). However, Warner et al. (1994) reported that the two-year admission rate was significantly *lower* among those whose drug preference was marijuana compared with the rest of the sample, including non-users. These patients cited reasons for substance use as: improved social interaction, relief of unpleasant affective states, boredom, and improved self-esteem.

Alcohol also can reduce anxiety and depression. The frequent rate of alcohol abuse among individuals with anxiety disorders has been reported consistently. Kushner, Sher and Beitman (1990) drew together the literature in this area and reviewed the extent to which alcohol is used to cope with severe anxiety. The question regarding whether alcohol reduces tension is related to a number of learning factors and most importantly how tension is defined. The evidence is not clear that alcohol does in fact reduce tension, apart from some chemically-based "stress dampening" properties. Interestingly, individuals with agoraphobia who also abused alcohol were likely to emphasize the stress-reducing properties of alcohol.

The frequent rate of alcohol abuse among individuals with anxiety disorders has been reported consistently.

With the exception of Ross et al. (1988), and Davis (1984), the issue of gender specific links for men and women in dual disorder appears to have been overlooked. Some studies (e.g. Warner et al., 1994) do not give any indication of gender at all, while others describe the population in numbers of males/females but do not discuss gender any further. This is disappointing but not surprising, according to a review of women's use of, and needs in, substance abuse treatment (Lightfoot, Adrian, Leigh and Thompson, in press). Since there are differences in both type of substance and type of mental illness attributed to gender, this is an important omission. However, Ross et al.'s (1988) overall impression was that psychiatric problems were so pervasive that men and women with substance abuse problems were more similar than dissimilar. No significant difference in lifetime or current prevalence of alcohol or drug disorders was found as a whole, but women were more likely to abuse barbiturates, sedatives and hypnotics, and men were more likely to abuse cannabis and/or tobacco. In the

populations studied, the majority of both males and females had a current alcohol disorder with no accompanying drug disorder, and no significant gender differences were found in prevalence of psychopathology, including affective disorders and schizophrenia. However, women were more likely than men to have an anxiety disorder, especially phobia, panic, or obsessive compulsive disorder, psycho sexual disorder or bulimia. Men were more likely to have antisocial personality and pathological gambling. This study contradicted other findings that women more likely to abuse other drugs in addition to alcohol, and also that women more likely to have more, and more severe, depressive symptoms than men.

Assessment

Assessment was found to be used for two purposes: 1) for diagnosis of dual disorder, and 2) for treatment planning. The majority of articles reviewed are from the standpoint of psychiatric treatment, perhaps because there appears to be an increasing awareness of the need to assess substance abuse in psychiatric populations.

Almost every treatment-related review, and every treatment program description, places a priority on a comprehensive assessment. A range of self-report and interview inventories from substance abuse treatment (e.g. Addiction Severity Index, Michigan Alcoholism Screening Test) have been incorporated into assessments in mental health or psychiatric facilities. Most studies also report using standardized assessment instruments, particularly the Diagnostic Interview Schedule (DIS), and the Structured Clinical Interview for the DSM-IIIR (SCID). Diagnoses are universally made according to DSM-IIIR.

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El-Guebaly (in Riley, 1993) advises that interview methods may be superior to laboratory testing in the detection of both excessive drinking and alcoholism among psychiatric patients. He states it is important to combine both an approach which uses the criteria in DSM to classify individuals, and an assessment of severity in several areas of the individual's life (e.g. Addiction Severity Index). Ratings of severity appear to give a better prediction of treatment outcome than the classified psychiatric disorder. Cooper and Kent (1990) reviewed assessment findings, concluding that a comprehensive assessment is both useful and likely to improve the chances of success in treatment. According to these authors, a comprehensive assessment, which also includes some biochemical measures, should occur as soon as the client is free from acute effects of the substance abused and/or the psychotic episode experienced.

Only two instruments were found which were developed specifically for use with dual disorder populations. Comtois, Ries and Armstrong (1994) reported the usefulness of a rating scale for community-based case managers to assess the clinical status of individuals over different phases

of treatment, and Schwartz et al. (1993) constructed an instrument to determine the extent to which alcohol abuse is assessed and included in treatment in psychiatric facilities.

Almost as universal among the studies as the need for assessment, is the claim that psychiatric patients are not sufficiently assessed for substance abuse. Schwartz et al. (1994) would like to see assessment for alcoholism regularly conducted, considering the high prevalence of alcoholism in this population. They found: a) alcohol dependence histories are not often obtained; b) diagnosis not made as often as expected, and c) the focus is on acute effects rather than effect on lifestyle and family.

Other clinicians are generally in agreement with these statements. They caution that assessors tend to overlook or misattribute symptoms of one of the disorders to the other, or they assume primacy of either the psychiatric disorder or the substance abuse disorder. However, it is also recognized that this question of primacy can be difficult to determine, and it is one of the reasons for ensuring that the individual is detoxified or free of acute psychotic symptoms before the assessment takes place. This separation of the effects of the drug and the psychiatric disorder is very difficult in many cases. Alcohol and street drugs can produce a broad range of temporary symptoms similar to those found in disorders such as schizophrenia. Even in terms of assessing schizophrenia, it is recognized that assessment is made difficult by the broad impact of schizophrenia on interpersonal functioning. Two important questions which must be asked are: when does the use of the psychoactive substance among mentally ill become abuse? and, when should psychiatric symptoms among substance abusers be considered a mental illness?

Alcohol and street drugs can produce a broad range of temporary symptoms similar to those found in disorders such as schizophrenia.

Very few studies were found which recommend paying attention to psychiatric symptoms in addictions treatment facilities. The exceptions are: 1) Cooper and Kent (1990) who present a table reporting studies which address the prevalence of dual disorder between 1971-1990. In the table, 4 of the 30 studies originated in substance abuse programs; two of which are attributed to Ontario's Addiction Research Foundation. 2) Marshall (1994), who would like to see psychiatric evaluations made available in substance abuse programs. He found that *none* of his social phobia patients had been properly diagnosed for phobia in any of the substance abuse treatment programs they had attended (although this statement was not supported with any data); and 3) Chambless, Cherney, Caputo and Rheinstein (1987) reached the same conclusion as Marshall after conducting a careful study of alcoholics with anxiety disorders.

Reports including a detailed assessment component of substance abuse in psychiatric care conclude the following: a) substance abuse contributes to multiple admissions and to chronicity; b) substance abuse is the chief component, identified in the young chronic psychiatric population; and

c) patients with substance abuse in addition to psychiatric disorder are more likely to live alone or be homeless. These reports (e.g. Pepper et al., 1981) point out that treatment should be directed more towards functional ability than towards diagnostic labels. Indeed, treatment outcome appears to be more related to such patient characteristics than type of treatment offered (The Group for Advancement of Psychiatry, 1991).

These reports (e.g. Pepper et al., 1981) point out that treatment should be directed more towards functional ability than towards diagnostic labels.

The second component of assessment is for diagnosis. This subject relates closely to prevalence. Because it is more likely to be found in the psychiatric literature, diagnosis is always reported in terms of DSM. It is often complemented with standard substance abuse questionnaires, such as the Addiction Severity Index (ASI), the General Health Questionnaire (GHQ) or Symptom Check List, (SCL-90).

Diagnosing mental illness is much more complicated when substance abuse is present. Most studies which address this issue point out the importance of recognizing how the effects of drug abuse can mimic nearly any psychiatric disorder, and therefore, some time must be allowed for acute symptoms to subside before a firm diagnosis can be made. It is often suggested that a provisional diagnosis should be made, until the real symptoms of the disorder(s) can be separated.

Diagnosis is often described as the first step to planning treatment. Some practitioners have classified individuals in terms of primary and secondary disorder in order to determine which disorder requires treatment first (El-Guebaly in Riley, 1993), but this information is not always available or reliable and may not be important for treatment. Lehman, Myers, Dixon and Johnson (1994) defined beforehand a typology of subgroups and then assigned patients to these subgroups using SCID and ASI, coming up with four dual disordered groups and two single disorder groups. They then discussed treatment implications for each group. Noteworthy was the fact that only 28% of the 461 patients were single diagnosis patients. One group was considered definitely dual disordered by the following criterion: "*current* independent mental disorder not related to substance use and a *current* psychoactive substance use disorder". This group comprised 109 of the 461 patients, with almost equal representation between the four main categories of schizophrenia, bipolar disorder, major depression, and anxiety. Alcohol was used by 88, cannabis by 50, and cocaine by 31 of these patients.

Based upon a review of the area, rather than any particular study, Ries (1993) proposed a method of diagnosing psychiatric disorder and substance abuse by low or high severity, and provides a detailed commentary on recognizing psychoses associated with various psychoactive substances. Other reviewers (e.g. Decker and Ries, 1993; Sciacca, 1991) point to the complexity of diagnosing dual disorders by suggesting that the effects of one disorder upon the other must be teased out one by one.

Treatment Programs

With only a few exceptions, contributions describing treatment models for dual disordered patients are based upon a disease-recovery model, including AA twelve-step programs. These programs are for the clearly dual disordered, with major psychiatric (Axis I) disorders and chronic current substance abuse. Minkoff (1989) compares the course of a major psychiatric disorder (e.g. schizophrenia) with the course of chronic alcoholism according to the disease-recovery model. He, and other authors (e.g. Drake, Antosca, Noordsy, Bartels and Osher, 1991; Kline, Harris, Bebout and Drake, 1991; McLaughlin and Pepper, 1991; Sciacca, 1991) agree that treatment should be divided into phases which can be summarized as the following: engagement or persuasion and acute care, stabilization and treatment modules, and maintenance or aftercare. Slightly different from substance abuse models is the acceptance that abstinence is not necessarily a requirement for the first phase of engagement. Abstinence from substances and psychiatric medication monitoring are required for the treatment components. Aftercare stresses family involvement and the support of self-help groups (A.A., N.A. or Double-Trouble dual disordered groups). These models also provide integrated treatment, defined as a program run by staff trained in both psychiatry and addictions, and addressing both disorders. This integrated treatment is compared with linked treatment (primary disorder treatment, secondary disorder arranged at other facility) or sequential treatment (primary first, secondary afterwards). Only one article described a day hospital program for psychiatric patients to address substance abuse problems (Alfs and McLellan, 1992), where group therapy is the primary treatment, and a goal of reducing substance abuse is seen to be more realistic then enforcing abstinence.

An alternative model used in both substance abuse and mental health is the cognitive-behavioral approach. This approach is quite widely represented in the alcoholism and other substance abuse literature, but there appears to be at present little mention of it in the articles focusing on dual disorder treatment, other than inclusion of relapse prevention in aftercare. Dual disorder specialized treatment programs are in their infancy, particularly in Canada. It will be a challenge for clinicians to develop and evaluate these over the next decade.

Dual disorder specialized treatment programs are in their infancy, particularly in Canada. It will be a challenge for clinicians to develop and evaluate these over the next decade.

Service Issues

The Group for the Advancement of Psychiatry (1991) state that although psychiatrists are ideally suited to provide services for substance abusers, they are often pessimistic and skeptical about the efficacy of treatment for these individuals. They also lack training in this area. Given a wide variety

of programs available in alcoholism and substance abuse treatment, the Group sees that the primary challenge is to match individuals to appropriate treatments.

It is interesting that the majority of treatment-related articles for dual disorder appear to originate in psychiatric literature. Glaser (in Riley, 1993) suggests that the idea of dual disorder is not new, and that the recent surge of interest on the part of psychiatry arises from the political utility of defining dual diagnosis as a psychiatric problem. Glaser suggests it is a question of program funding, and remarks that, instead of the two systems of mental health and addictions being prepared to collaborate, "in many jurisdictions, "dual diagnosis" has become the battle cry for a takeover of the alcohol and drug treatment system by psychiatry" (p.57). Glaser gives the example from his own state, where licenses for the treatment of "dual diagnosis" are issued only to psychiatric facilities. He also suggests the concept has been pressed into service in the ongoing warfare waged by psychiatry against psychology, which has developed much expertise in the treatment of substance abuse and alcoholism.

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Based upon the above information, it is also not surprising that service provision to date has concentrated on the major psychiatric disorders associated with chronic substance dependence. The articles reviewed which discuss service needs describe the following: a holistic orientation, provision of phases of treatment, a range of residential and non-residential options, the provision of safe and supportive housing, case management services for long-term aftercare, involvement of families, and the use of self-help organizations. In these disease-recovery models of service, abstinence is the preferred treatment goal.

The psychiatric provision of service described above targets treatment for clearly identifiable dual disorders — those individuals who are at the most problematic end of the continuum of functioning. As described by Marlatt (1993), those individuals with chronic alcohol dependence are seen to constitute only about 5% of the general population, and therefore, those with serious dual disorders would have a prevalence rate below this. According to Marlatt and others (e.g. Committee of the Institute of Medicine, 1990), a large segment of the population experience some form of problematic substance use, which should be, and often is, also the target of treatment services. It does not yet appear that reports on dual disorder treatment have addressed this larger group.

Lastly, Peele (1991), also coming from addictions services, reviews successful treatments, and conclude that these deal with the "addicts' interactions with their environments and help them develop beliefs in their self-efficacy" (p.1409). Drawing from substance abuse prevention and treatment studies, he concludes that a community-based approach, with

co-ordinators to help restore natural rehabilitation links through jobs, family, AA, church and social activities, is a cost-effective approach. He does not, however, address how mental disorders should be approached within this context.

Research Directions

Many researchers are aware of the lack of outcome research in the area of dual disorder. To our knowledge there are no clinical trials comparing different treatments for dually-diagnosed patients, and few randomized treatment outcome studies in which comorbidity has been addressed. A few comparative studies are reported, but the majority (Chambless et al, 1987; Drake, Osher and Wallach, 1991; Lehman et al, 1994; Ries, Mullen and Cox (1994), compare population characteristics. Only Loosen et al. (1990), El-Guebaly and Hodgins (in press), and Schuckit et al. (1994) have presented treatment outcome data related to dual disorder services.

To our knowledge there are no clinical trials comparing different treatments for dually-diagnosed patients, and few randomized treatment outcome studies in which comorbidity has been addressed.

Minkoff (1989) acknowledges that we lack prospective research data regarding the etiology, onset and development of dual disorders, and "recent psychiatric literature reflects the view that comorbid substance disorders should be considered independent and autonomous problems rather than secondary problems". McLaughlin and Pepper (1991) report that a five-year research grant has been awarded to compare treatment outcomes from two dual disordered populations. In the meantime they offer their clinical experience to state that integrated therapeutic treatment reduced rehospitalization and severity of symptom recurrence. However, they also state that this type of treatment is expensive and only one-third of the patients complete the program. On the other hand, Sciacca (1991) describes a program which is a component of existing mental health treatment that is "successful and cost effective, generally requiring no more than four hours per week of staff time devoted to MICAA (mentally ill chemical abusers) services and education". This author states that she is also in process of developing a research study to evaluate this program. Dual disorder treatment outcomes may be better understood when these various evaluations are completed and published.

Sees and Clark (1993) have pointed out the limited literature and research in the area of combining alcohol abuse with nicotine dependency. After reviewing various issues pertaining to this area, the authors suggest two basic questions that need to be explored by treatment providers: should nicotine dependency be considered as primary addiction, and does cigarette smoking serve as a relapse factor for the use of other drugs. One might add to these questions by asking how dependence on multiple substances affects mental illness treatment. This is an important issue, since single substance dependence is now far less common than it was one

or two decades ago. The various pharmacological actions of different substances are likely to have complex interactions with mental disorders. There is much room for research in this area.

Kendall and Clarkin (1992) introduced and summarized a special volume of papers addressing different kinds of dual disorder in mental health. They state that this area is the "premier challenge" facing mental health professionals. They point to the general lack of such studies. Others (e.g. Carey, 1991) have pointed out that no journal to date concentrates entirely on such studies. Therefore, one must look among a variety of journals for contributions in this area. Kendall and Clarkin emphasize that understanding dual disorder is an important issue in treatment planning, since multiple meanings of this term must be understood and considered. Much research and clarification of treatment issues is therefore needed.

TABLE 3

TREATMENT ISSUES

PREVALENCE	
Of 1007 young adults, 39% were daily smokers; of these, 51.3% were nicotine dependent. Dependent smokers had increased lifetime rates of major depression and anxiety disorders.	Breslau, Kilbey and Andreski (1993)
Of 75 inpatient alcoholics, 40% had lifetime diagnosis of anxiety disorder.	Chambless, Cherney, Caputo and Reinstein (1987)
Of 43 seriously mentally ill clients, 65% currently used illicit drugs and 72% reported some alcohol abuse.	Cohen and Henkin (1993)
Table listing 30 prevalence studies	Cooper and Kent (1990)
Prevalence affected by: method of identification treatment setting admission criteria age, sex psychiatric diagnosis clinical population	El-Guebaly (1990)
Of 9724 women with AIDS, 51% were i.v. drug users. Of 1859 children with AIDS, 58% had mothers who had used drugs i.v.	Group (1991)
Rates of psychiatric comorbidity: low in addiction populations. Rates of addictive disorders: high in psychiatric populations.	Miller, Downs, Testa (1993)
ECA STUDY	
Those with alcohol disorder: 37% comorbid mental disorder. Those with other drug disorder: 53% comorbid mental disorder. Comorbidity highest in prison population, especially: antisocial personality disorder schizophrenia bipolar disorder	Regier, Farmer, Rae, Locke, Keith, Judd and Goodwin (1990)

Of 501 (Canadian) clients seeking substance abuse treatment, 78% had lifetime psychiatric disorder and 68% had current psychiatric disorder.	Ross, Glaser and Germanson (1988)
Of 41 chronic mentally ill clients: 49% current substance abuse 29% history of substance abuse Persistent substance use doubled rate of rehospitalization	Safer (1987)
Of 239 primary alcoholic men: 4% developed depressive episodes 2.1% independent major depression	Schuckit, Irwin and Smith (1994)
Of 300 homeless women: 50% had psychiatric disorders and of these: 44% Axis I and substance abuse 62% Axis II antisocial personality disorder and substance abuse	Smith, North and Spiznagel (1993)
Lifetime prevalence in 55 mentally ill: 89% marijuana use 62% hallucinogens 60% stimulants 29% non-prescribed sedatives 45.5% narcotics 29% inhalants 13% over-the-counter drugs misuse 93% alcohol to intoxication	Warner, Taylor, Wright, Sloat, Springette, Arnold and Weinberg (1994)

TABLE 4

LINKS

Alcohol and drug abuse can cause signs and symptoms of both depression and anxiety, but with a different course and prognosis than independent depressive or anxiety disorders.	Anthinelli and Schuckit (1993)
Of 371 psychiatric admissions, no psychiatric disorder except alcoholism drank more than the mean. 33% with bipolar and minor depression drank more, but comparable group drank less.	Bernadt and Murray (1985)
Cocaine may worsen the course of schizophrenia and contribute to relapse.	Brady, Anton, Ballenger, Lydiard, Adnoff and Selander (1990)

Bipolar clients with substance abuse have a worse course of illness.	Brady and Lydiard (1992)
Cocaine induced paranoia is a common experience among chronic users similar to acute paranoid schizophrenia.	Brady, Lydiard, Malcolm and Ballenger (1991)
Current depression, but not history of past depression, increased probability of relapse in alcohol dependent clients.	El-Guebaly and Hodgins (in press)
Clients with anxiety problems relieve symptoms by pathological alcohol consumption. Alcohol lessens the fear which motivates avoidance, reduces "tension" and anxyolytic effects may reinforce drinking behavior.	Kushner, Sher and Beitman (1990)
More, and earlier, psychotic relapses occurred in cannabis abusing clients with recent-onset schizophrenia.	Linszen, Dingemans and Lenior (1994)
Less than 5 years abstinence and depression are most predictive of poor outcome.	Loosen, Bess and Prange (1990)
Clients with social phobia nine times more likely to abuse alcohol: to reduce social anxiety, lessen negative self-judgments, participate in groups.	Marshall (1994)
Onset of social phobia preceded onset of alcoholism.	Schneier, Martin, Liebowitz, Gorman and Fyer (1989)
Adults using marijuana, who were also abusing alcohol or other drugs, had more severe consequences of use and experienced more general distress	Stephens, Roffman and Simpson (1993)

GENDER

Marriage has protective effect for men and detrimental effect for women. Lack of early identifications in women; sex role of learned helplessness increases incidence of depression.	Gordon and Ledray (1985)
(Canadian) women abuse sedatives and minor tranquilizers; men, cannabis and tobacco. When antisocial personality disorder, alcohol history and employment is controlled, men and women have equal number of alcohol problems. Women have more symptoms of depression, in treatment earlier.	Ross (1989)
(Canadian) women with substance abuse more likely to have anxiety, psychosexual disorder and bulimia; men had more antisocial personality disorder.	Ross, Glaser and Stiasny (1988)

Genetic

Major depression and alcoholism in women appears to result largely from genetic factors, but common environmental risk factors also contribute.	Kendler, Heath, Neale, Kessley and Evans (1993)

Self-Medication Hypothesis

Marked variations found in perceived effects of drugs on the psychiatric symptoms of dual disorder clients. In general, users of depressants (heroin, alcohol) reported relief, users of stimulants (cocaine) reported symptom aggravation.	Castaneda, Galanter and Franco (1989)
Clients with schizophrenia reported using drugs: to get high to relax to increase pleasure, energy, emotions to go along with the group	Dixon, Haas, Weiden, Sweeney and Frances (1990)
Alcohol temporarily relieved chronic psychotic symptoms in clients with schizophrenia, but findings are contradictory.	Mueser, Bellack and Blanchard (1992)
Social phobic clients reported using alcohol to relieve phobic symptoms.	Schneier, Martin, Liebowitz, Gorman and Fyer (1989)
Psychotic patients tend to get worse with psychoactive drugs, but some may self-medicate side effects of medication. Nicotine reverses side effects of neuroleptics.	Ries (1993)
Clients with schizophrenia use more stimulants: amphetamines, cocaine, cannabis, hallucinogens, inhalants, caffeine and tobacco, and fewer depressants: alcohol, opiates and sedative-hypnotics than other psychiatric clients or normal groups.	Schneier and Siris (1987)

TABLE 5

TREATMENT ISSUES: ASSESSMENT AND SERVICE DELIVERY

ASSESSMENT ISSUES	
Case manager ratings assess clinical status of dual disordered clients.	Comtois, Ries and Armstrong (1994)
Factors which are useful to assess primary, secondary or combined dual disorders.	Lehman, Myers and Corty (1989)
Retrospective chart review of alcohol history by psychiatrists found: (a) dependence history often not obtained (b) diagnosis not made as often a expected	Schwartz, Lyons, Stulp, Hassan, Jacobi and Taylor (1993)
CLINICAL ISSUES	
Special populations include dual disorders and need treatment matching by characteristics to decide appropriate grouping.	Committee (1990)
Clients need flexibility, acceptance, open-ended, holistic, and a range of options.	Cooper and Kent (1990)
Potential interactions of substances with psychiatric illnesses are influenced by the stage of abuse, withdrawal, or recovery, and the nature of the psychiatric illness.	Decker and Ries (1993)
Clients without a history of major depression were more likely to abstain from smoking after cognitive-behavioral smoking cessation program.	Hall, Munoz and Reus (1994)
Psychiatric medications for dually-diagnosed clients may help or hinder recovery.	Ries (1993)
TREATMENT PROGRAMS	
Residential program has engagement, integration, extended length and modified 12-step.	Bartels and Thomas (1991)
Integrated and linked treatment models compared.	Kline, Harris, Bebout and Drake (1991)
A staged treatment model includes stabilization, engagement, persuasion, active treatment and relapse prevention. Outcome of substance abuse treatment depends on severity of psychiatric symptoms.	Kofoed (1993)

A therapeutic community modified for the mentally ill substance abusing homeless men is judged effective.	McLaughlin and Pepper (1991)
Chronic mental illness and substance abuse disorders both fit disease-recovery model. Requires continuity and comprehensiveness in integrated program.	Minkoff (1989)
Clients with substance abuse and schizophrenia need integrated elements of psychiatric and substance abuse treatment in a single program.	Muesar, Bellack and Blanchard (1992)
Hybridization means dually-diagnosed clients receive treatment for both disorders concomitantly within one setting.	Ridgely (1991)
Support groups (12 step) and family involvement adjusted for dual disorder clients.	Rubenstein, Campbell and Daley (1990)
Mentally ill chemical abusers need engagement, group discussion, unfolding of denial, achieving abstinence and self-help support.	Sciacca (1991)

SERVICE ISSUES

Dually-diagnosed clients particularly vulnerable to housing instability and homelessness.	Drake, Osher and Wallach (1991)
Psychiatrist has a role in treatment of clients and substance abuse. Psychiatrists need more training.	Group (1991)
Sub typing clients indicates a framework for service planning.	Lehman, Myers, Dixon and Johnson (1994)
Lack of organization innovation and co-ordination results in overburdening services designed for single disorders.	Ridgely (1991)
Psychiatric clients with past and current substance use may have greater use of services and need specialized treatment planning.	Ries, Mullen and Cox (1994)
Subgroups of mentally ill chemical abusers and chemically abusing mentally ill clients indicate different service needs.	Sciacca (1991)
Problem drinkers made greater demands on clinical resources and required more social services,including mental health, addictions, social and criminal justice systems.	Schmidt (1992)
Dangerous behavior associated with drug use by schizophrenics.	Yesavage and Zarcone (1983)

SUMMARY OF THE

LINKS BETWEEN MENTAL HEALTH AND SUBSTANCE ABUSE

This Detailed Analysis is the second of three documents formulated to explore the links between mental health and substance use. The first document is an Annotated Bibliography in which the authors report on and summarize the literature related to this issue. The Detailed Analysis provides a synthesis and analysis of the findings from the literature review. In the final document, the Discussion Paper, the authors will take the findings of the literature review and discuss them with regard to policy and program implications. As such, in this document, the major findings of the literature have been summarized and analyzed.

The findings of the literature, in general, support the existence of links between mental health and substance use in the literature. However, it appears that these links occur throughout the continua of both mental health and substance use and at several levels. First, it appears that substance use (most likely alcohol, tobacco and other legal drugs) can actually enhance mental health and facilitate coping. Second, if either mental health or substance use becomes problematic, the problem then becomes a risk factor for problems in the other domain (e.g. problematic alcohol use may be a risk factor for increased depression or increased anxiety may lead to increased reliance on alcohol to cope). It is likely in this category that the issue of dual disorder falls. Finally, it also appears that there are a set of external risk and protective factors which impact individuals' mental health and substance use patterns.

The links referred to in the first general category may be seen at one level as being quite functional for individuals, in that these persons may use alcohol and other drugs as a means to cope with various life difficulties which would otherwise give rise to depressive moods and/or anxiety. In these cases, alcohol and smoking are seen to be "legitimate" forms of substance use and have positive outcomes. It seems likely that many individuals participate in this form of substance use and it also seems likely that there is another set of "risk" factors which need to be in place before mental health or substance use becomes problematic. One of the more interesting questions that arises from any discussion of the links between mental health and substance use is: what are these additional risk factors and what causes people to move along the continuum towards problematic

One of the more interesting questions that arises from any discussion of the links between mental health and substance use is: what are these additional risk factors and what causes people to move 2one imalong the continuum towards problematic substance use or mental health.

substance use or mental health. Moreover, a close examination of these "functional" linkages between mental health and substance use may provide a great deal of information and insight regarding prevention programs.

The second major form of linkage between mental health and substance use is illustrative of the progression of substance *use* in relation to life difficulties towards substance *abuse* in relation to mental health problems. This form of linkage works both ways, in that mental health problems may act as risk factors for increased substance use and substance abuse may act as a risk factor for increasing mental health problems. The mental health risk factors include low self-esteem, external locus of control, low self-efficacy, and certain personality characteristics (in particular, sensation seeking, tolerance for deviance, and lack of conventionality). It seems that these typical mental health issues, when problematic, are directly linked to substance use. One important caution on these particular relationships, there are not many studies which directly illuminate a causal relationship between these mental health factors and substance use. The best evidence seems to come from those longitudinal studies reporting the occurrence of the mental health factor prior to problems with substances or the presence of substance abuse prior to the onset of mental health problems.

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A study conducted by Aneshensel and Huba (1983) serves to illustrate this discussion of the links between substance use and mental health and illuminates these first two forms of linkage. Aneshensel and Huba suggest that the immediate effect of alcohol is to relieve depressive symptoms but that the long term effects is increased depression. They also support that the relationship is bi-directional; that is, alcohol use ultimately increases depression and depression is a risk factor for alcohol abuse.

It is also interesting to note that, in general, most treatment/intervention programs deal with the presenting problem in isolation and rarely deal with the coexisting substance or mental health problem. Only in those programs designed to address dual disorder are both mental health problems and substance abuse addressed simultaneously. However, even within the dual disorder literature, there does not appear to be much clarity about the sequence of evolution of these types of problems.

The third major form of linkage discovered are those factors which seem to be risk factors for both mental health and substance use. These include: stress coupled with lack of coping skills, family dysfunction, family history of substance abuse, family violence, relationship problems, certain personality characteristics, minimal social support and poor social skills, and peer influences. For example, Zuckerman et al. (1987) indicate that the personality characteristics which act as risk factors for drug abuse are the same as those for depression. These risk factors appear to negatively impact some individuals and the negative impact may be expressed through mental health problems or through abusive use of substances.

One of the interesting questions arising from this discussion is why it is that some individuals appear to be more vulnerable to certain risk factors than others and how this vulnerability changes over time and context.

In light of the discussion about risk factors, it is also interesting to question the overwhelming emphasis on risk factors, rather than on protective factors. Why is it that, for example, when looking at policy and provision of services in the mental health and substance use areas, professionals and researchers tend to focus on the most dysfunctional, problematic end of the continuum of functioning and why do we focus so strongly on those factors which place people at risk? Particularly when this group of individuals make up such a small percentage of the population, while utilizing such a large proportion of the mental health dollars. It appears that there is fertile ground for a focus on prevention through examining those people who cope well without the use of substances and who seem to maintain a balanced healthy lifestyle. What are the protective factors and contexts which allow these people to cope and maintain their emotional and physical health? What are the implications for resource allocation in the areas of mental health care and substance abuse treatment of providing services which prevent or reduce the incidence of mental illness and substance abuse?

In summary, it seems that while many questions about the links between mental health and substance use have been raised, particularly about the exact nature and direction of the relationship, the existence of this relationship is without question. The task remains as to how best to understand and intervene in these relationships to empower individuals to cope with the challenges faced on a daily basis.

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