



Culture & Mental Health Research Unit

Report No. 1

**Suicide in Canadian Aboriginal Populations:  
Emerging Trends in Research and Intervention**

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**Report Number 1:**

**Suicide in Canadian Aboriginal Populations:  
Emerging Trends in Research and Intervention**

*A Report Prepared for the Royal Commission on Aboriginal  
Peoples*

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## PREFACE

This report was prepared at the request of Dr. Dara Culhane, Deputy Director of Social and Cultural Research for the Royal Commission on Aboriginal Peoples. Our mandate was to review the literature on suicide among Aboriginal peoples in Canada and set it in the larger context of research on the causes and prevention of suicide. The specific goal was to identify emerging trends in research and intervention. We hope that this document will help stimulate future studies, provide a basis for documents prepared for public dissemination, and assist the Royal Commission in its tasks.

The literature was reviewed by an interdisciplinary team of clinicians and scholars from psychiatry, family medicine, nursing, epidemiology, psychology, sociology and anthropology. It was assembled and integrated by the senior author.

In preparing this report we were able to draw from literature reviews and research results prepared by the Native Mental Health Research Group (See Appendix B) which receives support from the Fonds de la recherche en santé du québec as part of a priority research team on Culture and Mental Health, as well as grants from the Conseil québécois de la recherche sociale and the Kativik Regional Board of Health and Social Services. This work, however, was not done under the auspices of any of these agencies and they bear no responsibility for its content.

We would like to thank Drs. Morton Beiser, Dara Culhane, Charlotte Hobbs, Klaus Minde, John O'Neil, James Robbins, Mounir Samy, Michel Tousignant and two anonymous reviewers for the Royal Commission for their very helpful comments on earlier versions of this report.

Laurence J. Kirmayer, MD, FRCPC

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## 1. INTRODUCTION

### 1.1. Scope & Outline of Report

Suicide is an index of the severe social problems faced by Aboriginal peoples in Canada. The aboriginal suicide rate is three times that of the total Canadian population. From the ages of 10 to 29, Aboriginal youth on reserves are 5 to 6 times more likely to die of suicide than their peers in the general population (Medical Services Branch Steering Committee on Native Mental Health, 1991). Despite widespread concern about these alarming statistics, there continues to be a lack of epidemiological data, ethnocultural information on suicide and evaluation studies of intervention programs.

Our aim in this report is to review the scientific literature to situate the problems of Aboriginal peoples within the larger context of suicide in Canadian society so as to identify those features that are shared in common with the dominant society and those that are distinctive for Aboriginal groups. In such comparisons, there is a tendency to attribute any difference between groups to distinctive cultural or historical factors but economic problems, geographic differences and issues of scale (i.e. the size of communities and the degree of infrastructure) may also account for observed differences. Hence, comparative studies with statistical techniques that control for other possible explanations are needed.

This document is based on Medline, PsycLit and SocLit searches of the literature on suicide and Native peoples conducted in February and March of 1993 as well as consultations with researchers and review of the Royal Commission hearing transcript extracts on suicide. We have focused on more recent literature although we are indebted to earlier reviews of the literature on suicide (Hawton, 1986; Maris, Berman, Maltsberger & Yufit, 1992) and suicide among Native peoples in particular (May, 1990; Peters, 1981; Thompson & Walker, 1990). In many cases, we have had to rely on research in the U.S. since comparable Canadian studies are lacking. We have made no attempt to survey or assess popular and self-help literature on topics related to suicide as this has been undertaken by other groups for the Royal Commission. Many issues pertaining to Aboriginal culture and mental health that are only touched on in this report are discussed in more detail in a second report we have prepared for the Royal Commission entitled "Emerging Trends in Research on Mental Health Among Canadian Aboriginal Peoples."

**Outline.** In subsequent parts of this introductory section, we provide definitions of technical terminology and offer some general comments on the integration of social and psychiatric perspectives in models of suicide. The second major section addresses basic demographic data on Aboriginal peoples and descriptive epidemiological statistics on suicide in North America. We summarize variations in the prevalence of suicide and attempted suicide by age, gender, socioeconomic status, and other demographic factors. Particular attention is given to the marked changes in suicide rate that have occurred in

recent times as well as to variations across geographical location and ethnocultural group.

Section 3 summarizes research on risk and protective factors for suicide. Subsections address factors involving: the physical and social environment; constitution, temperament or developmental experiences; interpersonal relationships; alcohol and substance abuse; suicidal ideation and previous attempts; psychiatric disorders; social structure and economy; cultural traditions; and the impact of culture change.

In Section 4, we summarize what is known about the efficacy of interventions for suicide prevention. The introductory subsection presents a table outlining types of interventions that have been proposed. We then consider detection, primary, secondary and tertiary prevention, and postvention (that is, the treatment of survivors). The conclusion to this section presents a summary of a comprehensive 'state-of-the-art' approach to prevention.

In the concluding section, we sketch a sociocultural perspective on suicide. We then summarize the gaps in our knowledge, emerging trends in research and promising approaches to intervention. Appendix A presents a brief summary of research methods to orient the interested reader.

## 1.2. Terminology & Definition

The classic definition of suicide is due to Durkheim (1897/1951):

“The termination of an individual’s life resulting directly or indirectly from a positive or negative act of the victim himself which he knows will produce this fatal result.”

While it appears clear, this definition is difficult to interpret and apply consistently in research studies (Farmer, 1988). The official records on which suicide and other causes of death are recorded are often inaccurate, incomplete and do not contain crucial information for studying sociocultural correlates of suicide. Self-injury may mimic or aggravate pre-existing disease so that suicide is difficult to distinguish from “natural death.” Determinations of individuals’ motivation or intention to harm themselves may be difficult (Samy, 1993). In the case of studies of completed suicide, where it can only be done retrospectively, such judgments of motivation may be impossible.

These considerations have led researchers to distinguish between studies of *attempted suicide*, *completed suicide* and *parasuicide* (self-injurious or risk-taking behaviour that is life-threatening without suicide being the conscious goal). In ongoing studies of parasuicide, the WHO has defined parasuicide as:

(1) an act with nonfatal outcome, (2) that is deliberately initiated and performed by the individual involved without expectation of fatality, (3) but that causes self-harm or without intervention from others will do so, or consists of deliberately ingesting a substance in excess of the prescribed or generally

recognized therapeutic dosage, and (4) which is aimed at a goal, i.e. to bring about desired changes in consciousness and/or social or interpersonal conditions (Platt, Bille-Brahe, Kerkhof, Schmidtke, Bjerke, Crepet, et al., 1992).

Much of the literature makes sharp distinctions between suicide, attempted suicide and parasuicide, for both methodological and substantive reasons (Hawton, 1986; Maris, 1992). However, the interpretation of risk-taking behaviour or self-injury without the intent to die as related to suicide is contentious.

While many studies indicate somewhat different factors contributing to each of these forms of self-harm, they are certainly related.<sup>1</sup> Many completed suicides followed a progression from ideation to attempted suicide to completion (Jeanneret, 1992). Accordingly, suicidal behaviour may be viewed on a continuum and temporal and dynamic links sought between levels of life-threatening behaviour.

In this report we will focus primarily on completed and attempted suicide on the assumption that they represent a continuum of increasingly more lethal forms of self-harm. Statistics are generally more readily available and less ambiguous for completed suicide, while studies of psychological correlates are much easier to conduct on suicide attempters. We will present statistics primarily on completed suicide. We will also treat attempted suicide, along with suicidal ideation, as risk factors for completed suicide (See Section 3.6). Where important contrasts in the groups identified by each definition exist, we will highlight them.

### **1.3. Integrating Social and Psychiatric Perspectives**

The mental health professional tends to view suicide as an individual problem related to personal and/or family psychopathology. The sociological perspective sees suicide as a consequence of large scale social processes including economic disadvantage, acculturation stress and political disempowerment.

There is no single item of information or combination of items that allows accurate identification of individuals who will commit suicide over the long-term (Pokorny, 1992). Accordingly, the clinical psychiatric perspective focuses on identifying and treating individuals who are currently distressed and at immediate risk. Up to the present, Aboriginal peoples in many parts of the country have not received adequate access to the range of mental health services.

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<sup>1</sup> Comparisons of completed and attempted suicides are made difficult by differences in research methods. For example, Lester (1991) used a measure of objective suicidal intent on a sample of completed suicides and a sample of attempted suicides. He found that the correlates of suicidal intent were quite different in the two groups. This may reflect substantive differences between completed and attempted suicides but it also may reflect limitations of working with retrospective data. The problem with using reports by others of life events of the individual who has suicided is that the meaning of relevant events may be changed or omitted by the respondent.

The provision of adequate clinical and social services will certainly reduce the suicide rate.

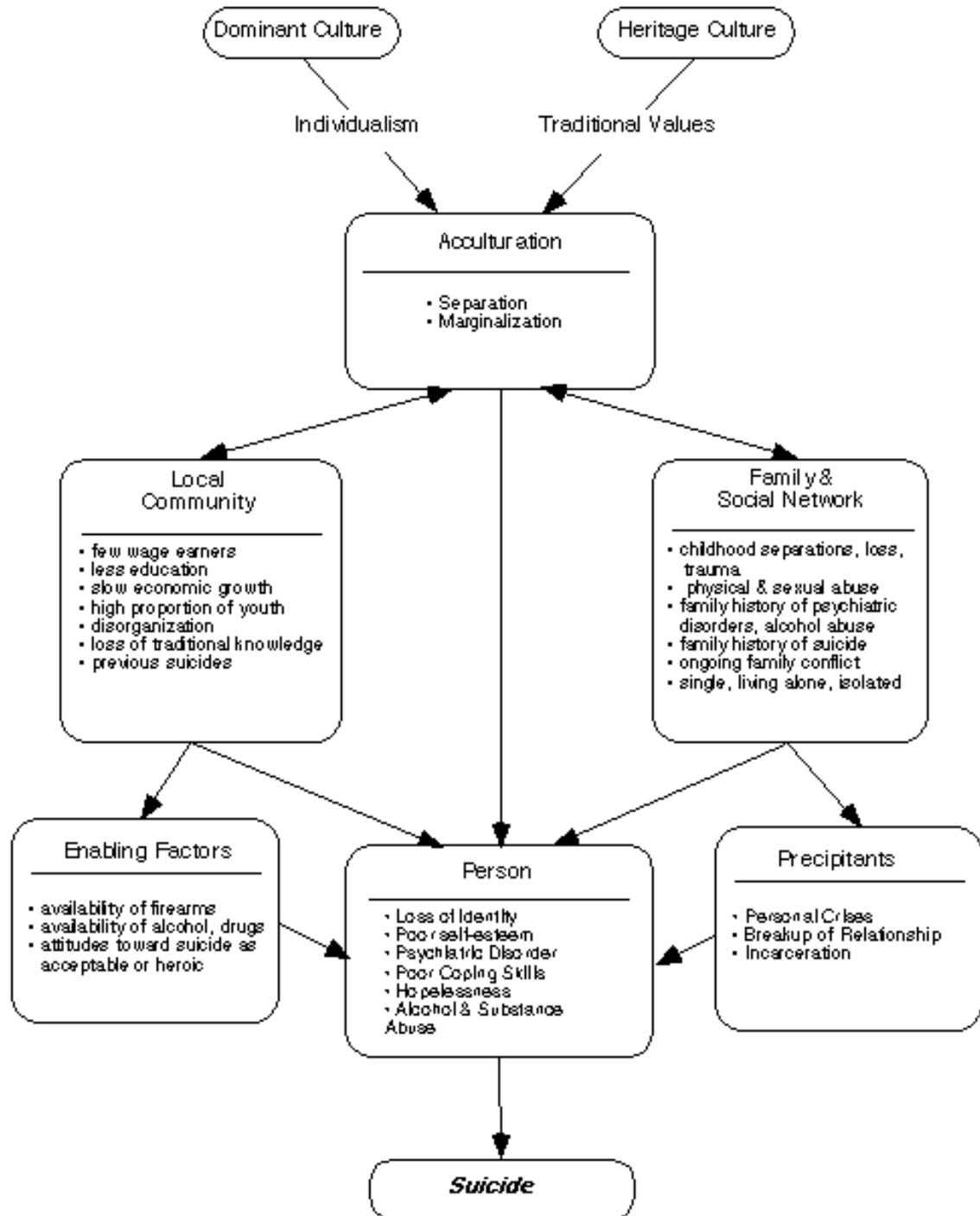
An argument can be made, however, that given the widespread social problems faced by Aboriginal peoples in Canada, viewing suicide strictly as the outcome of a psychiatric disorder actually aggravates the situation. Psychiatric explanations are stigmatizing and so add to the feelings of estrangement, devaluation and powerlessness that contribute to suicide attempts. A psychiatric approach directs attention to the pathological individual rather than to basic social problems that demand remediation. Labeling whole communities as 'sick' is a metaphor that may contribute to pervasive demoralization. From this perspective, it would be best to find a means to address hopelessness without labeling it as an illness at either individual or community levels.

Several studies on suicide and suicide attempter typologies suggest a distinction between: (1) individuals with major pre-existing psychiatric disorders, and (2) individuals who have less psychopathology but more recent stressful life events and alcohol use (Bagley, 1992; Duberstein et al., 1993; Kienhorst, de Wilde, van den Bout, van der Burg, Diekstra & Wolters, 1993). This typology raises the question of whether Native suicides are comprised of one type more than the other. Few data are available and the issue is clouded by the attributions made by clinicians in establishing psychiatric diagnoses, particularly those of personality disorders. If symptoms of conduct disorder, and substance abuse are attributed to endemic social problems, and self- or other directed aggression is viewed as a culturally or socially shaped response to rejection then most Native youth suicides would fall into the second group. If long-standing social problems and disruptions of parenting and other relationships result in major depression or deformations of character, then the same individuals might be given a psychiatric diagnosis and fall more clearly into the first group. Although this is an empirical question, it requires careful reformulation of diagnostic criteria and prospective longitudinal study to be answered.

Psychiatric and sociological views may be complementary rather than contradictory. Drawing from the work of Thorslund (1990, 1991), Figure 1 sketches an integrative model in which the collision of two cultures results in acculturation stress that acts at three levels: the community, the family and the person. The community suffers economic disadvantage, social disorganization and political disempowerment. Unemployment, poverty and community disorganization create conditions of alienation and anomie (normlessness). The family and social support system suffer disorganization as well from the forced changes brought on by rapid modernization and loss of traditional patterns of child-rearing. Individuals suffer self-estrangement and loss of self-esteem due to the denigration or marginalization of the heritage culture from which they draw their language, self-definition and personal history.

The model makes it clear that there are both distal and proximal factors that influence suicide. These range from social historical changes that exert their effects over long periods of time to enabling factors—like the ready availability of alcohol, drugs and firearms—that increase the likelihood of lethal suicide

Figure 1. A Model of Factors Contributing to Suicide Among Aboriginal Peoples.\*



\* Based in part on Thorslund (1991, p. 90).

attempts in response to a precipitant like the break-up of a relationship or other personal crisis.

This model of suicide is helpful in highlighting the central role of larger social historical factors in the predicament faced by contemporary Aboriginal peoples. It is misleading, however, in several important ways. First, it ignores the great diversity of Native communities both in social and cultural history and in current circumstances. Culture contact is not uniformly deleterious nor does it always result in a loss of traditional culture. There are very wide variations in the rate of suicide among Aboriginal communities, reflecting the different ways in which communities have responded to ongoing challenges.

Secondly, the acculturation model ignores the fact that culture contact is not primarily a matter of the choice of adaptive strategy of individuals but is the outcome of political forces and struggle between groups. For most of the history since contact, Aboriginal cultures have been actively suppressed, undermined and destroyed by European and Canadian institutions and individuals. These acts of violence have directly scarred many Aboriginal peoples and severely constrained their options for adaptation.

Thirdly, even with this history of violent oppression, culture contact remains a two-way process, in which Native culture and values have exerted a significant effect on the dominant society. In fact, this impact of Native values may be increasing in recent years through political efforts and media exposure. At the same time, Native peoples are actively engaged in creating ways of life and identity that blend features of traditional culture with elements drawn from the wider society.

The final common pathway of suicide is the hopelessness and pain of the individual. This hopelessness and despair is fueled both by psychiatric disorders and by existential problems that follow directly from the rapidity of social change, the suppression of traditional knowledge, history and identity, as well as from persistent racism and economic disadvantage in the larger society. These problems demand social and political analyses and interventions. The fact that the mental health literature tends to focus on individual problems and solutions should not obscure this need for a broader perspective on suicide among Aboriginal peoples.

## 2. EPIDEMIOLOGY

### 2.1. Demography

While the term 'Aboriginal' creates the illusion of homogeneity, there is great cultural diversity among Canadian Aboriginal groups with some 580 bands, 10 major language groups and more than 58 dialects (Frideres, 1993; Medical Services Branch, 1991). Although most communities face similar problems of rapid cultural change, there are substantial variations in the type and frequency of social and psychiatric problems. Throughout this document then, it is essential to keep in mind this variation which may limit the applicability of findings made in one community, cultural group or socioeconomic situation.

For governmental purposes, Canada's Aboriginal peoples comprise four main groups: status Indians registered under the Indian Act of Canada; non-status Indians; Métis and Inuit. Although some demographic data are available for all four groups, systematic health data collection systems for non-status Indians and Métis do not exist (Norris, 1990).<sup>2</sup> Since some Aboriginals who have integrated into the dominant society may no longer identify themselves as Aboriginal, existing statistics do not provide a complete picture of the evolution of health care problems even for status Indians.

The demography of the Aboriginal population is distinct from that of the general Canadian population in several important respects. Due to a transition to lower birth rates and increased life expectancy at a later date than the general population—that is, not until the 1940s to 1960s—a greater proportion of Aboriginal peoples are young (Norris, 1990). The birth rate remains at about twice that of the general population. Aboriginal groups have significantly higher mortality levels resulting in a life expectancy about 10 years shorter than that of the average Canadian. The 1986 Census indicated that 37% of all status Indians had less than grade 9 education, more than twice the total Canadian rate of 17% (Medical Services Branch, 1991).

The geographic distribution of Aboriginal peoples also differs from that of the general Canadian population in being predominately rural. In the 1986 census, 61% of those describing themselves as "Native only" in origin, and 46% of those with "mixed" (Native and non-Native) heritage, lived in rural settings compared to 23% of the population overall (Norris, 1990). About 60-70% of individuals who identify themselves as of Native origin only live on reserves and settlements. Aboriginal peoples off-reserve are more mobile than other Canadians, while those on reservations are less mobile. Women are more likely than men to leave the reserve. In recent years, however, the net flow of the Native population has been from urban to rural locations—especially among older women (Norris, 1990, p. 52ff). The Métis population is an exception to this pattern of migration.

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<sup>2</sup> Throughout this document we will use "Aboriginal" and "Native" interchangeably. We will also use the term "Indian" when referring to status or non-status Indians in Canada or Native American Indians in the U.S. To avoid confusion, the choice of term will parallel the particular literature we are citing or reviewing.

This demographic diversity presents a problem in estimating the extent of Aboriginal suicide from detailed data pertaining primarily to reserves or to status Indians. Over 75% of the total Aboriginal population reside off reserves (Valentine, 1992). While in Eastern Canada, Aboriginal peoples living off reserve tend to resemble the local general population in demographics and employment and prosperity, in Western Canada there continues to be a large gap between the economic status of Aboriginals and the local general population, even when Aboriginals leave the reserve.

## 2.2. Prevalence

Rates of suicide in Canada as a whole have generally been higher than in the U.S., although in the mid-range in cross-national comparisons (Group for the Advancement of Psychiatry [GAP], 1989). From 1971 to 1980, the rate of suicide in Canada ranged from 11.9 to 14.8 per 100,000. In the United States, the 1987 suicide rate was 12.7/100,000 (Tsuang Simpson & Fleming, 1992). Over this century, the U.S. rate has averaged 12.5/100,000, but ranged from a high of 17.4/100,000 during the depression to a low of 9.8/100,000 in 1957.

Overall, rates of suicide among Native peoples in North America have been substantially higher than the average of the general population (Earls, Escobar & Manson, 1991; GAP, 1989; Kettl & Bixler, 1991; Sievers, Nelson & Bennett, 1990). Annual suicide rates in recent years for all Canadians and for status Indians are shown in Figure 2.

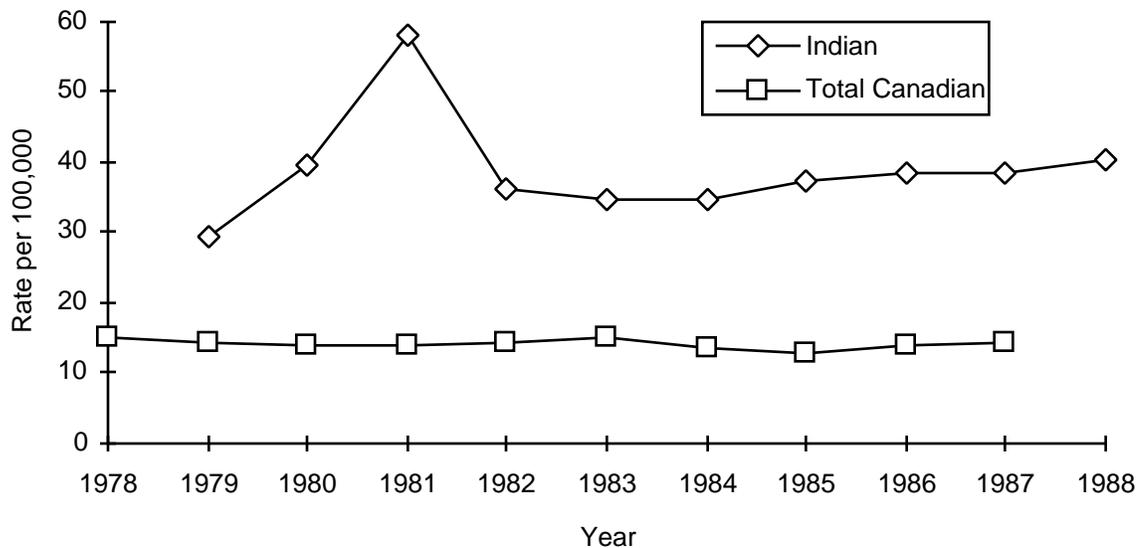
In some provinces, Aboriginals comprise up to half of all suicides. On average, registered Indians have approximately 3 times the rate of suicide of the total Canadian population. This greatly under-estimates the problem, however, since deaths by accident are also 4 to 5 times higher among Aboriginal groups and an unknown proportion of accidental deaths represent suicide—a Medical Services Branch (1991, p.45) report suggests as many as 25%.<sup>3</sup>

The prevalence of suicide attempts may be under-estimated in most studies because individuals are reluctant to divulge the problem, most attempts do not come to medical attention, and when they do, assessment of suicidal intent is difficult. In some cases, youth may report minor acts with no serious suicide potential as suicide attempts leading to an over-estimate. As a result, surveys of suicide attempts must include questions to assess the severity of the attempt (Meehan, Lamb, Salzman & O'Carroll, 1992).

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<sup>3</sup> In estimating prevalence, we have relied heavily on statistical data from the Medical Services Branch because few other data are available. Unfortunately, these statistics address only Status Indians. As well, we have not been able to review the original sources of these data or their methods of collection so we cannot ascertain their reliability.

Figure 2. Status Indian and Total Canadian Suicide Rates, 1978-88  
(Age-sex standardized rate per 100,000)



Source: Medical Services Branch Steering Committee, 1991, p. 45.

The Epidemiologic Catchment Areas study in the U.S. found a lifetime prevalence of suicide attempts in the general population of 2.9%; among 18-24 year olds this increased to 3.4% (Moscicki, O'Carroll, Rae, Locke & Roy, 1989). A survey of an urban population in Alberta found a self-reported rate of attempted suicide of 0.8% (Ramsay & Bagley, 1985). The U.S. National Adolescent Health Survey of a probability sample of high school students found 14% reported having made a suicide attempt at some time (American School Health Association, 1989). In a sample of 18-24 university freshmen, Meehan and colleagues (1992) found a self-reported rate of attempted suicide of 10%; as indices of severity, 4.6% reported having been injured in an attempt, 3% had sought medical attention due to an attempt and 1% were hospitalized for a suicide attempt. About 2% of respondents reported having made a suicide attempt in the last 12 months.

Among Native peoples in the U.S., the Adolescent Health survey administered to some 13,000 American Indian and Alaskan Native high school students living in non-urban settings, indicated that 17% had attempted suicide at some time (Blum, Harmon, Harris, Bergeisen & Resnick, 1992). A survey administered to 83 freshman students from the Zuni Public High School in New Mexico ( 58% girls, mean age 15.6) found a 30% rate of suicide attempts (Howard-Pitney, LaFromboise, Basil, September & Johnson, 1992).

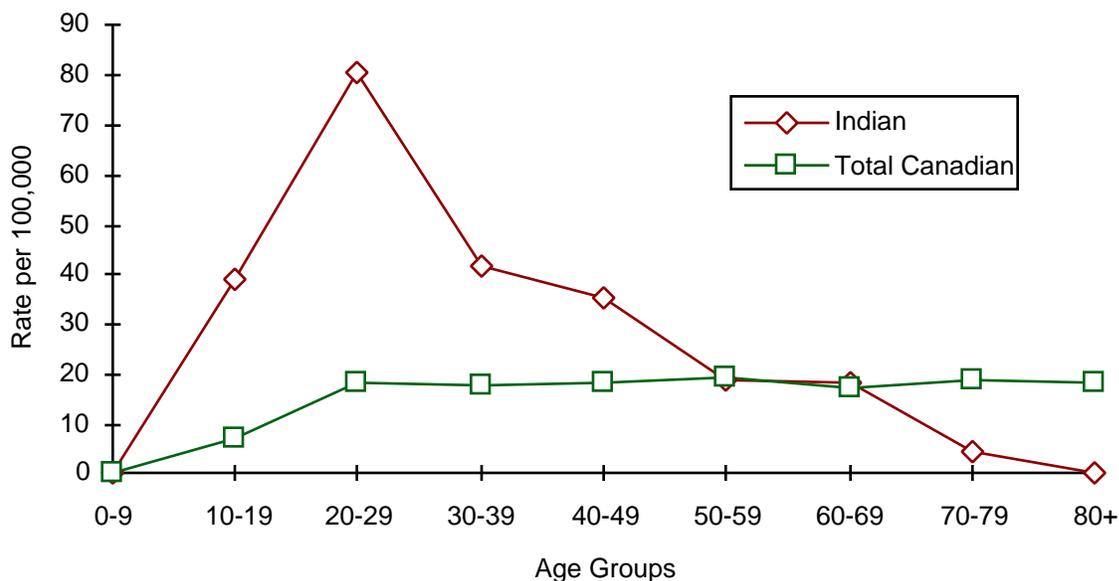
We could find little data on the prevalence of suicide attempts among Aboriginal groups in Canada. Results of the Santé Québec Health Surveys of the Cree and Inuit populations had not been released at the time of this report. Our own community survey of 100 Inuit youth (ages 15-25) in a settlement on the East Coast of Hudson's Bay, using an adaptation of the Adolescent Health

Survey incorporated the questions of Meehan and colleagues (1992), found a lifetime rate of attempted suicide of 34% (Kirmayer, Malus, 1994). As an index of severity, 11% of suicide attempts resulted in an injury. Fully 5% of individuals reported they had made a suicide attempt in the last month. Only 16% of those who had ever made an attempt reported seeing a doctor, nurse or other health professional in relation to this attempt.

### 2.3. Age Differences

In the general population, suicide rates vary markedly over the life span. Suicide under the age of 12 is very uncommon (Hawton, 1986; Ryland & Kruesi, 1992). The rate increases over the teenage years to reach a peak at about age 23-25 and then declines until 60-65 when it shows a second smaller peak (Tsuang et al., 1992). Suicide is the second leading cause of death, following accidents, among 15-24 year olds in North America (Rosenberg, Smith, Davidson & Conn, 1987).

Figure 3. Comparison of Status Indian and Total Canadian Suicide Rates by Age Group (Average over 1984-88)



Source: Medical Services Branch Steering Committee, 1991, p. 47.

This pattern of age trends is exaggerated in the Aboriginal population (See Figure 3). A status Indian adolescent is 5-6 times more likely to die from suicide than the average Canadian adolescent. After age 70 the rate among status Indians actually drops below that for the general population. This same pattern has been found among Natives in the U.S (GAP, 1989; Kettl & Bixler, 1991).

While completed suicide is rare, even among adolescents, suicidal ideation and suicide attempts are relatively common. A recent survey of over 11,000 high

school students in the U.S. found that 27.3% of students had 'thought seriously about attempting suicide last year' and 8.3% had attempted suicide (Ryland & Kruesi, 1992). Comparable or higher rates have been reported for Native American students in boarding schools (Manson et al., 1989) and high schools (Grossman et al., 1991; Howard-Pitman et al., 1992). Our own study of Quebec Inuit youth found that 34% reported ever having thought of suicide and 17% reported having thought of suicide in the last 3 months (Kirmayer et al. 1993b). About 5% reported serious suicidal thoughts in the current month.

## **2.4. Gender Differences**

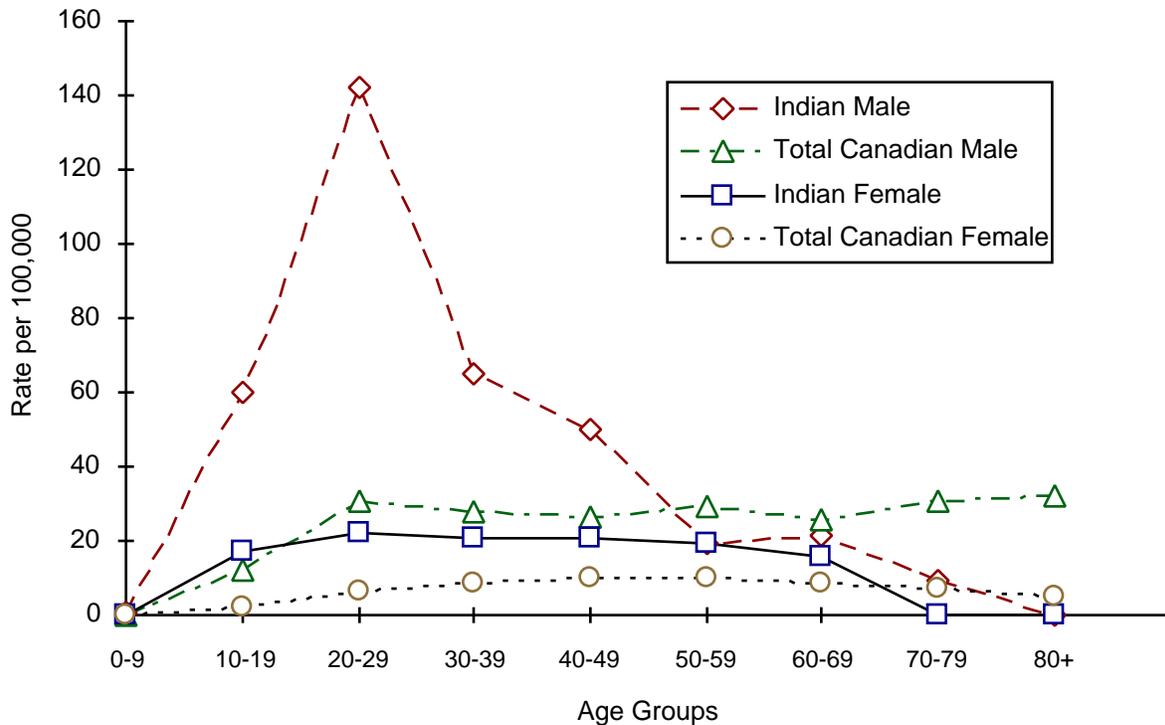
In the general population, suicide rates are generally higher among males than females, while suicide attempts are more frequent among females than males (Cheifetz et al., 1987; Velez & Cohen, 1988; Weissman, 1974). The male to female ratio of completed suicide is about 4 or 5 to 1 (Garrison, 1992). This difference is largely accounted for by the fact that males tend to use more lethal means (firearms, hanging, jumping from a height) than women (drug overdose, wrist slashing) (Velez & Cohen, 1988). Drug overdoses are rarely successful. The most common methods for completed suicides among women in urban settings are intoxication, hanging and jumping from a height (Cheifetz et al., 1987; Hawton, 1986). Less marked sex differences are found among some groups including Hispanics and blacks in the U.S. (GAP, 1989).

The gender differences in suicide rates among status Indians are comparable to those of the general population although amplified by higher rates in both males and females (See Figure 4). Female adolescent status Indians are 7.5 times more likely to commit suicide than female adolescents in the total population. In the 20-29 years age range, the suicide rate for female status Indians is 3.6 times the rate for all Canadian females. Female status Indians have higher suicide rates than all female Canadians up to 69 years of age, at which point the Aboriginal rate falls below that of all females. Rates for male status Indians are higher than the total male population from ages 10 to 50. Adolescent males are more than 5 times as likely to commit suicide than the average Canadian male adolescent. Male status Indians between the ages of 20-29 have the highest rates of suicide of any group in Canada.

## **2.5 Marital Status**

Suicide is more frequent among both men and women who are single, separated, divorced or widowed compared to those who are married (Trovato, 1991). Those who are married with children have still lower rates. Suicide attempters are also more often single, separated or divorced and live alone (Wasserman, 1988).

Figure 4. Comparison of Sex-Specific Status Indian and Total Canadian Suicide Rates by Age Group (Average over 1984-88)



Source: Medical Services Branch Steering Committee, 1991, pp. 48-51.

An analysis of Canadian data covering four decades (1951 to 1981) supported the hypothesis that a change from single or widowed to married status reduced suicide risk for men significantly more than for women (Trovato, 1991). In the case of a transition from divorced to married status, both sexes benefited equally in reducing suicide potential. However, the analysis was confined to the population aged 35 years and older because comparable information for younger ages was not available. As well, it is unknown to what degree common-law “marriage” or other culture-specific, informal cohabitation arrangements and liaisons confer the same benefits. In many Native communities, extended family and kinship networks take the place of the reliance on a spouse or partner in the dominant society. As a result, it is unclear to what extent these data can be generalized to Aboriginal populations.

## 2.6. Period and Cohort Effects<sup>4</sup>

Suicide attempts increased in prevalence in the U.S. from 1960 to 1971 (Weissman, 1974). While the overall rate of completed suicide was stable from 1950 to 1980 in the U.S., the rate actually decreased among older individuals and increased 200% to 300% among 15-24 year olds (Rosenberg et al., 1987). The rate for young people has continued to increase more gradually over the last decade (Tsuang et al., 1992). A smaller increase in rate of suicide has also occurred in the 25-34 year old age group over this same time span. Suicide rates are continuing to increase in early adolescence (ages 13 and 14) (Bourque, Cosand & Kraus, 1983; Deykin, Perlow & McNamarra, 1985; Velez & Cohen, 1988). These increases have affected both males and, to a lesser extent, females. There is some indication that rates for males over 20 may have stabilized in recent years, while rates for youth in the 15 to 19-year range continue to rise (Mao, Hasselback, Davies, Nichol & Wigle, 1990).

Similar patterns of increasing suicide rates among youth, especially young males have been reported among Aboriginal Canadians (Rodgers, 1982; Sampath, 1992; Thompson, 1987), American Indian and Alaska Native groups (Kettl & Bixler, 1991), Inuit in Greenland (Grove & Lynge, 1979; Thorslund, 1990), Aboriginals in South Australia (Cawte, 1990; Clayer & Czechowicz, 1991) and in Micronesia (Rubinstein, 1983). These changes do not just affect Aboriginal groups, although they are greatly amplified among both male and female Aboriginal youth (Jilek-Aall, 1988).

Holinger and Offer (1982) argued that the suicide rate is related to the composition of a population; specifically, the suicide rate for youth increases with the proportion of the population that is adolescent. Recent analysis of regional U.S. data supports this hypothesis (Holinger & Lester, 1991). (The opposite relationship was found to hold true for older suicide victims, i.e., higher rates of suicide among the aged are associated with a smaller proportion of older individuals in the population.) An attempted replication with an international sample did not support this finding cross-nationally (Lester, 1992b). These results were also not confirmed in a Canadian study, which found an inverse relationship between the size of the youth cohort and regional suicide rates (Hasselback, Lee, Mao, Nichol & Wigle, 1991).

The observation that in the U.S., the rate of youth suicide correlates with the proportion of population in the 15-24 age range suggests an hypothesis of "relative deprivation" in which greater competition for limited opportunities and resources leads to disadvantage and demoralization and hence, to increased rates of suicide. Elderly people are not involved in the same competition to establish themselves and so may benefit instead from the social solidarity and increased political-economic representation associated with a larger cohort.

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<sup>4</sup> A *cohort effect* is one that is associated with a specific group of individuals born within a specific time period (e.g., "baby-boomers"). A *period effect* involves changes occurring at one specific time that affect individuals of all ages at that time.

Data from Alberta indicate that similar trends of increasing suicide rates among adolescents and young adults in Canada cannot simply be explained by shifts in the age composition of the population (Hellon & Solomon, 1980). These data also suggest that there is a cohort effect (Solomon & Hellon, 1980).

The change in suicide rates over time may be both a cohort effect and a period effect. For the general population, a period effect seems to be the more important explanation for the recent rise in suicides, because changing social factors can best account for the rapidity and fluctuation of the changes in rate (Wetzel, Reich, Murphy, Province & Miller, 1987).

Both period and cohort effects also may be important for the current generation of Aboriginal youth who face unique circumstances. Their parents often went to residential schools while they are more likely to be educated in their communities. This difference accentuates the generation gap. They are a large cohort entering the work force during economically depressed times. Finally, they are living at a time of increasing awareness of the economic disparities between Aboriginal communities and the dominant society through mass media and a growing sense of concern over political issues such as land claims and self-government.

## **2.7. Regional and Ethnic Differences**

Suicide rates vary cross-nationally and across ethnocultural groups within a society, but comparisons are difficult to interpret unless they are made between communities with similar suicide reporting practices (GAP, 1989; Tousignant & Mishara, 1981).

Studies in the United States indicate large regional and ethnic differences. The suicide rate in the U.S. is about twice as high in whites compared to blacks at all ages (GAP, 1989). A study of 261 Canadian census divisions found higher suicide rates in census divisions with higher proportions of Francophones, Native people, and immigrants (Hasselback et al., 1991). High rates of suicide were also found in isolated regions.

There are wide variations in historical and current suicide rates among Aboriginal groups (Bachman, 1992; May & Dizmang, 1974; McIntosh, 1983-84; Pine, 1981; Shore, 1975; Spaulding, 1986; Webb & Willard, 1975). The average rates among different Native American groups over 1980-1987 ranged from 2.88 to 120.77 per 100,000 in 100 different U.S. reservation-counties (Bachman, 1992). The highest rates have been reported in the Western U.S. and Alaska (Kettl & Bixler, 1991; Pine, 1981).

In a study by Shore (1975) American Indian suicide patterns in the Pacific Northwest were examined with data obtained from the Portland Area Office of the Indian Health Service for the years 1969-1971. Of the 40,000 Indian people who live in the states of Washington, Oregon, and Idaho, there were 20 completed suicides over the three years and a total of 227 attempts. The profile of

the completed suicide subject was of an Indian male, single or separated who shot or hung himself at home or in jail on the intermountain reservation. Alcohol and solvent abuse were involved in 75% of the completed suicides. Except for the Intermountain tribe, the typical profile of the attempted suicide subject was that of a young female who attempted a drug overdose at home following a quarrel with a relative or friend. These were often impulsive acts; alcohol was involved in 44% of the cases. Shore emphasized the high risk for suicide in Intermountain tribes compared to the much lower risk for Northwest Coastal and Plateau tribes. Suicide occurred more frequently in specific groups, in *clusters*,<sup>5</sup> as a learned response to social psychological stress. As probable contributors to these suicide clusters, Shore cited: enforced residence on reservations, geographical isolation, widespread unemployment, widespread alcoholism and drug abuse, disorganized family life, and loss of relatives or friends by death.

As shown in Figure 5, there are marked regional variations in suicide rates among status Indians (Medical Services Branch, 1991). However, such regional variations may reflect differences in reporting practices as well as true effects. From the period of 1979-83 to 1984-88, there were increases in the suicide rates for Alberta, Atlantic and NWT regions, while the rates in Québec, Saskatchewan and Yukon regions decreased.

We could not find any study that systematically compared suicide rates and characteristics across Canadian Aboriginal groups. Studies in Canada either report provincial statistics and provide a discussion of the differentials between Aboriginal and non-Aboriginal suicide (e.g., Aldridge & St. John, 1991; Thompson, 1987), or discuss Aboriginal suicide in a specific area or territory (e.g., Ross & Davis, 1986; Spaulding, 1986).

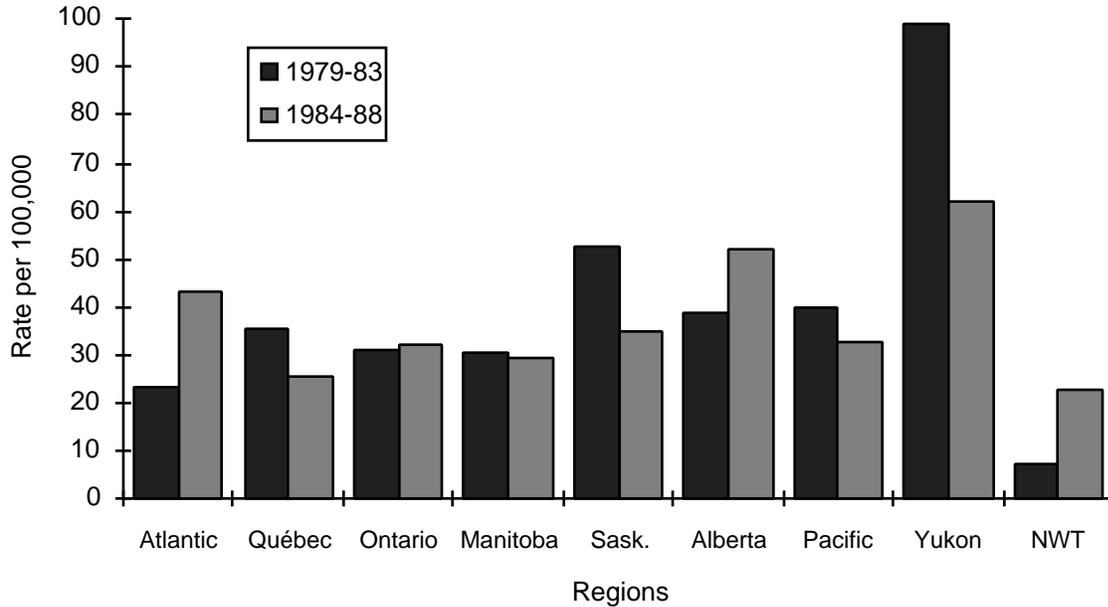
Table 1 summarizes studies of suicide rates among Canadian Aboriginal groups. These studies are not directly comparable because of differences in method, time period and sample. However, they all indicate much higher rates than those in groups of comparable age and gender composition from the general Canadian population.

There are wide variations in suicide rates for Aboriginal people between communities, even within the same geographical region. For example, there is a three-fold difference between southern and northern Alberta (Bagley, Wood & Khumar, 1990). In a study of suicide in Newfoundland, all cases among Aboriginal people were restricted to a few communities in Northern Labrador where only 25% of the Aboriginal people live (Aldridge and St. John, 1991). There are five isolated coastal communities in Northern Labrador one of which is Innu while the others are mainly Inuit. These communities have been noted to be distressed for some time and the Innu community of Davis Inlet has recently been the focus of much urgent attention. The communities have problems with crowded housing, alcohol and solvent abuse. About 40% of the population is under age 15.

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<sup>5</sup>A suicide cluster is a grouping of suicides close in time and location. See Section 2.8 below.

Figure 5. Regional Comparison of Status Indian Suicide Rates  
(Five year averages, 1979-83 & 1984-88)



Source: Medical Services Branch Steering Committee, 1991, pp. 52.

Our own data based on a review of the medical charts of all deceased individuals from a 10 year period (1982 to 1991) for the Inuit on the East Coast of Hudson's Bay yield a figure of 54.3/100,000 (Kirmayer, Malus & Delage, 1993a). For 1982 to 1986, the rate was 28.6/100,000, while for 1987-1991 it was 80/100,000. Most of this increase was due to a cluster of 10 suicides in 1991. The nonadjusted rate thus jumped from twice to almost 5 times the national average. Fully 90% (17/19) of suicides occurred in the 15-25 year age group. If 'possible' suicides are added to the suicide group, then the rate rises to 85.7/100,000 over 10 years (45.7 for 1982-86 and 125.7 for 1987-91); again, fully 83% (25/30) of suicides occurred in the 15-25 age group.

**Table 1. Some Reported Suicide Rates Among Canadian Aboriginal Groups.**

Region	Group	Period	Source	Suicide Rate* (per 100,000)
Labrador	'Native Peoples' Age 15-24	1979-83	Wotton, cited in Aldridge & St. John, 1991	337
	Innu, Inuit North Coast of Labrador, Age 10-19	1977-88	Aldridge & St. John, 1991	180
East Coast of Hudson's Bay	Inuit	1982-91	Kirmayer et al., 1993	55-86**
Northwestern Ontario	Ojibwa	1975-82	Spaulding, 1986	62
	Wikwemikon	1975	Ward & Fox, 1977	267
Manitoba	Northern Manitoba, Status Indians	1981-84	Ross & Davis, 1986	77
	Natives Age 18-20	1971-82	Thompson, 1987	177 M 32 F
	Indian Reserves	1971-75	Cited in Rodgers, 1982	31
Alberta	Northern Alberta Natives Age 15-34	1980-85	Bagley et al., 1990	80 M
N.W.T.	Total Population Age 15-24	1970-80	Rodgers, 1982	120 M 40 F

\* Rates rounded to integers.

\*\* Higher rate with inclusion of 'possible suicides'.

## **2.8. Suicide Clusters**

Examination of mortality data for 1978-1984 from the U.S. National Center for Health Statistics Mortality Detail files, revealed significant clustering of suicides in time and location (Gould, Wallenstein & Kleinman, 1990). There was some indication that the frequency of suicide clusters increased over this period of time. The transmission of increased suicidality may occur through media exposure as well as personal ties and emotional identification with the predicament and actions of suicide victims.

The prominent display of a suicide in the newspaper, television or other mass media leads to a predictable increase in deaths over a one to two week period following the display (Eisenberg, 1986; Gould et al., 1990; Phillips & Carstensen, 1986). The relationship is dose responsive, that is, the more intense the media coverage, the greater the increase in suicide rate (Phillips, Lesyna & Paight, 1992). This adverse effect of media attention has been noted in recent Native American suicide clusters (Tower, 1989).

It seems obvious that suicide clusters occur on an imitative basis. However, it has proved difficult to demonstrate this rigorously. A case control study of 14 adolescent suicides occurring in two clusters, using closed response questionnaires given to parents, found that cases were no more likely than controls to have had direct exposure to persons who had committed suicide (Davidson, Rosenberg, Mercy, Franklin & Simmons, 1989). Cases were also no more likely to have had indirect exposure to suicide through media. They were more likely to have attempted suicide previously, to have damaged themselves physically, to have known someone closely who died violently and to have broken up with girlfriends or boyfriends recently. They had a past history of having moved more often, attended more schools and had lived with more parent figures.

There is no research yet on whether imitative suicides involve the same types of individuals and actions as those occurring under other circumstances. In one study, the incidence of suicide attempts was no higher in friends of suicides than in controls over a six month follow-up suggesting that suicide clusters must involve additional factors beyond close familiarity with a victim of suicide (Brent, Perper, Mortiz, Allman, Friend, Schweers, et al., 1992).

It appears that suicide clusters involve individuals who were previously at risk. However, the choice of methods, time and place for the suicide may be strongly influenced by exposure to previous suicides. Suicide clusters pose a special problem for Native communities in which many individuals are closely related and share the same social predicaments so that the impact of one suicide is deeply felt within the whole community and has strong reverberations. This close connection between many individuals and sense of a shared predicament increases the risk of a cascade effect giving rise to a cluster of suicides.

## **2.9. Summary of Epidemiology**

Suicide rates among Aboriginal peoples have increased dramatically in recent decades to more than three times the rate of the general population. Suicide occurs much more commonly among the young than the elderly. Victims are most likely to be male. Suicides most often occur in association with heavy alcohol consumption, and are carried out by highly lethal means (guns and hanging). There are wide regional variations in suicide rate. Compared to the general population, suicide in Aboriginal adolescents may be more likely to occur in clusters (Earls, Escobar & Manson, 1991).

Basic data on rates of suicide among non-Status Indians and Métis are not available. Few data on attempted suicide are available for any Aboriginal group. Suicide clusters command most of the attention of media and observers but this obscures the fact that some communities have lower than average rates while others have higher rates. Analysis of these regional and community differences might help to uncover specific problem areas and successful strategies for reducing suicide in Aboriginal communities.

### 3. RISK & PROTECTIVE FACTORS

#### 3.1. Overview

The study of risk factors attempts to identify variables which act singly or in interaction to increase the likelihood of suicide. Risk factors may reflect individual vulnerabilities or may be social factors that affect specific groups or whole communities. Since suicide is a rare event, risk factors are of more value in planning public health interventions than in predicting individual suicides.

A wide range of risk factors have been shown to contribute to suicide in the general population. These may be divided into three broad groups: (1) *predisposing factors* such as extremes of temperament (e.g., aggressivity, impulsivity, inhibition), childhood separations, loss and abuse, major depression or other psychiatric disorders, alcohol and substance abuse, hopelessness and cognitive rigidity; (2) immediate environmental factors such as stressful life events, especially loss of relationships, marital problems, family pathology, isolation, living alone, modeling of suicidal behaviour by family or friends; and (3) social-cultural factors including problems with work, unemployment, poverty, social disorganization, loss of tradition, alienation and anomie.

Of course, each risk factor has its obverse—circumstances that may be viewed as protective factors against suicide. In many cases, the absence or reduction of a risk factor can be viewed as a protective factor. Perhaps because suicide is rare in the population, however, factors or circumstances that protect against suicide have received much less attention. Suicidal ideation is, however, extremely common, so it is useful to consider factors that lead individuals to cope with suicidal thoughts and feelings without taking harmful action. Specific cultural values and traditions may act to increase or reduce the risk of suicide by making suicide more or less of an option for individuals in a given community.

We have identified some of the sociodemographic risk or protective factors in Figure 1 and in the previous sections on epidemiology. Here we summarize literature that has addressed specific factors in an effort to develop methods of suicide prediction as well as prevention.

#### 3.2. Physical and Social Environment

Suicide shows seasonal variation, with increased rates in the fall and spring in North America. There is no generally accepted explanation for these variations (Eastwood & Peter, 1988; Fossey & Shapiro, 1992); it may, however, be related to seasonal variations in mood and affective disorders.

It has been demonstrated that affective disorders<sup>6</sup> often follow a seasonal variation, fluctuating with changes in the length of the day (Rosenthal, Sack, Gillin, Lewy, Goodwin, Davenport, et al., 1984). Mild dysphoria and insomnia during the short winter days are common in northern latitudes (Haggag, Eklund, Linaker & Gotestam, 1990; Hansen, Bratlid, Lingjärde & Brenn, 1987). Interpersonal conflict and disease susceptibility may follow a parallel seasonal variation among Inuit (Condon, 1982; Condon, 1983). Major depressive disorder triggered by change in length of day has been described in the north (Nayha, 1985). Such seasonal affective disorder may respond to treatment with bright light early in the morning to simulate a longer period of daylight (Hellekson & al., 1986; Lewy, Kern, Rosenthal & Wehr, 1982).

The increased suicide rate in the fall may correspond to an increase in the prevalence of depression with the shortening of the day. The increased prevalence in the spring may reflect either the contrast effect of feeling somewhat better then relapsing or the availability of increased energy and hence, ability to act on suicidal intentions. This pattern is also seen during the treatment of depression: individuals are at greatest risk for suicide when they begin to respond to treatment and experience increased energy (Appleby, 1992; Hawton, 1987).

Within Canada, suicide risk among Aboriginals varies with the latitude of the community, being higher in more northern communities, and also with greater distance from the nearest town with a population of more than 5,000 (Bagley, 1991). It is unclear whether these correlations reflect environmental or socioeconomic influences, or variations in suicide reporting.

The man-made environment also affects suicide rate. Isolation and seclusion of criminals in custody puts them at considerable risk for suicide (Bonner, 1992). Given the over-representation of Native peoples in the prison population, the confinement of individuals in prison is a substantial contributor to Aboriginal suicide (Bland, Newman, Dyck & Orn, 1990; Medical Services Branch, 1991). Encounters with the law contribute to both immediate and long-term suicide risk and so may be an important focus for suicide prevention.

Most directly, availability of a lethal method, notably firearms, influences the number of completed suicides (Brent, Perper, Allman, Moritz, Wartella & Zelenak, 1991; Garrison, 1992). Alcohol use interacts with this—suicide victims who use firearms are more likely to have been drinking (Brent, Perper & Allman, 1987). In one study among Alaska Natives, fully 76% of suicides were due to gunshot wounds and suicide by firearms was associated with elevated blood alcohol levels (Hlady & Middaugh, 1988).

Historically, the elimination of specific lethal means of suicide has had a measurable effect on the suicide rate (Garrison, 1992). Of course, firearms are readily available in Aboriginal communities and, owing to their use in hunting,

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<sup>6</sup> Affective disorders include major depression and bipolar (manic-depressive) disorder and well as dysthymia (chronic low grade depression).

are not amenable to tight control. This availability of means accounts in part for the high lethality of Aboriginal suicide attempts.

For young people, who are at highest risk for suicide, school is often the most salient aspect of their physical and social environment. Many Native people have suffered separations, loss and trauma through the residential school systems. In urban settings, schools may expose Native youth to prejudice along with neglect or outright suppression of their traditions. Even reservation schools have tended to ignore traditional cultural knowledge and so contributed to the devaluation of Native identity. For the many youth who abandon school, it remains a reference point against which they may gauge their own status and hopes for the future. Negative attitudes toward school and experiences of failure are important contributors to the sense of hopelessness which can overtake vulnerable youth. The availability of charismatic teachers and a milieu that fosters a sense of positive identity and self-esteem in the course of transmitting life and work skills constitutes an important protective factor.

### 3.3. Constitutional & Developmental Factors

A high proportion of first and second degree relatives of suicides have made suicide attempts. This probably indicates both shared constitutional vulnerabilities and social learning.

Suicides have more complicated birth histories, parental alcohol and tobacco use, and received less prenatal care (Hawton, 1986). They are also more likely to have had poor physical health as adolescents (Earls, et al., 1991; Blum et al., 1992).

**Temperament.** Certain temperamental or personality traits—including hypersensitivity, withdrawal, perfectionism and impulsivity—may contribute to suicide risk (Ryland & Kruesi, 1992). Suicidality among psychiatric inpatients, is related to trait and state anxiety, anger, sad mood and impulsivity (Apter, Plutchik & van Prang, 1993).

Impulsivity may make individuals liable to respond to an emotional crisis with self-injurious behaviour. In a study of 94 male Israeli soldiers complaining of mental distress, impulsivity and depression were found to contribute independently to suicide risk (Koslowsky, Bleich, Apter, Solomon, Wagner & Greenspoon, 1992). Surprisingly, no link was found between violent behaviour and suicide risk; however, the sample and context may have masked the association.

A study of adolescents with self-report measures of three types of “recklessness” among adolescents—(1) foolhardiness, (2) driving while under the influence of alcohol or drugs, and (3) smoking, drug use or keeping “bad company”—found only the third factor had a significant correlation with depression and suicidal ideation (Clark, Sommerfeldt, Schwarz, Hedeker & Watel, 1990).

Suicidality and aggressivity are highly intercorrelated among individuals. Plutchik and colleagues have proposed that an underlying process of aggression may reach a threshold for action and then be directed either toward self or others depending on both psychological and social factors (Korn, Botsis, Kotler, Plutchik, Conte, Finkelstein, et al., 1992; Koslowsky, Bleich, Greenspon, Wagner, Apter & Solomon, 1991). The underlying trait or state may be due to serotonin (5-HT) depletion or down-regulation (either constitutional or acquired) which is associated with anger, irritability and depression, as well as with impulsivity and aggression (Brown, Linnoila & Goodwin, 1992).<sup>7</sup>

While impulsivity contributes to risk of suicide attempts, there is some evidence that withdrawal, hypersensitivity, and behavioural inhibition are more common premorbid personality traits than impulsivity in completed suicide (Hoberman & Garfinkel, 1988; Shafii, Carrigan, Whittinghill & Derrick, 1985). Inhibition and withdrawal may contribute to suicide risk by impairing social functioning and relationships, leading to diminished self-esteem and self-efficacy, social isolation, and a lack of social supports.

**Psychological Development.** Ego development may also contribute to suicidality. Borst and colleagues (1991) examined the relationship of ego development, age, gender and diagnosis to suicidality in 219 adolescents admitted to a private psychiatric hospital. Level of ego development was described as *preconformist*, *conformist* or *post-conformist* according to Loevinger's (1966) stages. Preconformist represents the earliest stage, in which individuals are impulsive, have stereotyped cognitive styles, and are dependent or exploitative in relationships. Conformist individuals are particularly concerned with interpersonal acceptance and often express their views in clichés and stereotypes. Individuals who have reached the post conformist stage are said to cope with inner conflict generally with a high degree of self-awareness. With increasing ego maturation, adolescents diagnosed with conduct and/or affective disorders became *more* vulnerable to suicide. This type of study requires reconceptualization to be cross-culturally valid since styles of moral reasoning and the path of ego-maturation and adaptation may vary with culture and social circumstances (Shweder, 1991).

In some Aboriginal groups, child rearing practices aimed at developing self-reliance involve teasing or playful threats of abandonment that may also foster insecurity about relationships and intense dependency needs. This may leave individuals vulnerable to depression and self-harm in situations of loss or deprivation (Briggs, 1982). Similarly, socialization may also inhibit other-directed

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<sup>7</sup> Individuals who complete suicide tend to have low levels of cerebrospinal fluid 5-hydroxyindoleacetic acid (CSF 5-HIAA), a metabolite of the neurotransmitter serotonin (5-HT), and low levels of serotonin in the brain on post-mortem examination (Roy, 1992). This suggests that individuals who commit suicide have a depletion or hypofunctioning of brain serotonergic pathways which have also been implicated in depression. In hospitalized psychiatric patients receiving treatment, a declining or low CSF 5-HIAA may predict poor prognosis. Although usually interpreted as evidence of a biological defect, CSF 5-HIAA levels may also reflect the influence on the brain of environment or social factors including social status. At present, the measurement of CSF 5-HIAA remains a research tool with uncertain clinical application.

aggression and increase the likelihood of self-directed aggression in times of frustration or loss (Briggs, 1983). Presumably, child-rearing practices interact with the temperamental differences discussed above to make individuals more or less vulnerable to suicide. However, the impact of cultural variations in child-rearing on personality remains a controversial issue. The profound changes in Aboriginal settlement life have also rendered many traditional child-rearing practices difficult to apply or inappropriate and may be creating new problems. Clearly, this is an area in urgent need of systematic study.

Conflict over sexual identity, particularly early awareness of one's homosexual orientation, is also a significant risk factor for suicide among youth (Ryland 1992). Negative feelings about the maturing body have been noted by psychotherapists in some adolescent suicide attempters (Ladame, 1992). This may be severely aggravated by experiences of incest or sexual abuse which have more pervasive effects on self-esteem and contribute to a wide range of types of psychiatric problem (Briere, 1993).

**Childhood Separation, Loss, Trauma and Abuse.** Suicide is associated with a history of early separations, losses and emotional deprivation. Grossi and Violato (1992) found that adolescent suicide attempts were significantly related to greater number of residential moves, greater number of grades failed, and earlier age of separation from parents. Tousignant and colleagues (1993) found the effect of frequent residential moves on suicide risk did not hold when the control group consisted of adolescents with family problems, suggesting that level of family functioning or distress is the essential factor. Parental loss may be particularly damaging when it leads to persistent disorganization of the household (Adam, 1985). Closer examination may reveal that family disorganization exists even in families that have not lost members and are therefore superficially intact.

Recently, there has been increased recognition of the widespread prevalence of physical and sexual abuse of women and children in North American society as a whole (Conte, 1991; Gelles & Conte, 1990; Herman, 1992). A survey of 15-16 year old students in the Netherlands found that a history of suicide attempts was associated with sexual abuse, feelings of loneliness, depressed mood, low self-esteem, and the use of drugs for both male and female adolescents (Garnefski, Diekstra & de Heus, 1992). Additional risk factors for females were physical abuse and for males, low self-reported academic achievement. Among adolescents inpatients at a private psychiatric hospital, severity of childhood physical abuse (but not sexual abuse) was significantly correlated with number of suicide attempts (Shaunese, Cohen, Plummer, Berman, 1993). Histories of severe physical and sexual abuse during childhood are extremely common among individuals with borderline personality disorder who, in turn, are prone to multiple suicide attempts (Paris, Nowlis & Brown, 1989).

Single parent families are about twice as common among status Indians as in all Canadian families and these are headed by women about five times more often than by men (Medical Services Branch, 1991). However, the impact of single parenthood depends on local social and cultural factors which determine the degree of support by extended family, relatives, elders and other members of

the community. Similarly, in some Aboriginal communities—notably the Inuit—adoption may be extremely common and less stigmatized and so may not be associated with the same increased risk for suicide seen in the total population. The cultural and personal meanings of adoption in these communities are undergoing change and this requires much closer study.

Studies among American Plains Indians found that youths who completed suicide were much more likely to have had a change of caretaker during their childhood or adolescence (May & Dizmang, 1974; Resnick & Dizmang, 1971). Native populations have experienced a high frequency of separations due to education in boarding schools and prolonged hospitalization out of their communities for tuberculosis and other chronic illness (Kleinfeld & Bloom, 1977; Manson et al., 1989). In Canada, the residential school system exposed Aboriginal children to prolonged separations from family and kin, physical and sexual abuse, and active suppression of their cultural identity (Haig-Brown, 1990; Knockwood, 1992).

Native communities also suffer from family breakdown, as well as physical and sexual abuse (Fischler, 1985; Lujan et al., 1989). Owing to their isolation and complex web of family relations, there may be intense taboos within some communities against exposing and confronting family violence and abuse. Lack of opportunity and support to confront the problem leaves victims to struggle alone with their pain and so may contribute substantially to the risk of suicide.

### **3.4. Interpersonal Factors**

Interpersonal conflicts, usually family or marital discord, breakup of a significant relationship or loss of personal resources are the most common precipitants of suicide attempts (Weissman, 1974). Suicide precipitants vary with the phase of life. For adolescents, conflict with parents, loss and separation from family members and rejection in relationships are the most powerful stressors. Several studies confirm that the immediate precipitants of youth suicide are usually an acute disciplinary crisis, or a rejection or humiliation (e.g., loss of girlfriend, or other failure) (Hawton, 1986; Rich, Warsrad, Nemiroff, Fowler & Young, 1991; Shaffer, Garland, Gould, Fisher & Trautman, 1988).

Several studies indicate that the quality of the individual's social network is a strong predictor of the risk for suicide attempts. Compared to controls, suicide attempters have less extensive and less adequate social support networks (Hart & Williams, 1987). Magne-Ingvar and colleagues (1992) reported that suicide attempts were more frequent among patients with poor social relationships and problems at work. Similar findings were summarized by Maris (1992), who identified work problems, being separated widowed or divorced, living alone, and being unemployed or retired as risk factors for attempted suicide. Grossi and Violato (1992) found that adolescent suicide attempts were related to a lack of emotionally significant others. However, this was not confirmed in a later community study in Québec (Tousignant et al., 1993).

Further evidence of the importance of social networks is provided by a study indicating that, prior to the suicide event, friends of suicide victims have a higher incidence of psychiatric disorders than controls (Brent et al., 1992). This might reflect either an effect of the social network on the vulnerable individual or, the suicidal individual's own depression causing similar dysphoria in friends—a well established consequence of depression (Coyne, 1976). In either case, it indicates a compromised social support system prior to suicide.

The existence of suicide clusters suggests that “suicide begets suicide.” However, there is little direct evidence that this is true. Brent and colleagues (1992) studied the impact of suicide on 58 friends and acquaintances of 10 adolescent suicide victims. The rate of suicide attempts was no higher in this group. This same study found that following the suicide, there was a higher incidence of Major Depressive Disorder in friends of victims (37%) than controls (7%) within one month of the suicide. Substance abuse, anxiety disorder and Conduct Disorder all followed the same trend. Many were still depressed at 6 months after the bereavement. Thus, a suicide has deleterious effects on others that last long after the victim dies. This may in turn impair the social support system of others at risk.

Although suicide often follows an interpersonal crisis, even in these cases, it is almost invariably the endpoint of long-standing problems. A retrospective study of all adolescent suicide victims over a one-year span in Finland found a high level of psychosocial stress in the year prior to suicide (Marttunen et al., 1992). Among the indicators of long-term difficulties were: antisocial behaviour (45% of males, 33% of females), alcohol abuse, previous suicide attempts (33%), and adjustment disorder (33% of males). Despite a high incidence of psychopathology preceding suicide, many parents were unaware of their child's suicidal intentions, and even of their previous attempts. One-third of parents had, however, made contact with a psychiatrist in the year prior to their child's death.

Interpersonal factors identified in studies of American Indian suicide include: a history of non-parental caretakers, arrests of caretakers, early age of first arrest of suicide victim, arrest in previous 12 months, and recent loss of relationship through conflict or death (May & Dizmang, 1974; Resnick & Dizmang, 1971). A study of seven victims of a suicide cluster in a Cree community, found that all had evidence of low self-esteem, lack of intimate relationships, social isolation and identity confusion. They were uncommunicative and withdrawn, sometimes since childhood (Ward & Fox, 1977).

### **3.5. Alcohol and Substance Use**

The rate of substance abuse in patients who suicide varies widely cross-nationally—e.g., from 2/3 in a San Diego study to 1/4 in a Finnish study (Runeson & Rich, 1992). There is a strong association between attempted suicide and alcoholism (Dyck, Bland, Newman & Orn, 1988).

Alcohol intoxication has been noted to be a major factor contributing to suicide in most studies of Aboriginal peoples including: the Cree of Northern Ontario (Ward & Fox, 1977); the Ojibwa of northern Manitoba (Thompson, 1987); the Inuit of Greenland, Alaska and the NWT (Kettl & Bixler, 1991; Kraus, 1971; Rodgers, 1982; Sampath, 1992; Thorslund, 1990) and numerous studies in the U.S. (Brod, 1975; GAP, 1989).

Compared to suicides associated with depression, suicides associated with alcohol and substance use may be more often preceded by interpersonal stressors in the 6 weeks prior to the event (Duberstein, Conwell & Caine, 1993). Of course, these life events (mainly conflicts, arguments and disruptions of relationships) may also reflect long-standing interpersonal and characterological difficulties. Nevertheless, this finding supports the notion of a typology of suicides (e.g., Bagley, 1992), some of which are more directly to psychiatric disorder (primarily depression) while others are linked to interpersonal events, alcohol use and, perhaps, personality problems that make individuals liable to catastrophic reactions to these events.

In part, the association between alcoholism and suicide may reflect common predisposing factors (including a shared biological diathesis: e.g., Brown et al., 1992). But it is clear that both acute and chronic alcohol use increase the likelihood and lethality of suicide attempts (Lester, 1992a). Acutely, higher blood alcohol concentration increases the probability that a firearm will be utilized as a method of suicide (Garrison, 1992). Chronically, about 15% of psychiatric patients hospitalized for a suicide attempt who have coexisting alcoholism eventually commit suicide—a rate comparable to those with affective disorders, although in contrast to depression, the suicides tend to occur late in the course of illness (Hawton, 1987). In drug addiction, the suicide risk may be 20 times that of the general population risk.

Solvent abuse is common in many Native communities. In our survey of Inuit youth in one community in Quebec, 21% reported having used solvents at one time and 5% used them within the last month (Kirmayer, et al., 1993b). Chronic solvent abuse can lead to neurologic damage (Byrne, Kirby, Zibin & Ensminger, 1991). It is unknown whether the cognitive impairment or other sequelæ of solvent abuse independently increase suicide risk or whether solvent abuse simply indicates more profound social and psychological problems that may lead to suicide.

In addition to their intrinsically rewarding and addictive effects, alcohol and drug abuse allow a temporary escape from sadness, anxiety, boredom and emptiness. Foulks (1980) has suggested that, among the Inuit, traditional shamanistic practices provided culturally sanctioned forms of dissociation as a method of problem solving and escape from boredom and pain. Cultural changes have made this strategy less available (although it persists in some contemporary religious practices) and alcohol and drug abuse have taken the place of religious, healing and recreational dissociative experiences with an attendant increase in suicide.

### 3.6. Suicidal Ideation and Attempts

Most suicide victims have previously expressed suicidal thoughts or made suicide attempts. Shafii et al. (1985) found that 85% of adolescent suicide victims had previously expressed a wish to die, and 40% had made a previous attempt. Thus, although most suicidal acts have an acute precipitant and many acts are impulsive, suicide usually occur in the context of persistent or recurrent thoughts and plans about suicide.

Suicidal ideation is so common among adolescents, however, that it does not serve as a useful index of high risk (Ladame, 1992). As mentioned above, a study of U.S. high school students found that 27% reported suicidal ideation in the last year (Ryland & Kruesi, 1992). It is important therefore to distinguish between serious suicidal ideation or suicidal crises and thoughts about suicide that express less urgent existential questions.

Among adolescent patients with major depressive disorder, suicidal ideation tends to fluctuate with the severity of depression rather than representing an independent cognitive state (Myers, McCauley, Calderon & Treder, 1991). In a multivariate study of 558 French-Canadian adolescents and 150 adults, suicidal ideation in adolescents was found to be positively associated with depression with smaller effects of stressful life events, low self-esteem and dissatisfaction with social supports (De Man, Leduc & Labrèche-Gauthier, 1992). Suicidal ideation in adults was independently associated with self-esteem and life events but not with depression.

Suicidal attempts may range from mild “gestures” with minimal lethal intent to serious attempts in which death is averted only by happenstance. It is important, where possible, to characterize the severity of attempts to assess their potential lethality. Clinically, this involves estimation of a “risk-to-rescue ratio”—that is, the relative seriousness of the means used divided by the relative likelihood of discovery and prevention by someone else. A high risk/low rescue attempt might involve going off with a shot-gun into the bush without telling anyone; in contrast, a low risk/high rescue attempt might involve taking a few sleeping pills in front of a spouse. In epidemiological research on suicide, efforts have been made to develop questions that assess severity of attempts retrospectively to better understand the significance of the very high levels of mild attempts found among youth (Meehan, Lamb, Saltzman & O’Carroll, 1992).

A previous suicide attempt is the single best predictor of subsequent attempts and of completed suicide (Maris, 1992). However, previous suicide attempts do not predict from 75-90% of all completed suicides—which occur on the first recorded attempt. Compared to attempters, completers are more likely to be male, older, unmarried, divorced or widowed, living alone, and retired or unemployed (van Egmond & Diekstra, 1990).

Up to 50% of suicide attempters make a second attempt (Kreitman & Casey, 1988). Individuals may be at highest risk for a repeated suicide attempt in the first 3 months or so following an attempt. Repeaters tend to have previous psychiatric diagnoses and treatment, a history of other self-destructive

behaviour, a history of alcohol and substance abuse, and to be isolated and unemployed (Kreitman & Casey, 1988). Psychological characteristics of patients hospitalized for a suicide attempt who make a repeat attempt within 3 months of the initial episode include low frustration tolerance, internal locus of control, and a view of self as powerless (Sakinofsky & Roberts, 1990; Sakinofsky, Roberts, Brown, Cumming & James, 1990). Repeaters also have more externally directed hostility. There is some evidence that lethality tends to increase with each successive suicide attempt (van Egmond & Diekstra, 1990).

Patients who make multiple non-lethal suicide attempts may be different from those who complete suicide within a very few attempts. Clinicians tend to view the former as having a personality disorder (typically, Borderline Personality Disorder) or characterological problems and as tending to use suicide attempts as an angry or dramatic gesture in a somewhat calculated or manipulative way (Dingman & McGlashan, 1988). However, one cannot dismiss the risk of suicide in patients with personality disorders as it is still significantly elevated when compared to the general population. A review of long term follow-up studies of patients with personality disorder (most studies focus on borderline personality disorder) shows an average suicide rate of 5% (range 0 to 9%) (Paris, Brown & Nowlis, 1987; Tanney, 1992).

### **3.7. Psychiatric Disorders**

A history of major psychiatric disorders, especially major depression, is extremely common among suicides. World-wide, post-mortem interview studies have shown a diagnosis of a mental disorder in 81-95% of youth suicides (Goldstein, et al. 1991; Runeson & Rich, 1992).<sup>8</sup> Retrospective studies of completed suicides in adolescents and young adults find high rates of specific disorders including: 43-79% affective disorders (mostly major depression), 26-66% substance abuse, and 3-61% with conduct problems or personality disorder (usually Borderline or Antisocial Personality Disorder) and 0-17% schizophrenic disorders (Ryland & Kruesi, 1992). The wide range reflects methodological differences in diagnostic methods and criteria as well as the limitations of retrospective data in making diagnoses. The rate of personality disorders is significantly higher among youth suicides than among their older counterparts. In one retrospective study, 33% of adolescent female suicides suffered from borderline personality disorder (Marttunen, Aro, Henrikson & Lönnqvist, 1991). Of those with personality disorders who commit suicide, about 85% have coexisting major depression and/or substance abuse disorders. Thus, it is

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<sup>8</sup> Psychiatric disorders are currently categorized according to the World Health Organization, ICD-10 or the Diagnostic and Statistical Manual (DSM) of the American Psychiatric Association which is currently in its third revised edition (DSM-III-R: (American Psychiatric Association, 1987). The latter scheme has two principal axes: Axis I concerns acute psychiatric disorders, while Axis II involves personality disorders—chronic or lifelong difficulties in adaptation and interpersonal behaviour that are related to extremes of temperament or characterological difficulties. There are complications involved in interpreting and comparing studies pre- and post-1980 when the DSM-III was introduced, particularly with regards to the diagnostic groupings of depressive disorders, and the lack of systematic reporting of comorbidity of personality disorder (Axis II) with depression (Axis I) prior to 1980 (Runeson & Rich, 1992).

comorbidity of depression and substance use which distinguishes those patients with personality disorder at high risk for suicide from those at low risk (Runeson & Rich, 1992). Similar findings have been obtained in Québec (Lesage, 1993).

Depressed patients have 50 times the suicide rate found in the general population (Appleby, 1992). Other risk factors identified in psychiatric populations include: previous suicide attempts (particularly with a violent or dangerous method), recent relapse or discharge, certain features of mental state (such as depression and psychosis and especially the cognitive feature of hopelessness), social circumstances (isolation, unemployment) and demographic characteristics (male, youth) (Appleby, 1992). However, this risk profile is common enough in psychiatric populations as to be of no benefit in predicting suicide.

Symptoms of severe depression (psychomotor retardation, hopelessness, hypersomnia) best predict subsequent suicide (Motto, Heilbron & Juster, 1985). Other predictors among depressed adolescents include: weight gain; anergia and fatigue; father living away from home; previous suicide attempt; self-rating of likelihood; pessimistic attitude; and hopelessness (Kienhorst, de Wilde, Diekstra & Wolters, 1991). A three-year follow-up of adolescents with Major Depressive Disorder found that predictors of later suicidality were primarily severity of initial suicidality and intensity of anger (Myers et al., 1991). Suicidality was not related to impulsivity or attention deficit disorder.

Anxiety disorders, particularly panic disorder, also carry a significant risk of suicide (Weissman, Klerman, Markowitz & Ouellette, 1989). An analysis of data from the U.S. NIMH Epidemiologic Catchment Area Study revealed that diagnoses of either panic disorder or sporadic panic attacks were also associated with an increase in both suicidal ideation and suicide attempts (Weissman et al., 1989). In fact, the rate of suicide attempts was higher in panic disorder than in major depression. This increased risk was independent of comorbid major depression or alcohol abuse.

About 10% of patients with schizophrenia eventually die through suicide (Hawton, 1987). The period of highest risk is early in the illness, often during a relatively non-psychotic phase of the illness. Those most at risk had high educational attainment prior to this illness, with higher expectations of themselves for the future. They were aware of the effects of the illness and expressed hopelessness and fears of mental disintegration. In contrast to affective disorders these findings emphasize the need for careful surveillance during remission as well as during relapse since it is when they are not delusional that some schizophrenic patients may assess their situation as bleak.

A study of incarcerated juvenile offenders investigated the ability of depression, substance abuse, conduct disorder and hopelessness to differentiate suicide attempters from non-attempters (Kempton & Forehand, 1992). Only depression emerged as a predictor of suicide for white, but not black, youth. This study illustrates the importance of controlling for ethnic group when examining predictors of suicide attempts.

Appleby (1992) suggests that persons with psychiatric disorders are at greatest risk for suicide during two phases of their illness: (1) the acute phase prior to hospitalization or treatment; and (2) the transition from inpatient to outpatient care. Loss of the continuous supervision in the inpatient setting, stress at re-entry into the community, and policies of short admissions and early discharge are proposed to explain the elevated suicide risk during the transition phase. A review of three studies of staff and physicians' attitudes towards patients found that a patient's "disturbed relationships with hospital staff, resulting in premature discharge" distinguished suicides from a control inpatient population. Hawton (1987) confirms that the first week of admission to hospital and the first month after discharge are periods of high risk for psychiatric inpatients.

In summary, psychiatric disorders are found among the majority of individuals who commit suicide. The small subgroup of suicides with no major psychiatric disorders tend to show excessive performance anxiety and perfectionism along with a poor response to stress and dislocation (Hawton, 1986). They may commit suicide when faced with a failure or setback at school or in other activities.

The diagnoses most often linked to nonfatal suicidal behaviours are personality disorders (21-48%), dysthymic disorder (22%) and substance abuse (20-50%) (Tanney, 1992). Comorbidity of psychiatric disorders further increases the risk of suicide. However, psychiatric diagnosis alone is not a sufficient explanation for suicidal behaviour. Among psychiatric patients, a past history of suicide attempts is the single best predictor of future attempts (Pokorny, 1992).

There are insufficient data on the prevalence of psychiatric disorders in Canadian Aboriginal communities, so it is not possible to determine what proportion of suicides are associated with major psychiatric disorders. Experiences with psychiatric consultation in Aboriginal communities indicate high rates of major depression and dysthymia in many communities (Armstrong, 1978; Sampath, 1974; Young, Hood, Abbey & Malcolmson, 1993). The diagnosis of personality disorder is complicated by endemic social problems but is probably also common. Schizophrenia, bipolar disorder and panic disorder are also present. Individuals with depression or other psychiatric disorders may be more vulnerable to the demoralizing effects of social problems experienced by Aboriginal peoples. Even where social problems cause or contribute to depression and other psychiatric disorders, once present these disorders appear to require specific treatment to resolve.

### **3.8. Cognitive Style**

At the time of a suicide attempt, individuals typically describe a narrowing or constriction of thinking with an inability to generate alternatives or project themselves into the future (M. Samy, *personal communication*). In conjunction with thoughts of death as relief or escape and suicide as effective way to send a message of anger and despair, this cognitive constriction makes the act of suicide

possible. These attitudes toward death and suicide and the tendency toward cognitive constriction may long antecede the suicide attempt.

Cognitive factors that increase suicide risk include: hopelessness, dysfunctional assumptions, dichotomous thinking, cognitive rigidity, poor problem solving ability and negative self concept (Weishaar & Beck, 1992). Demoralization, lack of self-efficacy, cognitive distortions and lack of reasons for living all predispose an individual to suicidal behaviour, while interpersonal stress and intense hopelessness appear to be more immediate precipitants.

In fact, hopelessness may be more directly related to suicidality than depression itself. In a prospective longitudinal study of 207 hospitalized psychiatric patients followed over 5 to 10 years, a statistically significant correlation was found between high scores on the Hopelessness Scale and eventual suicide (Beck, Steer, Kovacs & Garrison, 1985). The scores on two additional instruments, the Beck Depression Inventory and the Scale for Suicide Ideation, did not correlate with eventual suicide, although the single item of the Beck Depression Inventory on pessimism did appear to have predictive value.

The cognitive theory of depression emphasizes the role of specific patterns of thinking in generating and maintaining depressed mood including helplessness, hopelessness, pessimism, and over-generalization (Beck, Rush, Shaw & Emery, 1979; Kovacs & Beck, 1978). Mood, however, also alters cognition. Elated mood causes individuals to have more access to positive reasons for living while depressed mood leads to difficulty in recalling or generating such reasons (Ellis & Range, 1992).

People who make multiple suicide attempts have a large number of psychological deficits including pervasive hopelessness, poor interpersonal problem solving skills, and poor ability to regulate affect (Strosahl, Chiles & Linehan, 1992). Underlying these deficits may be a tendency to remember and think of past negative experiences and reduced anticipation of specific positive experiences (MacLeod, Williams & Linehan, 1992). Suicide attempters tend to be angry while completers tend to be depleted, withdrawn and resigned.

Bancroft and colleagues (1975) examined self-reported motives for suicide. A list of possible reasons for suicide was presented to attempters, who could endorse more than one reason. One-third reported they were seeking help, 42% wanted to escape from an intolerable situation, 52% were seeking relief from a terrible state of mind, and 19% were trying to influence someone. This type of work needs replication and extension cross-culturally. However, individuals' conscious reasons for suicide must be interpreted with caution both because they are actually retrospective reconstructions and because suicidal behaviour is influenced by psychological and social factors of which the individual may sometimes be unaware.

Clinically, some Inuit adolescents mention boredom as their reason for attempting suicide, giving the superficial appearance that it is a casual act (Kirmayer, Corin, Corriveau & Fletcher, 1993). Boredom is a common complaint among youth who feel there is a lack of interesting activities or opportunities for

them in their community. The use of the term “boredom” as a reason for suicide may reflect a cultural style of minimizing or denying distress, a reluctance to acknowledge difficulty in coping, or a simple description of feelings of alienation and emptiness. In many cases, further inquiry leads to more explicit expressions of suffering, and acknowledgment of loss of relationships, intolerable family circumstances, or depression.

Most research on suicide has identified the maladaptive characteristics of suicidal persons, instead of adaptive, life-maintaining characteristics of those who do not attempt suicide. As noted above, American Blacks have much lower suicide rates than Whites despite facing economic disadvantage and endemic racism. In an exploratory study, Ellis and Range (1991) administered the Reasons for Living Inventory to 227 undergraduates at a large Southern U.S. university. Blacks scored significantly higher than Whites on two of the seven subscales: Survival and Coping Beliefs, and Moral Objections. Cultural beliefs which engender a sense of self worth in the face of negative social perceptions may contribute to lower suicide rates among Blacks.

The conviction that life makes sense and has meaning may contribute to coping with suicidal ideation (Petrie & Brook, 1992). In a study of 150 patients hospitalized after suicide attempts, subsequent suicidal behaviour was significantly predicted by two measures of “sense of coherence”: manageability (the sense that one could handle life and its vicissitudes) and comprehensibility (the conviction that life makes sense) (Petrie & Brook, 1992).

The study of reasons for staying alive when you are thinking of killing yourself may point toward both psychological and social interventions (Kralik & Danforth, 1992; Linehan, 1983). This type of work could be extended to Native communities in a search for reasons for living and means of coping with distress that fit local culture and social conditions.

### **3.9. Social Structure & Economy**

Durkheim (1987/1951) focused on the ways in which changes in economic and occupational structure interfered with those social institutions and forms of life that serve to weave together or regulate the social order and so maintain a sense of morale and shared meaning in life (Symonds, 1991). Durkheim argued that the suicide rate “varies inversely with the degree of integration of domestic society.” has offered a popular way to understand the deleterious effects of social breakdown and disorganization that have come from forced acculturation and relocation. He used the term “*anomie*” for a state of pervasive demoralization related to the breakdown of the “moral order” including religious, kinship and other social institutions; suicides due to such social breakdown he termed “*anomic*.” Durkheim contrasted them with *altruistic* suicides which occur in an effort to sustain the life of loved ones or the community and *egoistic* suicides which occur when the cultural concept of the person becomes overly individualistic and undermines communal values, ultimately creating an ‘empty

self' (Cushman, 1990). Interdependence within the family and the community should reduce both egoistic and anomic suicide.

Durkheim also noted the existence of fatalistic suicide, which occurred when individuals experience no alternatives or possibilities for escape from intolerable circumstances. This corresponds to the situation of many adolescents faced with multiple problems and few options in their communities. Fatalistic suicide can occur in situations of rigid social structure with few options while anomic suicide occurs in situations of loss of social structure and norms. In a sense, however, they are not mutually exclusive, since communities may be rigid in some respects and chaotic in others. As well, chaotic communities may be embedded in a larger social system that is rigid and allows few options for Native peoples. Forms of institutional and bureaucratic rigidity, however, are also embedded in a larger world system marked by rapid and capricious change. The distinct forms of suicide characterized by Durkheim may thus not capture the range of conflicting situations faced by youth faced with local community politics, larger institutional structures and constantly exposed to mass media views of the larger world.

While Durkheim assumed the whole population is suicide prone, it seems clear that individuals with psychopathology are more likely to respond to anomic or fatalistic conditions with suicide (Wasserman, 1992). However, since these same conditions undoubtedly increase or aggravate many forms of psychopathology, the importance of other social factors in making suicide a more salient option should not be overlooked.

**Poverty & Unemployment.** The impact of economic conditions on suicide has been studied extensively at a cross-national level (Garrison, 1992). Economic indicators used include levels of unemployment, disposable income, stock market indices, per capita income as a percentage of the gross-national product, and poverty levels.

Suicide rates increase during times of economic hardship and decrease in times of relative prosperity. Suicide rates have been found to be strongly correlated at  $\rho=.65$  with percentage of population below the poverty level among Native Americans in the U.S. (Young, 1990), and at  $\rho=.76$  among Native Canadians on 26 reservations in Alberta (Bagley, 1991).

In most studies of the general population, suicide attempts are strongly associated with unemployment in both men and women (Dyck et al., 1988; Hawton, Fagg & Simkin, 1988). Increasing unemployment is related to increased suicide rates, although this effect is generally stronger for men than for women (Cormier & Klerman, 1985; Wasserman, 1992). Unemployment may have an additional indirect effect on women when affected men respond to this social stress with alcoholism and physical abuse of their spouses.

Rates of unemployment are much higher among Aboriginal peoples than in the general population. The percent of Indians on reserve receiving social assistance was 2.5 times the total Canadian rate in 1987 (Medical Services Branch, 1991). The situation is similar among the Inuit (Irwin, 1989). However,

Thompson (1987) suggests that “unemployment is seldom reported as a problem in Native male suicides because it is the ‘status quo’ on most reserves and is no more of a problem for the victim than for the rest of his community.” In some communities where traditional subsistence patterns have been maintained, the meaning of wage employment may be different and the impact of unemployment thereby mitigated.

The transition from traditional subsistence based economy and tribe or band society to a wage and social welfare economy has led to profound changes in the distribution of social status, power and wealth. This is true both at the local level, in family structure and sex-role differentiation, and at the larger sociopolitical level, in community leadership, economic development and interaction with provincial or federal political institutions. Of course, this does not mean that unemployment is not a factor in Native suicide, only that its effect may vary and must be examined in the context of the history and current values of specific communities.

**Reservations, Settlements and Urban Settings.** Studies relating rural versus urban location with suicide vary cross-nationally with some finding higher rates in urban settings and others in rural settings. The proportion of individuals living alone in an urban community may be one of the most powerful predictors of suicide (Kowalski, Faupel & Starr, 1987). In contrast, extended family households may offer protection against suicide, where such living arrangements are traditional, particularly for elderly people (Dodge & Austin, 1990). The effect of living arrangements, lack of support and loss may be both to increase demoralization and, through a lack of contact, communication or supervision, to increase the opportunities for a lethal suicide attempt—i.e., one in which the chance of rescue is minimal (Grundlach, 1990). The meaning of living arrangements, however, must be understood in the context of local economic conditions, family structure and cultural values.

Native Americans on reservations have higher overall mortality rates than those off reservation (Thornton, 1987, p. 50)—although many possible factors could account for this observation. Forced relocation of entire communities has repeatedly been noted to have devastating effects on psychological well-being (Berry, 1993; Shkilnyk, 1985). The loss of power and social segregation intrinsic to being placed on reservations or in settlements by a distant and unseen government has been viewed by many authorities as contributing directly to Native American suicide (Devereux, 1961).

Conditions in most reserves and Aboriginal settlements are difficult. Crowded dwellings (defined as any dwelling occupied by more than one person per room) are some 16 times more common among Native groups than Canadians in general (Medical Services Branch, 1991). Despite recent improvements, provision of adequate water supply and sewage disposal also continues to be a problem in many settlements.

About 45% of status Indians on-reserve are functionally illiterate compared to 24% of Indians off-reserve (Medical Services Branch, 1991). This contributes to difficulty in competing on the job market and in making use of information

resources. It also impairs the transmission of traditional culture. Thus, many youth are cut off from both cultures.

**Family and Religion.** Since Durkheim it has been claimed that religion affects the suicide rate, with higher rates found among Protestants compared to Catholics and Jews. In a study of U.S. suicide rates, Stack and Lester (1991) found no effect of type of religious affiliation but more frequent church attendance did lower the rate of suicide. This effect of religiosity was independent of education, gender, age and marital status. A high proportion of individuals without religious affiliation in a community has also been found to be associated with an increased risk of suicide (Hasselback et al., 1991).

Quality of family life and religiosity are highly correlated (Stack, 1992). The impact of religion on suicide rates may be understood not so much in terms of specific beliefs about suicide, suffering and the afterlife but more in terms of the way in which religious affiliations and practices organize social support networks (Pescosolido & Georgianna, 1989). Religiosity may reduce the suicide rate through its effects on strengthening social ties through participation in community activities. Family and religious institutions are the remaining 'collectivist' institutions in American life. Religiosity, stable families and low suicide rates may all reflect a strong sense of shared communal values.

**Social Disorganization & Traditionalism.** Bachman (1992) studied the correlates of Native American suicide rates averaged over 1980-87 in 100 different U.S. reservation-counties. She examined three hypotheses in multiple regression models: (1) the higher the rate of social disorganization within a reservation community the higher the rate of suicide; (2) the higher the level of economic deprivation within a reservation community, the higher the rate of suicide; and (3) the more traditional and integrated a reservation community, the lower the rate of suicide.

Social disorganization was measured by the mobility rate—i.e., proportion who did not live on their current reservation in 1979 or 1980. Economic deprivation was measured by three indicators: (1) percentage of families below the poverty level; (2) percentage unemployed; and (3) the percentage of 16 to 19-year olds who have dropped out of school. Traditionalism versus acculturation was measured by the percentage of the county population that was American Indian. This was intended to tap the degree of contact with white society. The percentage of the American Indian population between the age of 18 to 24 was included as a demographic control since the suicide rate is known to be highest for this age group.

The first and third hypotheses were not confirmed. Mobility was not significantly related to the suicide rate. The percentage of the county that was Indian was actually positively correlated with the suicide rate. Of the economic indicators, the unemployment rate and the percentage of families below the poverty line were both significantly related to suicide rate and there was a trend for the drop-out rate to also contribute. Further, homicide was closely related to

suicide suggesting some common factors increasing the risk of violent death.<sup>9</sup> In addition to such shared underlying factors as alcoholism and family violence, loss of family members by violent death is more likely to lead to complicated grief reactions and increase the risk of subsequent suicide. When the homicide rate was added to the model, it was the most significant predictor of the suicide rate, followed by the economic indicators.

This study is limited by the crude proxy measures of social disorganization and traditionalism. However, of the variables examined, economic deprivation emerges as the most important contributor to suicide risk. These results suggest that it was neither acculturation nor traditionalism *per se* that contributed to suicide risk but the degree of economic deprivation. Certainly, loss of family members by violent death is more likely to lead to complicated grief reactions and increase the risk of subsequent suicide.

### 3.10. Cultural-Historical Factors

Historical accounts of the health of the Aboriginal population were frequently distorted by biases. Two common portraits were of an “innocent, peaceful and happy” Native living in harmony with nature and enjoying exceptional health and vigor, or of a life in primitive circumstances that was “nasty, brutish and short.” Contemporary accounts of social problems among Aboriginals tend to adopt the former idealized view of traditional times, perhaps in an effort to regain a noble past as part of a renewed identity.<sup>10</sup> The historical reality was, of course, neither of these extremes. As far as can be determined, social problems, including suicide, homicide and abuse of women and children, existed throughout the history of Aboriginal peoples as they have among peoples everywhere (Edgerton, 1992). A review of suicide in preliterate societies found rates that were not much lower than in many literate urban societies (Tousignant & Mishara, 1981). This historical reality, however, should not detract from the predominant role of culture change and the destruction of traditional ways of life by the dominant society in the problems of contemporary Aboriginal peoples. Nevertheless, traditional beliefs and practices may persist in current practices and concepts of the self and so constitute both risk and protective factors for suicide.

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<sup>9</sup> Suicide rates tend to be highly correlated with homicide rates in communities, ranging from  $r=.34$  to  $.52$  (Bachman, 1992; Young, 1990).

<sup>10</sup> A second reason is the adaptationist argument that people in most places and most times are well-adapted to their environment and have few social or psychological problems unless some exceptional perturbation occurs, either internal to the society or in the form of culture contact (e.g., colonization: see, for example, Berry, 1993). However, this assumption is not borne out by either by the historical record or by epidemiological surveys with modern instruments which indicate substantial levels of psychopathology in every society ever studied (Edgerton, 1992). It appears that human organisms are liable to maladaptive behavioural and emotional distress so that no society has ever had a “perfect fit” with both its local ecology and human psychological needs. This fact should caution us against facile appeals to a golden age in the past, as well as to simple solutions to our present predicaments.

Smith and Hackathorn (1982) used the Human Relations Area Files (HRAF)<sup>11</sup> to look at the prevalence of suicide in tribal and peasant societies. Choosing only 69 societies for which sufficient data on suicide prevalence were available, their sample included 20 Native American societies (tribes). Suicide was *less* frequent in societies with the following characteristics (Ibid, p.203):

- (1) Greater family integration, as indicated by predominant mutual bonds and empathy among the adult members of the households.
- (2) Greater political integration, as indicated by a smaller number of jurisdictional levels present in the society between the individual and ultimate political authority.
- (3) Greater economic integration as indicated by three measures: (a) a settlement pattern involving nomadism or semi-nomadic life; (b) an economic level involving primarily hunting-gathering; and (c) a local community size that is very small.
- (4) More moderate expression of emotions, as contrasted with very restrained or very open expression.
- (5) Less importance of pride and shame in the culture.

Type of economy (settled agriculture as opposed to hunter-gatherer) and the importance of pride and shame in the culture were the factors most predictive of high suicide rates.

Suicide must be considered in its cultural historical context for different Native groups (GAP, 1989). Examination of historical and ethnographic records suggests that suicide was rare in pre-contact times but these data are extremely sketchy and unreliable (Pine, 1981). Despite wide variations in belief, most groups had explicit negative attitudes and proscriptions against suicide.

To emphasize the diversity of contemporary Native American groups, Webb and Willard (1975) described the different patterns of suicidal behaviour in six different groups. For some time, high rates of suicide were assumed to exist among all American Indian groups on the basis of studies of only two Shoshone Indian reservations suffering from a high level of social disorganization, unemployment, alcohol and solvent abuse, and criminal behaviour among adolescent males. These very limited data have been frequently cited to establish the severity of the problem in the entire Native population.

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<sup>11</sup> The HRAF are a series of databases of ethnographic information on a large number of societies compiled in a standard format that permits statistical comparison. However, the studies used to construct the database were never intended for this use; they span many different periods in the history of anthropology and were conducted without any standard method of data collection. Consequently, the presence or absence of mention of a specific datum (like suicide or psychopathology) reflects the idiosyncratic interests and perspective of the individual ethnographer. At best then, the HRAF is useful for generating hypotheses; it cannot be considered a valid test of hypotheses—although it is an antidote to overgeneralization from isolated ethnographic reports.

In contrast, the Pueblo Indians have been noted to have low suicide rates, although they comprise many different groups and, as with other Native groups, owing to their small numbers, it takes only one cluster of suicides to drive the rate up significantly. Among the Dakota and Cheyenne, there have been few reports of completed suicide, although suicide attempts are more common. Webb and Willard (1975) argue that completed suicide is actually more common than it appears in this group because it often takes the form of risky or foolhardy behaviour or provocation in which one knows one will be killed. This conforms to a traditional pattern called "Crazy-Dog-Wishing-To-Die." Many accidental deaths may then be suicides.

Altruistic suicide by the incurably ill or disabled, was described in some early historical reports of Native peoples but it seems usually to have been a response to desperate circumstances. Many accounts make no mention of this practice and its prevalence is unknown (Vogel, 1970/1990, p.157). In fact, the epidemics of contagious diseases brought by European colonizers that decimated the Native population may have provoked many suicides through the utter despair felt by individuals who had lost their families and communities (Thornton, 1987, p. 74ff.)

In the Boreal or subarctic regions, suicide was sanctioned, indeed institutionalized, as a response to insoluble marital problems or as an act of mourning for the loss of a loved one (GAP, 1989). Among the Inuit, ethnographic accounts suggest that suicide was traditionally sanctioned when an individual became a burden to the group (Leighton & Hughes, 1955). Grief over the death of kin was also recognized as a legitimate reason for taking one's own life.

Certain cultural beliefs and social practices may also contribute to the risk of suicide. For example, the Hopi have been traditionally perceived as restrained, nonviolent, and highly integrated as a cultural group. However, in recent years they believe they have suffered an increase in suicide and alcoholism. This is popularly attributed by the Hopi to the impact of acculturation. Levy and Kunitz (1987) challenge some of these assumptions. In a study of suicide on Hopi reservations, they found most victims came from socially deviant families, in that their parents had married across traditional lines of endogamy (Levy, Kunitz & Henderson, 1987). Hopi suicides could be seen as a consequence of the stresses associated with contravening cultural taboos and so were at least partly attributable to forces of traditionalism within the community that act to maintain the community's self-definition and integration by controlling deviance. When deviant individuals, who were suffering social ostracism, attempted to improve their lot, they were sometimes attacked by others for trying to step out of their place—at the bottom of the society.

This study illustrates an important caveat against the tendency of some researchers to attribute all problems to cultural change. All communities create and control certain forms of deviance to define and integrate themselves. Yet, social pressures on the individual labeled as deviant may be so powerful that they have deleterious effects on their mental health and create pathology. Of course, communities may differ in their tendency to label deviance according to their scale and cultural values (Freilich, Raybeck & Savishinsky, 1991).

There is a lack of sufficient information on the meaning of suicide in Canadian Aboriginal cultures. Much of the ethnographic literature does not address mental health issues or deals with a bygone era of varying relevance to contemporary Aboriginal peoples. There is an urgent need for detailed ethnohistorical and ethnographic studies of Aboriginal traditions and practices related to the range of deviant behaviours and distressing emotions, including depression, demoralization and suicide.

### 3.11. Culture Change, Modernization & Acculturation

“Acculturation” is a term for the accommodation of individuals from one cultural background to the encounter with a new culture. In the case of Aboriginal peoples this process has been driven both by their own economic interests and by tremendous external pressure from government, economic, educational, medical and religious institutions at various points of their history. This process of cultural confrontation and change has usually proceeded at a pace dictated by interests outside the Native communities. Hence, it is appropriate to speak of *forced acculturation*.

Berry (1993) notes that at the level of the group, acculturation may involve many types of changes: (1) changes in *physical environment* including location, housing, population density, urbanization, environmental degradation and pollution; (2) *biological* changes in nutritional status and exposure to communicable diseases; (3) *political* changes, transforming or dissolving existing power structures and subordinating them to the dominant society; (4) *economic* changes in patterns of subsistence and employment; (5) *cultural* changes in language, religion, education and technical practices and institutions; (6) changes in *social* relationships, including patterns of inter- and intra-group relations.

Changes have been particularly profound for Aboriginal groups that were hunter-gathering societies organized at the level of extended family, bands or tribes. In most cases, these groups were accustomed to large territories, low population densities and relatively unstructured social systems. The process of sedentarization has changed all of these parameters. Relatively large communities composed of unrelated individuals, living in high density dwellings, with complicated new political and institutional structures that restrict freedom of activity are now the norm.

Berry (1976; 1985) described four different patterns of response to acculturation: integration, assimilation, separation and marginalization. The choice (or emergence) of a particular response to acculturative stress is based on two variables: (1) whether traditional culture and identity are viewed as having value and are therefore to be retained; and (2) whether positive relations with the dominant society are sought. In general, integration and assimilation are viewed as positive outcomes by the dominant society—the former involving a form of biculturalism while the latter amounts to abandoning one’s identification with one’s culture of origin for the dominant culture. In fact, active efforts to maintain

traditional culture may sometimes be protective against the depredations of culture change:

“Groups that have maintained separationist responses, such as many of the Southwestern Pueblos and the Navajo, have experienced lower suicide rates than other Native Americans faced with the combined pressures of modernization, technological change, and acculturative stress” (GAP, 1989, p. 51).

However, as these same authors note:

“Where traditional lifestyles and values have been eroded by displacement, disease, persistent unemployment, poverty, and religious and educational efforts to discourage ‘old ways,’ separationist and integrationist adaptations tend to break down. Many Native American groups have endured this situation for generations; with pathways to assimilation to the dominant society blocked, they have slipped or been forced into cultural marginalization. These groups have lost many essential values of traditional culture and have not been able to replace them by active participation in American society in ways that are conducive to enhanced cultural and psychological self-esteem. The feelings of loss, alienation, self-denigration and identity confusion engendered by this situation are reflected in the escalating rates of suicide witnessed in many Native American communities” (Ibid., pp. 51-52).

The increase in rates of suicide among many Native groups in recent decades, has paralleled the increase in culture contact and acculturative stress. In general, higher rates of suicide are found among Aboriginal groups in greater contact with the dominant society (Bachman, 1992; GAP, 1989; Van Winkle & May, 1986). Increasing rates of suicide among Inuit and Athabaskan peoples have been associated with greater contact with southern culture and with access to alcohol (Kraus & Buffler, 1979). However, this pattern may not be consistent across all groups. For example, among the Navajo rates of suicide did not vary on different reservations with degree of contact with the dominant society (Levy & Kunitz, 1971). Navajo culture has a long history of change, syncretism and assimilation of features of other groups (Webb & Willard, 1975). The crucial issue may be the trajectory of the process of acculturation which in turn depends both on traditional patterns of culture change and on the pattern of negotiation with the dominant society (GAP, 1989).

As noted above (Section 3.9), Bachman (1992) found that more traditional communities actually had higher suicide rates. In attempting to explain this finding, Bachman cites Berlin’s cautions about the dilemmas of tradition versus modernity:

“Traditional communities, however, may impose old values on adolescents and young adults that may also lead to suicides or suicide attempts. For instance, an important American Indian value is that people should not strive to be better than others and thus cause others to lose face. In school and even in athletic events, being singled out as a superior student or athlete may bring ostracism or even physical chastisement from the peer group. Thus, at times, traditional tribes’ values may be used to the detriment of their young people” (Berlin, 1987, p. 226).

However, many other explanations are possible. Bachman's proxy measure for traditionalism is imprecise and may also reflect segregation, political disempowerment, size and social isolation of communities. Without further controls and a more direct measure of traditionalism and acculturation stress, the relationship is still inadequately tested. To a large extent, the problem is that acculturation is not a one-dimensional construct, and the process may go through distinct phases with different consequences for mental health and suicide risk (Berry, 1985). There may be a sort of 'inverted U' relationship between traditionalism and suicide in which both very traditional and highly assimilated individuals or communities are protected from suicide while those in the intermediate state experience greater conflict and confusion about identity resulting in increased risk for suicide.

Jilek-Aall (1988) compared juvenile suicide in Norway, Denmark, Japan, and among Amerindians and Inuit. Although she found disturbed family life during childhood to be a common predisposing factor for suicide across cultures, the Native case warranted special attention for endemic social problems which lead to "anomic depression." She described anomic depression as follows:

"This term denotes a psychophysiologic and behavioral syndrome characterized by anomie—absence of traditional norms guiding behavior—and by cultural identity confusion; a chronic dysphoric state with lack of interest in life, lack of self-respect and purpose, and no hope for a better future. These young people who have also lost culturally acceptable ways of expressing anger and frustration, are extremely susceptible to the temporary escape provided by alcohol. The disinhibiting effect of alcohol facilitates violence and self-destructive behavior, thus creating new misery and the desire for further escape, ultimately leading to suicide" (Jilek-Aall, 1988, p. 95).

Davenport and Davenport (1987, p. 536) discuss the ways in which Native culture and lifestyle have been damaged and transformed by the dominant white culture. All the changes wrought upon Natives have taken away their autonomy and initiative. The enforced settlement of Natives on reservations, with allocation of tribal lands without an understanding of the traditional relationship to the environment has disrupted hunting and gathering practices that depend on natural cycles and shifting territorial boundaries. The collective use of land, rather than its individual ownership, is not easily accommodated by the political economy of modernization. The insensitivity of the dominant culture and government to Native political, religious, and educational practices has also caused and continues to create problems.

In the face of the systematic negation and destruction of Native traditions and self-esteem, suicide may be viewed both as an escape from an intolerable situation and as an act of defiance.

"It reflects the hopelessness of trapped and imprisoned souls...According to many American Indians...suicide could be construed as the ultimate act of freedom. It is an act that defies governmental control and challenges the dominant society to face up to its irresponsibilities in meeting treaty agreements for health, education and welfare" (LaFromboise, 1988).

Marginalization involves a sort of “deculturation” in which individuals acquire the skills, values and tradition of neither culture. To some extent, this describes the situation of many Native youth, deprived of a deep education in and sense of value for their tradition, cut off from the mainstream of Canadian society by poverty, isolation and educational barriers, lacking linguistic skills in either the language of their elders or of the dominant society. Berry (1993, p. 17) states that among Native youth in Northern Ontario suicide “is related to the situation of being caught between two cultures, and being unable to find satisfaction in either.”

Several studies indicate that suicides tend to occur among Native youth who are better educated than their Native peers although less educated than their counterparts in the non-Native population (Travis, 1983). Brant (no date, p. 3) suggests that these suicide victims “may have had ambitions to participate in mainstream society” but experienced frustration because they were “still behind in terms of education achievement and competing for jobs and recognition.”

In a discussion of the dramatic increase in suicide rate in the NWT from 1971 to 1978, particularly among the Inuit, Rodgers (1982) noted that the victim was often a better educated person who was employed and had spent time out of the community (creating greater discrepancy between expectations and possibilities). He was seen by others as a potential success but was unable to confide his doubts or fears due to the need to maintain “an outward facade of self-reliance.” The suicide victim thus maintains his image of success—to the satisfaction of the community—at the cost of a more basic level of acknowledgment and support from others.

Young males may experience great acculturative stress due to greater discrepancies between the traditional male role of hunter, provider, leader and limited contemporary economic opportunities. Native women may experience somewhat more continuity between traditional roles and current challenges but they inevitably share in and suffer from the demoralization of the men in the community who are their fathers, husbands, and sons.

The acculturation model implies that individuals and communities have choices as to how they adapt to contact with another culture. However, O’Neil (1983, 1984, 1986) has argued that this psychological view of acculturation fails to consider the political context in which acculturation takes place. As a result, it exaggerates the extent to which individuals exercise choice in selecting traditional or modern values. In his work on Inuit youth, O’Neil found that “the ‘coping styles’ available to young people were very much determined by a colonial political economy” (*personal communication*). He suggests that rather than viewing coping as a purely psychological construct, it is better understood as the outcome of an interaction between the individual and political economic constraints derived from both local and larger social forces.

The pattern of acculturation reflects the ideology of the dominant society as well as the strategies of assimilation and accommodation adopted by the traditional group (Berry, 1993). Canada currently has an explicit policy of promoting multiculturalism which should encourage individuals to maintain

both their culture of origin and acquire new skills, values and practices derived from the dominant society. Historically, however, government interventions (as well as the activities of educational and religious institutions) have been based on policies of assimilation or segregation. Thus, despite recent changes in official policy and a less explicit ideology of assimilation, Aboriginals in Canada face similar problems to those encountered by their counterparts in the United States. The revival and revitalization of Native values and traditions is a powerful counterforce to this assimilation.

Most researchers in this area, approach Native cultural assimilation and culture conflict in terms of a bicultural model: white versus Native culture. For example, Larose (1989, p. 38) discusses the situation of Québec Native culture in terms of a conflict of identity between the idealized Native self-image of the “bush Indian,” which is in contrast to contemporary Native identity which always presupposes some form of contact with and adaptation to white norms of behaviour (p. 38). Acculturation research tends to assume a one-way direction of change in which the dominant culture overwhelms and displaces Native heritage cultures.

It may be more accurate, however, to view Aboriginal peoples as actively involved in constructing a new identity that draws, in varying degrees, from at least three sources: (1) the cultures of the dominant society; (2) the cultures of Native communities, whether urban enclaves, reserves or dispersed kinship networks; (3) the traditions of the past. Past traditions are transmitted by family and elders within Native communities, but they are also represented in the dominant society as distorted images that are either denigrated or idealized. Individuals and communities must use creative *bricolage* to recover and re-invent their identity in a form that serves self-esteem and efficacy. In the process, Native communities and culture also help to reshape the dominant culture and its institutions. Although this process of identity construction is a two-way street, the overwhelming direction of influence, until recent times, has been the active displacement and destruction of Native traditions and values by the institutions of the dominant society. Even now, interest in Native traditions within the dominant society often takes the form of a romantic distortion and commercial appropriation of traditions that can only be truly understood in the context of specific communities and kinship ties.

### **3.12. Summary of Risk and Protective Factors**

There is general consensus that there are high rates of major depressive disorder among Native groups although epidemiological data are limited (Medical Services Branch, 1991, p. 26). However, even among depressed patients, for whom the risk of suicide is greatest, the lifetime probability of suicide appears to be no more than 15% (Goldstein et al., 1991). The accuracy of a model to predict true-positive results is limited by this low base rate. Goldstein and colleagues (1991) note that “the results have been disappointing when trying to predict suicides statistically. Although the list of potential predictors from which the present model was generated included nearly all the demographic and clinical risk factors for suicide that have been reported consistently in the

literature, the model failed to predict even one of the eventual suicides.” The study of risk factors is more useful as a guide to public health policy than to predict individual suicides.

Many studies address risk factors independently so it is not possible to know whether they act through other, more fundamental, variables. For example, major depression may be a risk factor because it increases hopelessness or because it leads to depletion of brain monoamines. Unemployment may be a risk factor because it leads to poverty or to loss of self-esteem. Multivariate studies allow researchers to control for confounding variables and to examine interactions between variables. Even models that include multiple risk factors, however, account for only small amounts of the variance in suicidal behaviour (Myers et al., 1991; Pfeffer et al., 1988).

A number of studies have assessed the relative contributions of risk factors to completed suicide or suicide attempts among Native Americans. A longitudinal survey of American Indian students attending a Bureau of Indian Affairs funded, but tribally administered, boarding school in the Southeastern U.S., examined the prevalence and incidence of symptoms of depression, anxiety, and substance abuse as well as the relative contribution of specific risk factors (Manson, Beals, Dick & Duclos, 1989). Suicide potential was ascertained by two survey items: (1) whether the student had ever tried to kill himself; (2) whether suicide ideation occurred in the past month. In this study, 23% of students had attempted suicide at some time in the past and 33% reported suicidal ideation within the past month. Suicide attempters had higher levels of depressive symptomatology, greater quantity and frequency of alcohol use and little family support. The authors found a strong relationship between relatives or friends having committed or attempted suicide and the students' attempts and current risk of suicide. Having experienced the death of a sibling or parent was not related to either suicide indicator in students, although the death of a friend was related to both past attempts and current suicide risk.

Analysis of data from the 1988 U.S. Indian Health Service Adolescent Health Survey identified multiple risk factors for suicide attempts (Grossman, Milligan & Deyo, 1991). Self-report questionnaires were completed by 7,254 students in grades 6-12 on the Navaho reservations. Fifteen percent (N=971) of students reported a past suicide attempt; over half of these reported more than one attempt. Logistic regression was used to identify the factors that independently contributed to having made a past attempt. Factors identified, and their associated odds-ratios<sup>12</sup>, were: history of mental health problems (3.2); having a friend who attempted suicide (2.8); weekly consumption of hard liquor (2.7); family history of suicide or suicide attempt (2.3); poor self-perception of health

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<sup>12</sup> The odds-ratio indicates the relative likelihood that an individual with the stated characteristic will attempt suicide compared to individuals without that characteristic. For example, an odds-ratio of 3.2 for mental health problems indicates that individuals with mental health problems in this study are 3.2 times more likely to have attempted suicide. In logistic regression, these ratios are calculated while controlling for (holding constant) other variables. Hence, they represent the increase (or decrease) in risk that is uniquely attributable to that characteristic.

(2.2); history of physical abuse (1.9); female gender (1.7); and history of sexual abuse (1.5).

In summary, risk factors for completed and attempted suicide among Native Americans closely parallel those for youth in general and include (Earls et al., 1991): frequent interpersonal conflict; prolonged or unresolved grief; chronic familial instability; depression; alcohol abuse or dependence; unemployment; family history of psychiatric disorder (particularly alcoholism, depression, and suicide). Among Native adolescents, suicide rates are higher for those with physical illnesses, those who have previously attempted suicide, those with frequent criminal justice encounters, and those who have experienced multiple home placements. Cultural marginalization and concomitant problems in identity formation which produce chronic dysphoria and anomie, render Aboriginal youth vulnerable to suicide, even in the absence of clinical depression. The phenomenon of the outwardly successful youth who commits suicide is a chastening reminder of the diversity and complexity of suicides. A single model of risk factors cannot fit every situation faced by Aboriginal peoples today.

Traditional beliefs and practices influence the motives for—and the community response to—suicidal behaviour. It appears, however, that whether rates of suicide among Aboriginal groups were high or low in the past, many groups have experienced a tremendous increase in recent times. This has been attributed to the stress of acculturation and the availability of alcohol (GAP, 1989; Kraus & Buffler, 1979; Ward & Fox, 1977). However, as noted above (in Section 2.6) the increase in the last few decades parallels, in exaggerated form, the increase found among young people in the general population. This suggests that larger social processes in Canadian society—like increases in drug and alcohol problems and family disorganization—play a role in the current pattern of Aboriginal suicide. Only appropriately designed studies that combine epidemiological and ethnographic methods can clarify the role of cultural tradition, large scale social processes and the unique dilemmas posed by culture change and marginalization.

## 4. INTERVENTIONS

### 4.1. Overview

In this section we will review what is known about the effectiveness of various types of interventions for the detection and treatment of suicidal individuals, the prevention of suicides at the population level and the post-suicide assistance of affected individuals and communities. The major types of current interventions are listed in Table 2 along with sources in the literature where more details can be found.

### 4.2. Detection

Both under-diagnosis of depression and inadequate use of antidepressants have been shown to increase suicide risk (Appleby, 1992). Primary care medical settings play an important role in the detection of suicidality. Most individuals making a suicide attempt have seen a primary care physician at some point prior to the attempt. Primary care providers may under-recognize depression and other serious treatable psychiatric disorders in all settings due to somatized clinical presentations (Kirmayer, Robbins, Dworkind & Yaffe, 1993b). This problem is compounded where limited resources or cultural and linguistic differences make diagnostic assessment more difficult.

A history of suicide attempts is common among adolescent patients in primary care but most adolescents present with chief complaints related to sexually-transmitted diseases, obstetrical or gynecological concerns, or somatic symptoms like abdominal pain. In a study of 332 patients aged 12-19 attending a medical clinic, only 8% of suicide attempters presented with mental health related complaints (Slap, Vorters, Khalid, Margulies & Forke, 1992). Consequently, physicians tended not to identify adolescents with past suicide attempts (74% of whom reported current suicidal ideation) who are at risk for recurrent attempts.

Targeting primary care providers may be an efficient method of improving mental health care delivery and reducing the suicide rate. For example, an educational program for general practitioners on the island of Gotland, Sweden was developed to increase knowledge about the diagnosis and treatment of affective disorders (Rutz et al., 1992; Rutz, von Knorring & Wälinder, 1989). Suicide rate was studied as an indicator of ultimate treatment failure of depressive disorders. There was a statistically significant decline in incidence of suicide in Gotland versus Sweden as a whole the year after the educational programs were completed. This is in marked contrast to the lack of significant effects found from other suicide prevention programs such as telephone hot lines for the general population or school-based suicide prevention programs.

Table 2. Types of Intervention for Suicide

Interventions	Sources
<i>Detection</i>	
Training of Primary Care Providers	Michel & Valach, 1992; Rutz, Carlsson, von Knorring & Wälinder, 1992)
Promoting Help-Seeking Public Awareness of Depression	
<i>Primary Prevention</i>	
Crisis Hotlines Community Crisis Teams, Support Networks	Everstine, Bodin & Everstine, 1977
School-based Educational Programs in Problem Solving School-based Counseling Firearm control	Leenaars & Wenckstern, 1991 Harvey, 1985) Brent et al., 1987; Brent et al., 1991
Alcohol and substance use control Youth-Elder Adventure Camps Community Workshops	Levy & Kunitz, 1987 Berger & Tobeluk, 1990; Ewan Cotterill, et al., 1990; Muskox Program Development, 1991
Job Training and Economic Development Political Empowerment	
<i>Secondary Prevention</i>	
Crisis Intervention Psychiatric Treatment Hospitalization	Samy, 1993 Berlin, 1985 Jacobs, 1983; Sletten & Barton, 1979
Specific Psychotherapy	Hendin, 1981; Hendin, 1991; Lieberman, 1981; Linehan, Armstrong, Suarez, Allmon & Heard, 1991; MacLeod et al., 1992
Family & Network Therapy Rehabilitation Programs/Aftercare	Richman, 1979
<i>Postvention</i>	
Group or School-Based Individual or Family Therapy for Bereaved Community Intervention Mass Media	Hazell, 1991 Worden, 1983 Rodgers, 1991 Phillips et al., 1992

This preventive value may be extended by promoting primary care detection and treatment of panic disorder which also carries an increased risk of suicide attempts (Weissman et al., 1989). Patients with panic disorder frequently present to emergency room physicians or general practitioners where their symptoms of panic disorder may be misdiagnosed as a variety of cardiac or other medical illnesses. Consequently, their suicide risk may go unrecognized.

Suicide in adolescents may be the outcome of serious psychological problems that began before the age of 10 or 11. There is a need, therefore, to reach out to young children with improved methods of detecting and treating early depression, conduct problems and family pathology (Carlson, 1990). Studies of Native Americans at public boarding schools and high schools, also suggest the need for early identification of students' general mental health needs and the importance of giving specific attention to substance use (Howard-Pitney et al., 1992; Manson et al., 1989).

Unfortunately, the most seriously ill youths may be the ones who "elude the mental health system" (Myers et al., 1991). They may not be in school where their problems can come to the attention of educators. They may avoid contact with health care providers and reject community interventions. In our survey of Inuit youth in a settlement on Hudson's Bay, we found that not a single young person would go to a doctor or nurse for a problem with depression (Kirmayer & Malus, 1993a). This may reflect a lack of knowledge about the symptoms of depression and the availability of effective treatments in the form of medication and psychotherapy.

The problems of detection and treatment of depressed or suicidal individuals are compounded in small communities where there is considerable cost to one's social identity associated with declaring a personal or family conflict. Cultural values may also mitigate case-finding; as Brant notes:

"There is a problem with early identification and treatment of ...[the] at risk person because Native society is non-interfering and if such a person were... asked if he was having problems...[one would probably get the response:] 'nothing I can't handle' because self reliance in one's internal emotional world is expected" (Brant, no date, p. 15).

The reluctance to acknowledge emotional distress may be a response to living in a small community, a specific cultural style, or a psychological defense. Given this reluctance, there is a need to develop means of reaching vulnerable and distressed individuals without subjecting them to psychiatric labeling and potential ostracism from the community. One solution is public education about depression and other psychiatric disorders aimed at reducing stigma. Another approach would provide counseling and group support in non-clinical settings such as youth recreation programs, vocational training or cultural activities.

### **4.3. Primary Prevention**

Primary prevention aims to reduce suicide risk by improving the health of a population. In the case of many Native communities, the high prevalence of suicide attempts puts many youth at risk and suggests the utility of a broad-based approach aimed to promote community mental health. However, most suicide prevention programs have remained focused on the individual level and the issue of suicide *per se*.

The fact that interpersonal crises are usually the immediate precipitants of youth suicide raises serious problems for prevention for at least three reasons: (1) interpersonal crises are frequent events for many individuals; (2) they are often provoked or aggravated by other characteristics of suicide attempters; and (3) there is often a short interval between the stressor and the suicide attempt (Shaffer et al., 1988).

The basic modalities of suicide prevention developed for urban communities are rooted in a clinical perspective and include:

- (1) providing ready access to comprehensive psychiatric services;
- (2) restricting access to methods used to commit suicide;
- (3) providing school-based programs to:
  - A. heighten awareness of the problem;
  - B. promote case finding;
  - C. provide information about mental health resources;
  - D. improve teenagers' coping abilities.

Suicide hot lines have had limited impact (McNamee & Offord, 1990). This disappointing lack of benefit may be due to low utilization rates by the individuals most in need, poor training and uneven quality of helpers who provide inappropriate advice, and the lack of outreach or follow-up of individuals at risk (Shaffer et al., 1988).

Most students do not recognize suicide as a feature of a mental illness; instead, suicide is treated as a natural response to rejection, feeling unloved or unwanted; or even as a heroic or romantic gesture (Shaffer et al., 1988). This impedes help-seeking and acceptance of psychiatric intervention. Educational materials and public awareness programs aimed not at suicide *per se* but at coping with conflict and loss and facilitating psychiatric help-seeking for major depression and family problems may help reduce the suicide rate.

An analysis of U.S. data from the period of 1980 to 1987 found that state governmental initiatives on suicide prevention—including specific legislation, a commission task force or advisory group, and production of manuals or brochures—were associated with a decrease in suicide rate (Lester, 1992c). However, student participation in school based suicide prevention programs was actually associated with a subsequent *increase* in the level of adolescent suicides within the state.

In an important critical review of youth suicide prevention programs, Shaffer and colleagues (1988) point out that educational programs—which are usually lecture programs of several hours duration in which students are given information about suicide—may have counter-productive effects. These

programs may have the effect of normalizing suicide rather than emphasizing its strong association with major psychiatric pathology:

“Relatively few students believe either before or after exposure to a program that suicide was a feature of mental illness. In view of the evidence that suicide is a feature of mental illness, programs that choose to ignore the psychiatric correlates of suicide are either operating in ignorance or are misrepresenting the facts. They may also inadvertently enhance the chances of imitation, which the authors believe is especially likely if suicide is portrayed as an understandable, tragic, heroic, or romantic response to stresses emanating from uncaring adults or institutions. In the authors’ view, suicide is less likely to be imitated if depicted as a deviant act by someone with a mental disturbance. The findings thus do little to support the value of general educational programs. Most students do not need them, and those who do would probably be better served by an individualized approach to their clinical problems. This is not to say, however, that there is no place in the high school curriculum for more education about mental health and how to obtain help for emotional disorder” (Shaffer et al., 1988).

Vieland and colleagues (1991) assessed the impact of a high school based suicide prevention program on the help-seeking behaviours of adolescents. The implemented program comprised a single 90 minute information session given by teachers who in turn had received 6 hours of training in the subject. Over an 18 month follow-up period, students completed three questionnaires on their coping strategies when faced with life stresses, including suicidality. There was no significant difference in reported coping strategies between students exposed to the program and those who did not receive it. In fact, there was a nonsignificant trend for the exposed group to report attitudes inconsistent with the program. Spirito and colleagues (1988) found a positive change in knowledge and coping skills following a six week prevention program with a structured curriculum but did not test any impact on suicide rate.

It may be that drawing attention to the problem of suicide has a deleterious effect. School programs targeted not at suicide *per se* but at enhancing self-esteem may prove to be more effective (Garland & Zigler, 1993; Stivers, 1991). Dryfoos (1990) examined 100 prevention programs in the areas of adolescent delinquency, pregnancy, drug abuse, school failure and acting out behaviour. Work on these problems is relevant to suicide prevention since they share many common risk factors. Dryfoos concluded that programs with multiple goals that include educational enhancement, job preparation, aid to dysfunctional families and restoration of community pride were more successful than others. The most successful programs managed to use the schools as the basic approach to problems of unemployment, family breakdown and community despair. Programs that were more likely to be successful integrated multiple rather than single goals, i.e., drop-out prevention, pregnancy prevention, and improvement in child placements.

Felner and colleagues (1992) also emphasize the potential value of comprehensive programs, which include educational enhancement, improving employment opportunities and strengthening family coherence and community pride. More successful recent programs have a broad base which includes

making schools more supportive of student populations already at risk from deleterious socioeconomic factors through such measures as smaller classes and teaching styles that enhance self-esteem.

One issue that appears only sporadically in the suicide prevention literature is the question of cultural identity. As discussed above, Grossman and colleagues (1991) found alienation from culture and community to be an important risk factor in a survey of suicide attempts among Navaho youth. Elders in an Inuit community on Hudson Bay—the site of a cluster of teenage suicides in 1991-92—reported: “We don't know what to teach the children any more” (Personal communication to M. Malus). This points to the importance in a comprehensive program of nurturing a sense of pride in one's roots and heritage. Positive strength from one's past can work to inform the present with a sense of optimism for the future. In the U.S., authorities on Native health have repeatedly called for community-wide intervention grounded in the culture and customs of the tribe. As the authors of a report on Native American adolescent health note:

“One is struck by the strong cultural values and heritage which transcend the poverty and negative statistics we have confronted. In many communities there is an orientation to collective values over individual decisions—a strong cultural base for prevention programs. In many homes, cultural values and spirituality buffer youth from the often brutal economic realities which surround them. Language, arts, music and religion can serve as the basis for building common values.” (Indian Health Service and University of Minnesota Adolescent Health Program, 1992).

The challenge then is to encourage and support local initiatives that build on traditional values to provide renewed community solidarity and integration that reaches alienated youth.

Communities themselves may be a fertile source of ideas that fit with local social and cultural realities. A state initiative in Alaska allowed communities to develop their own suicide prevention programs (Berger & Tobeluk, 1990). Town meetings in each community led to proposals which were funded by the state. The types of programs funded included: youth/elder communication (33%), i.e., cultural instruction, modeling; projects to promote knowledge of traditional language and culture; recreational activities to provide alternatives to alcohol or drug use (12%); support groups (9%) for youth, elders or both to raise self-esteem; volunteer systems to improve informal helping and networking in the community (8%); direct counseling to persons at risk (7%); education/prevention programs to inform people about self-destructive behaviour and train community residents to help (7%); development of a crisis intervention team (5%); and development of a crisis line (3%). No data were provided on whether this program was successful, but it was well-received by the communities. Grass-roots development programs have been undertaken in the NWT and elsewhere in Canada (Ewan Cotter, 1990; Muskox, 1991), but these programs need both continued financial support and access to relevant mental health and organizational expertise to implement and evaluate their programs.

Various conventional mental health programs may be effective provided they have the support and participation of the community (Berlin, 1985). However, since the breakdown in the transmission of cultural traditions appears to contribute substantially to the widespread demoralization and hopelessness of youth, the development of programs to transmit traditional knowledge and values, usually by respected elders, is also a crucial component of any suicide prevention program addressed to Aboriginal peoples. Whatever programs are developed should include an evaluation component so that other communities can learn from their successes and failures.

#### 4.4. Secondary Prevention

Acutely suicidal individuals require skilled crisis intervention and may require hospitalization. Suicide attempters require comprehensive medical care to prevent mortality and morbidity associated with their attempt and systematic follow-up and aftercare to prevent recurrence. Effective treatment of depression by antidepressant medication and psychotherapy can reduce the risk of repeated attempts and completed suicide.<sup>13</sup>

Given the uncertainty of prediction even in high risk groups, many authorities have suggested that attention be focused on previous attempters to prevent recurrence and extended to follow-up of individuals with parasuicidal behaviour (Jeanneret, 1992). Although treatment studies are lacking, long-term psychotherapy may be beneficial for adolescent suicide attempters (Ladame, 1992). Beck and colleagues (1985) advocate cognitive therapeutic interventions that specifically address hopelessness to lower suicide potential. Psychodynamic approaches offer a more differentiated approach to the range of motivations and conflicts that may give rise to suicidal behaviour (Hendin, 1991). However, psychodynamic psychotherapy is generally time and labour intensive, requiring great expertise to administer and there are still no outcome studies to verify its usefulness in reduction of suicidality. Family intervention may be the treatment of choice where suicidal impulses can be traced to intransigent conflicts with parents or siblings (Samy, 1993).

Unfortunately, there are few controlled outcome studies of the treatment of victims of attempted suicide with adequate description of sample, clearly

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<sup>13</sup> Concerns that the recently introduced antidepressant fluoxetine (Prozac), may provoke suicide have not proved well founded (Power & Cowen, 1992). The original report by Teicher et al. (1990) presented anecdotal reports of 6 cases all of whom represented complex diagnostic problems. A retrospective study of 1017 patients found a significant increase in new onset suicidality in the fluoxetine treated group (2.77%) versus non-fluoxetine treated group (0.75%). However, a meta-analysis of pooled data from double blind trials found new-onset suicidality in 1.2% of fluoxetine treated patients, 2.6% of placebo treated patients and 3.6% of TCA treated patients. Fluoxetine appears to be safe and effective. However, it may cause agitation, irritability or motor restlessness (akathisia) and dysphoria in some patients, which the patient may attribute to a worsening of depression. This is most often seen with doses greater than 20 mg daily and usually shortly after increasing the dose.

defined treatment and close follow-up. A recent review concluded that there is no proof at present that psychiatric aftercare of suicide attempters is effective in preventing subsequent suicide (Moller, 1989). One major problem is nonadherence to treatment, with most studies showing only about 25% of patients participating in follow-up. In a 3 month follow-up study of adolescents seen in a general hospital emergency department or an inpatient psychiatric unit, about 15% never showed up for their crisis therapy and 10% made a second attempt (Spirito, Plummer, Gispert, Levy, Kurkijian, Lewander, et al., 1992).

In the general population, individuals who make repeated suicide attempts constitute a special group with widespread deficits in problem solving and interpersonal relationships (Appleby & Warner, 1993). Specific forms of behaviour therapy directed at interpersonal problem-solving produce demonstrable delays in parasuicide and less risk of repetition (Lieberman, 1981). A randomized clinical trial of cognitive-behaviour therapy for the treatment of chronically parasuicidal women who met criteria for borderline personality disorder, found less frequent and less severe parasuicidal behaviour over the year of the treatment, in the treated group compared to a "treatment as usual" community control (Linehan et al., 1991).

The relevance of these psychotherapeutic approaches to the problem of Aboriginal suicide is still uncertain. Davenport and Davenport (1987, p. 537) argue that: "psychological approaches favored by many mental health workers are most applicable to egoistic suicide—a type that is relatively rare among Indians. Although psychological approaches can also be used with altruistic and anomic suicide, psychological intervention for these types of suicide should be primarily an adjunct in a comprehensive process of community and social development."

#### **4.5. Postvention**

Treatment of bereaved relatives and friends of suicide victims who may themselves be at risk for increased psychiatric morbidity including suicide is termed *postvention*. As noted above, suicide may occur in clusters and this has been particularly common in Native communities which are closely knit. Suicides have significant impact on family and friends of the victim, increasing depression for at least 6 months after the event. Consequently, many authorities advocate the provision of counseling and supportive psychotherapy aimed at promoting normal mourning and avoiding pathological grief responses (Brent et al., 1992).

The U.S. Centers for Disease Control has developed guidelines for the community response to suicide clusters (O'Carroll, Mercy & Steward, 1988). In brief these guidelines suggest:

1. A community should review these recommendations and develop their own plan before the onset of a suicide cluster.
2. The response to the crisis should involve all concerned sectors of the community:
  - A. a coordinating committee of concerned individuals from school, church, health care, government, law enforcement; helpers, etc.
  - B. a host agency should be identified to coordinate meetings, planning and actual response in time of crisis;
3. Relevant community resources should be identified, including: hospital, emergency medical services, school, clergy, parents groups, suicide hotline, students, police, media, representatives from agencies not on coordinating committee.
4. The response should be implemented when a suicide cluster occurs or when one or more deaths from trauma are identified that may impact on the adolescents.
5. The first step in crisis response is to contact and prepare all groups involved.
6. Avoid glorifying suicide victims and minimize sensationalism.
7. High risk persons should be identified and have at least one screening interview with a trained counselor and then be referred for further counseling as needed.
8. Timely flow of accurate, appropriate information should be provided to the media.
9. Elements of the environment that might increase the likelihood of further suicide attempts should be identified and changed.
10. Long term issues suggested by the nature of the suicide cluster should be addressed.

Rodgers (1991) discusses an approach to suicide clusters in Native communities based on experiences with clusters in three communities, two in the NWT and one in Saskatchewan, each with a population of about 1200. The suicide clusters involved mostly young males living in communities which lack resources, have problems with alcoholism, family violence, general hopelessness and pervasive feelings of low-self esteem. Rodgers advocates a community based intervention, conducted with outside consultation, based on the hypothesis that the suicides are an indicator of more widespread community disorganization.

In this intervention, the consultant prepares for a brief visit by collecting available information from key contacts within the social and political structure of the community. On-site activities involve workshops, meetings with key informants, and community meetings. These meetings serve to identify problems within the community which can then be targeted for change. Key informants are also asked to identify individuals at risk within the community who are then offered ongoing counseling. Responsibilities for follow-up are clearly defined.

Rodgers reports an almost complete halt to suicides in the three communities which received this intervention. Unfortunately, this report lacks both systematic description of the intervention and structured evaluation of its effectiveness. However, it remains a promising direction for integrating professional expertise with community resources.

#### **4.6. Role of the Media**

As noted above, in Section 2.8, the more publicity given to suicides, the more suicides that follow in their wake (Phillips et al., 1992). While the exact mechanism of this effect is poorly understood, news media must be encouraged to follow specific guidelines with respect to suicide reporting. There is some evidence that this may actually reduce suicides following in the wake of media reporting (Ibid). Many Canadian editors have adopted policies to minimize the reporting of suicide to reduce their negative impact (Pell & Watters, 1982).

Phillips and colleagues (1992, pp. 510-512) offer explicit recommendations on the media handling of suicides to reduce the contagion effect:

- (1) Headlines should not mention suicide explicitly.
- (2) Alternatives to suicide should be presented in the article.
- (3) The negative outcomes of suicide should be stressed; rather than a romantic treatment (e.g., a TV program that portrays suicidal youth as heroic representatives of a betrayed culture)
- (4) Suicide stories should be short and not repeated frequently, while antisuicide stories should be presented immediately after suicide stories and frequently repeated.
- (5) The media should not create 'epidemics' by juxtaposing suicides from different parts of the country.
- (6) People conveying antisuicide messages should be recognizably similar in demographic characteristics (i.e., age, sex, ethnicity) to those of the targeted audience.
- (7) Multiple advocates should repeat the message that suicide is rare, and elaborate on alternative ways of coping with loss, pain, rejection, depression, stress, and family or social problems.

Antisuicide materials can also be promulgated through the media. For example, there is a need for continued public education about the recognition of depression and panic disorder. Our survey of 100 youth in a Northern Québec Inuit community found that not a single person would go to a doctor, nurse or other professional helper if they were depressed, despite high levels of health care utilization for physical problems (Kirmayer et al. 1993b). People need to be informed that major depression and panic disorder are treatable and the stigma of mental disorder must be reduced, even as the stigma attached to suicide and other self-destructive behaviours is increased.

Finally, the media can contribute to suicide prevention by presenting positive images of Native culture and examples of successful coping and community development. Unfortunately, such stories are often eclipsed by more sensational accounts of community problems which, while they may help Native groups gain political leverage, can be deeply demoralizing for individuals and

communities that identify with the afflicted groups. This is further aggravated by media tendencies to lump all Native people together with little regard for their diverse cultures and experiences. Presenting a wide range of Native voices and events will counteract this tendency to stereotype and, inadvertently, promote prejudice.

#### **4.7. Summary of Interventions**

Figure 6 presents the types of suicide intervention arranged by their point of application: to pre-existing social or contextual factors, to the vulnerable individual or at the time of a precipitating event or crises. Interventions may be targeted at the sociocultural milieu, the family, the vulnerable individual or the crisis situation. While all these approaches are reasonable, only the public educational and individual levels of intervention have received much study and there is little evidence that they have significantly reduced the suicide rate (McNamee & Offord, 1990; Shaffer et al., 1988). Most disturbingly, there is evidence that some types of intervention may actually be harmful—specifically, school-based suicide awareness programs and media attention to suicide epidemics (Lester, 1992b; Phillips et al., 1992; Shaffer, et al., 1990; Vieland et al., 1991). Most studies of the effectiveness of interventions have been methodologically flawed so that no firm conclusions can be reached (McNamee & Offord, 1990).

Although early studies of school-based educational suicide prevention programs have been very disappointing (Shaffer et al., 1988), some authorities remain optimistic (Leenaars & Wenckstern, 1991). More recent studies suggest some efficacy for intensive, broad based programs (Felner et al., 1992). The current consensus in the literature on youth suicide prevention emphasizes that rather than teaching the topic of suicide directly to students, schools should provide a health education curriculum for all students that builds basic skills useful for managing a variety of health issues. Such a curriculum would enhance students' skills in coping with stress or distressing emotions, problem solving, interpersonal communication and conflict resolution—all measures that help to build self-esteem (Cimboric & Jobes, 1990). Even if these psychological issues are explored and dealt with in life skill programs, however, the surrounding socioeconomic factors that the community, and hence the individual, is struggling with, must be dealt with simultaneously.

Aboriginal peoples must be provided with ready access to culturally sensitive mental health care. In the case of individuals with major psychiatric disorders who comprise a large proportion of suicidal individuals, this means comprehensive psychiatric care including access to evaluation, and the full range of treatment modalities. Traditional values of non-interference that are used to justify non-intervention and lead to avoidance of problems must be counter-acted with education on help-seeking for specific problems.

However, for many suicidal adolescents, their problems are inextricably intertwined with problems in the family and the social order. Consequently, they

insert fig 6 here

need therapy aimed at helping them to negotiate and master the chaotic social situations they face. Family therapy or social network interventions aimed to uncover abuse, resolve conflicts and ensure the emotional support of youth may be more useful than an individually centered approach. For those suicidal adolescents who are withdrawn “outsiders” vis-a-vis the community, therapy “directed at formation of role identity and assimilation into the dominance hierarchy would be a logical strategy to try, but has not had systematic study” (Ryland & Kruesi, 1992, p. 192). For adolescents who are outward success stories, but who inwardly harbor perfectionistic strivings and an inability to share pain and self-doubt, it may prove helpful to identify some of the burdensome community expectations they receive and develop relationships where they can confide their concerns and receive support.

One type of program that may be particularly effective at the level of cultural transmission, enhancing self-esteem and promoting social integration, is the development of heritage camps that bring together youth and elders. Under skillful leadership and design, these programs can integrate potentially deviant youth without singling them out for further labeling or ostracism (Levy & Kunitz, 1987).

Government responses to social pathologies which simply provide more health care avoid the more fundamental causes. Serious effort must be applied to developing full employment and to actively preserving and enhancing community and cultural esteem. Prevention programs must identify community strengths as well as weaknesses to avoid contributing further to the demoralization that hurts everyone (Levy & Kunitz, 1987). Berry states that:

“Fundamental changes are required in order to retain control over lives, and through this, to return self-respect among Aboriginal Peoples. This return of control will involve advancing and withdrawing: the former on the part of Aboriginal peoples in the areas of education, health, social services, justice and economic development; and the latter on the part of non-Aboriginal peoples in the areas of schooling, hospitals, welfare, policing and resource exploitation” (Berry, 1993) p. 18.

In the U.S., recent legislation has authorized a comprehensive mental health program for Native Americans that will include community mental health planning, increased clinical staff, training of community workers, public education and research (Nelson, McCoy, Stetter & Vanderwagen, 1992). Current policies are based on an Indian Health Services document (IHS, 1990) that emphasizes the importance of providing a high level of professional mental health care to all Native groups. Efforts to make this care culturally sensitive and to work cooperatively with Native healers are also stressed. Local community initiatives are essential to the development of new programs that address the low self-esteem, family violence and alcohol abuse that often contribute to suicide. A special team is available to help communities develop programs (DeBruyn, Hymbaugh, K. & Valdez, 1988). Such a program centered on delivery of professional mental health care is a minimal standard that should be extended to all Native peoples by virtue of their citizenship. However, this professional

response will likely be insufficient to tackle the elevated rates of suicides in Native communities. Only community development, political empowerment and the re-vitalization of Native identity will give youth a solid sense of self-worth and a hopeful future.

## 5. CONCLUSION

### 5.1. A Sociocultural Perspective

Psychiatric disorders increase the risk of suicide but, in themselves, are not a sufficient explanation for many suicidal acts (Tanney, 1992). Depression and schizophrenia increase the risk of completed suicide; while increased rates of nonfatal suicide attempts are most closely associated with personality disorders, dysthymic disorder and substance abuse. At present there are no adequate data to decide to what degree the problem of suicide among Canadian Aboriginal peoples is directly related to major psychiatric disorders. In particular, it is not known what proportion of suicide attempts are associated with major depression and what proportion occur in otherwise healthy individuals facing hopelessness and despair due to social or community problems. However, since both depression and personality problems can be provoked and aggravated by social conditions (Brown and Harris, 1978; Goldberg and Huxley, 1992), a high prevalence of psychiatric comorbidity does not preclude a social explanation for suicide. It would, however, indicate the need for provision of psychiatric care to complement social interventions aimed at the root of the problem. There is also a continuing need for psychiatric epidemiology in Aboriginal communities to ascertain the prevalence of major psychiatric disorders and determine what social changes may alleviate the problem.

But the individual is not a free-standing entity—one's personhood and selfhood (the outward and inward faces of identity) are social and cultural constructions (Markus & Kitayama, 1991; Shweder, 1991). Cultures vary in the concept of the person and the self (Carrithers, Collins & Lukes, 1985; Marsella, DeVos & Hsu, 1985). The impact of social forces on individual psychopathology then, may be mediated by culture-specific notions of self and person.

The dominant North American culture tends to be highly individualistic, valuing self-direction, individual preferences and achievements as the marker of maturity, psychological health, and success (Bellah, Madsen, Sullivan, Swidler & Tipton, 1985). In contrast, many other cultures see the person as a social being whose identity derives from participation in family and community (Sampson, 1988). The broad polarity between egoistic or individualistic cultures and those that are communalistic or sociocentric, which has dominated the literature of cross-cultural psychology, must be expanded, however, to encompass the cultural realities of Native peoples. In some respects, these cultures appear sociocentric in that the well-being of the family, tribe or band often takes precedence over the individual. In other respects, they are better understood as more individualistic than the modern welfare state, in that traditional values of respect for the individuals' own choices and non-interference are central to the community (Brant, 1990).

In addition to the contrast of egoistic and sociocentric versions of the self, a third aspect, not adequately incorporated in current models, concerns the role of

the environment in the experience of the self. For Native peoples, the land, the animals and the elements are all in transaction with the self and indeed, in some sense constitute aspects of the self (or, better, the human self participates in these larger more encompassing realities) (Stairs, 1992). Damage to the land, appropriation of land, and spatial restrictions all then constitute direct assaults on the self. These environmental attacks on the self must be understood as having psychological consequences that are equivalent in seriousness to the loss of social role and status in a large scale urban society. The result is certainly a diminution in self-esteem, but also a hobbling of a distinctive form of self-efficacy that has to do with living on and through the land. The implication is that issues that may seem purely political or territorial for the dominant society, are fundamentally issues of collective and personal self-creation and well-being for Aboriginal peoples.

Psychotherapy and other mental health interventions assume a particular cultural concept of the person with associated values of individualism and self-efficacy (Kirmayer, 1989b). These approaches may not fit well either with traditional Aboriginal cultural values or contemporary realities of settlement life. There is a need to rethink the applicability of different modes of intervention from the perspective of local community values and aspirations. Family and social network approaches that emphasize the interconnectedness of individuals may be more consonant with Aboriginal culture, particularly if they are extended to incorporate some notion of the interconnectedness of person and environment (LaFromboise, 1988).

As well, Native notions of spirituality are at the center of the renaissance of traditional healing practices (Absolon, 1994; Stout, 1994). These values are being reclaimed after centuries of active suppression by religious, education and governmental institutions. Traditional healing practices invoke spirituality as a link between individual suffering and the health of the community as a whole. Suicide then is seen as closely related to other forms of sickness of the spirit and the aim of healing is to restore the balance of physical, mental, emotional and spiritual dimensions of self and community (Stout, 1994). While the term 'spiritual' is intuitively and experientially understood by many people it has specific interpretations in different community contexts. The efficacy of promoting spiritual values and healing cannot be understood simply in terms of symptoms, behaviours or outcomes as it is an essential element in the current reconstruction and revitalization of Aboriginal identity both at individual and community levels.

## 5.2. Emerging Trends in Research

A fundamental problem for efforts to predict suicide is its low base rate. Any method that is sensitive enough to detect individuals at risk will actually identify many more *false positives* —that is, individuals who are not truly at risk. At the same time, unpredictable life events sometimes precipitate suicide attempts. Consequently, the goal of accurate prediction of individual suicides may be forever out of reach. Instead, we need to understand the nature of suicide in psychological, social and cultural perspective to guide broad based interventions aimed at improving the health and well-being of Aboriginal peoples and so reducing suicide rates among groups as a whole.

Research on psychological processes proximate to suicide may guide better understanding of causes, prevention and psychotherapeutic treatment. Such research may also provide a locus where the impact of culture on psychological processes, beliefs and attitudes can be examined. Similarly, studies of family, interpersonal and social network responses to depression, aggression and suicidal behaviour offer another way to examine the impact of distinctive social and cultural factors on behaviour and may lead to culturally adapted intervention strategies.

Among the questions to be addressed at the psychological level are:

- How are depression, anxiety and demoralization expressed and coped with within Native communities? Expressions of distress vary widely cross-culturally so that psychiatric diagnostic categories may give a very incomplete picture of local forms of distress (Kirmayer, 1989a). We need to know more about cultural variations in the expression of distress so that treatable disorders can be recognized. We need to understand the social response to problems so that helpful strategies can be supported and maladaptive responses modified.
- What role do culture-specific notions of the self and the person play in the cognitive and behavioural processes that contribute to depression, anxiety and suicide?
- How does the self mediate the social processes of disorganization and anomie?
- How do some individuals resist the damaging effects of widespread social problems and political disempowerment? The study of “reasons for living” and ways of coping offers an entry point for studying adaptive strategies that fit local traditions and social context.
- What therapeutic strategies have an immediate effect on suicidal ideation?

- What interventions have long-term benefits in suicide prevention?
- Traditional values of non-interference may be used to justify non-intervention and lead to avoidance of problems. The circumstances under which denial and avoidance are adaptive strategies and under which they are themselves the cause of harm, are the focus of current controversies in health psychology, and must be studied in the Native context.
- How must psychotherapy, family therapy and network interventions be modified to fit the social and cultural situation of Native peoples? We need to develop culturally appropriate forms of psychotherapy and intervention that reflect the cultural concept of the person and cultural values (Kirmayer, 1989b). Thus, most psychotherapy is individualistically oriented and aimed at self-efficacy. To respect traditional values of family, community and spirituality, psychotherapy may need to be altered, or at least occur with a large measure of openness to alternate conceptions of the self.

Social processes affect the whole community and demand different research strategies to examine their impact. Important social questions for understanding and preventing Aboriginal suicide include:

- What accounts for the enormous variations in suicide rates across communities?
- To what extent is this a question of simply accounting for the dynamics of clusters?
- There is lack of information on the effect of changing configurations of the family and on the impact of parenting or presence or absence of children (Stack, 1992).
- To what extent are economic factors (poverty, unemployment, rate of growth) sufficient to account for differences in rates?
- How can we understand local variations in the acculturative process?
- How do community attitudes toward suicide and mental health affect the suicide rate? Lester and Bean (1992) have developed scales to measure attitudes toward suicide (e.g., whether “people who commit suicide are usually mentally ill,” “suicide is often triggered by arguments with a lover or spouse,” “suicide can be a rational act,” “only cowards kill themselves,”) which, with cultural adaptation, could be used to examine community attitudes that may sanction or prohibit suicide.

Specific gaps in the research literature identified by this review include the following:

- We lack basic data on the rates and psychosocial correlates of suicide attempts among most Canadian Aboriginal groups.
- There are no systematic comparisons across regions and tribal groups in Canada to identify variations and social correlates.
- There are few ethnographic studies of Aboriginal concepts of the person and the self as they pertain to health and well-being as well as to coping with adversity.
- We know little about the impact of culture change on child-rearing practices, the nature of family composition, and social support within different types of Native communities.
- Many individuals, families, and communities cope successfully with adversity, depression and suicidal ideation. Case studies of communities where positive changes have occurred are essential to balance the current emphasis on detailing problems and applying conventional solutions without adequate evaluation. Studies of community-based programs would provide an essential corrective to the tendency of mental health research to focus on individual psychopathology and interventions.
- There is little work on the meanings and implications of the spiritual dimension of suffering and healing which are the focus of the revitalization of Native healing traditions.

There is a clear need for basic epidemiological data, and for more culturally valid studies that integrate anthropological and indigenous perspectives with epidemiological methods (Rogler, 1992). Inconsistencies in findings across studies may be minimized with standardized epidemiological methods. Those that remain, however, will be understood only when we address the personal and cultural meanings of symptoms and behaviour.

There is an urgent need for evaluation research of intervention programs in Aboriginal communities, since there is a real possibility that some well-intentioned interventions may do more harm than good. Compounding this problem is the fact that suicide commands public and government attention and therefore is perceived as a powerful issue to bring to the fore in political debates. Just this focus, however, may serve to legitimate suicide as a form of political protest and so, inadvertently, increase its prevalence.

Research must be conducted collaboratively with communities to ensure relevance and responsiveness to local needs and perceptions. Ethical guidelines for the conduct of research with Native communities and peoples have been published by the Royal Commission (1993) and the Association of Canadian Universities for Northern Studies (1990) among other groups.

### 5.3. Implications for Intervention

Previous working groups have clearly set out the broad agenda for Aboriginal mental health (Steering Committee, 1991). The basic principles include: (1) a holistic approach to health—that is, avoiding the segmentation of care and narrow focus of biomedicine to encompass biological, psychological, sociocultural and spiritual dimensions of health and well-being; (2) coordination of multidisciplinary services; (3) a continuum of care from promotion to prevention, treatment, support and aftercare; (4) mental health training of existing community workers; (5) development of specialized indigenous training centers; (6) a particular focus on child and family; (7) experiential learning and development of indigenous models of knowledge and practice.

While embracing these principles, the research we have reviewed suggests that suicide interventions among Aboriginal peoples must:

- address problems at community and political level as well as at individual level; specifically, to promote empowerment of individuals and communities so that people come to feel a greater sense of coherence and control over their lives;
- promote active transmission of traditional language and life skills from elders to young people;
- support symbols and enactments of group and community pride;
- develop culturally appropriate educational programs that address problem solving, dealing with substance abuse, depression, anger, relationship breakups, and other life events;
- ensure access to basic biomedical care; train primary care providers to better detect and treat major depression, panic disorder, and other psychiatric disorders;
- develop and improve access to treatment programs for alcohol and substance use;
- develop cadres of local Native community mental health workers with skills in individual and family counseling, social network intervention and community development;
- develop culturally sensitive approaches to psychotherapy, family therapy and social network intervention—especially the promotion of traditional healing practices.

As well, we note that there are certain problems not of culture but of scale, that affect the applicability of mental health programs designed for urban settings. In small communities, identifying vulnerable individuals may have damaging effects on their social status and integration thus further aggravating their situations. As well, in small communities there are no secrets so that usual

guarantees of professional confidence may be more or less meaningless. The development of interventions must thus proceed with the participation of community members, experts on social process and cultural practitioners and not by mental health practitioners who simply transplant models of care appropriate to their familiar settings to Aboriginal communities.

Suicide is a response to feeling trapped in a dead-end with no exit. It is almost always an effort to escape unending frustration, grief and psychic pain (Schneidman, 1993). The prevention of suicide must therefore counteract frustration, hopelessness and unbearable pain in all of their toxic forms and provide other means of changing or escaping intolerable circumstances. In many cases, this may involve psychotherapy, medication or other forms of healing that renew the individual's sense of power, self-efficacy and self-worth. For conventional mental health approaches to be effective, however, they must fit with community values. Where the loss of hope affects whole communities, this individualized approach may be woefully inadequate. Rather than turning Native communities into "therapeutic milieus" where everyone is preoccupied with mental health issues, it may be more effective to address directly the social problems of economic disadvantage, the breakdown in the transmission of cultural tradition and identity, and political disenfranchisement.

In accord with previous reports then, we believe that the fragmentation of mental health programs into substance abuse, violence, psychiatric disorders, suicide prevention and so on, is not a wise way to proceed (Steering Committee, 1991). There is tremendous overlap between the affected individuals, the professional expertise and the appropriate interventions. Focusing attention exclusively on suicide, without attending to its larger context, may do more harm than good. A comprehensive approach to the problem of suicide should be integrated within larger programs of health promotion, family life education, community and cultural development, and political empowerment.

## APPENDIX A.

### A NOTE ON RESEARCH METHODS

There are three broad strategies for studying the problem of suicide at the level of communities: clinical, epidemiological and ethnographic. Each has strengths and limitations. The integration of these forms of knowledge is an ongoing challenge in the field of mental health.

*Clinical studies* that compare suicide attempters with other patients are conducted in the settings where problems are recognized and where professional staff are present to collect information. Clinical studies can describe the characteristics of suicide attempters who come or are brought for help and can identify potentially important risk and protective factors but cannot determine their prevalence or relative contributions to suicide risk in the population which is important both to identify social causes and potential methods of prevention. In any given clinical setting, completed suicide is usually a rare event and it can be misleading to generalize from the idiosyncratic features of a few cases.

As well, studies of mental health in the community indicate that many individuals never come for help or use alternative family and community resources. Those that do contact the professional health care system are seen primarily in primary care not in psychiatry or specialty mental health. It is therefore necessary to conduct community surveys to determine the true prevalence of suicide attempts and to study the effectiveness of family and community resources as well as professional interventions (Goldberg & Huxley, 1992). Studying the pathways to care may also identify problems in recognition of distress and in differential treatment and so improve the delivery of appropriate care.

*Epidemiological surveys* offer the best means of identifying risk and protective factors that function at the level of the vulnerable individual, as well as factors at the levels of family, social network, cultural community, society or nation that affect whole populations. Current epidemiological methods emphasize structured diagnostic interviews and systematic recording of details of personal history and experience (Eaton & Kessler, 1985). However, memory is surprisingly poor even for personally salient events, and recall is biased by present concerns and conceptions (Rogler, Malgady & Tryon, 1992). These factors set limits on the reliability of any psychiatric survey. Self-report measures of symptoms also identify dimensions of distress though these may not fit discrete psychiatric diagnostic categories (Goldberg & Huxley, 1992).

Studies of completed suicides demand special methods to reconstruct the suicide victim's personality, psychopathology, recent life events and living circumstances (sometimes called a "psychological autopsy") (Brent, Perper, Kolko & Zelenak, 1988). Usually, these are case-control studies in which suicide victims are compared with peers or age-mates who died by other means or who are alive and well.

All retrospective studies have limitations due to the lack of complete and accurate information in medical charts, family or informant recollection, official records and so on. For example, many studies have found low correlations between parents' reports of their children's distress and children's self-reports. While parents are often aware of symptoms of emotional distress in adolescent suicide attempters, parents tend to be unaware of (or deny or refuse to report) their adolescent's suicidal ideation and even suicide attempts (Marttunen, Aro & Lönnqvist, 1992; Velez & Cohen, 1988).

Retrospective case studies of completed suicide that involve intensive interviews with bereaved family members raise special practical and ethical issues (Beskow, Runeson & Åsgård, 1991). Interviews may be stressful for family and friends and it is crucial to insure that such interviews are conducted by mental health professionals equipped to recognize and deal with pathological responses to loss.

Many deaths recorded as "accidents" are really suicides. This error in record-keeping is due both to the difficulty in determining intent retrospectively and to a general reluctance to acknowledge suicide because of its social stigma. This issue of suicide masquerading as accidental, violent or drug-related death is particularly important in assessing the extent of the suicide problem in Aboriginal communities (Medical Services Branch, 1991).

A partial solution for this problem involves reassessing the cause of death by standardized criteria (Cheifetz, Posener, La Haye, Zaidman & Benierakis, 1987). Such criteria can be applied in other settings allowing comparisons that are not vitiated by local variations in coroner's judgments and reporting practices. For example, it has been claimed that Newfoundland has very low suicide rates. Aldridge and St. John (1991) conjectured that this might simply be due to high rates of under-reporting. They produced a more thorough count of the total number of suicides by supplementing official suicides with a systematic reassessment of records of accidental deaths, death certificates not transmitted to archives and records of pathologists' examinations not sent to the Chief Forensic Pathologist.

"Cases were included as suicide if death had been caused by firearms, hanging, jumping in front of a speeding vehicle or jumping from high places. Deaths by other less lethal self-destructive methods such as recreational or prescription drug overdose, asphyxia or drowning were considered to be suicide if one or more of the following were found in the record: a suicide note or record of a note having been found; record of a previous suicide attempt; evidence of previous psychiatric hospitalization or psychiatric treatment; statements that the person had suffered from a psychiatric illness before or at the time of the suicide. Alcohol and drug abuse were included as psychiatric illness because of their association with suicide in young people" (Aldridge & St. John, 1991, p. 433).

This procedure revealed that fully 58% of suicides were not initially reported—a substantially higher rate of under-reporting than that found in previous studies. While this type of careful assessment gives a more accurate estimate of suicide prevalence, it also introduces bias into studies of the correlates of suicide since psychiatric morbidity and substance abuse become

criteria for defining a death as suicide. In effect, it conflates suicide and parasuicidal behaviours which may have occurred without suicidal intent.

Comparisons across regions and groups—or between groups and the general population—must adjust the crude suicide rate for differences in the demographic composition of the population. For example, groups with a disproportionate number of young people will have inflated suicide rates because the suicide rate is generally higher for youth. Alternatively, comparisons among groups must be made for specific age and gender strata or subgroups. Further, breakdown of group comparisons by type of suicide may also be important where there are clinical or public health reasons for identifying the role of specific risk factors or the effectiveness of specific interventions (Tousignant & Mishara, 1981).

A general problem for cross-sectional epidemiological research is that factors found to correlate with an outcome do not necessarily cause it. Studies that simply report correlations between factors and suicide rates, while they may be useful in developing indices of prediction, may be extremely misleading in attempts to determine the causes of suicide. Similar underlying processes may give rise to both suicide, attempted suicide and other factors associated with these outcomes. In completed suicide, only replication of observations in different samples with statistical control for confounds can allow identification of more fundamental risk factors. In the case of attempted suicide, longitudinal studies permit greater confidence in identifying antecedents and consequences of factors presumed to contribute to suicide. Ultimately, however, ascription of causality depends on theoretical models of the pathway from cause to consequence. These causal models are usually derived from social or psychological theory, clinical experience, and detailed knowledge or case studies of communities.

*Ethnographic case studies* use anthropological techniques of participant observation, depth interviews and qualitative data analysis to explore the meaning of events and actions to the individuals and groups involved. They examine actions as *situated*—that is, having a particular salience, pragmatic force and meaning in a specific social context. In the case of suicide, ethnographic studies do not assume that suicide has a universal meaning but focus, instead, on the specific meanings of suicidal behavior within a given community. While older anthropological traditions were pre-eminently concerned with belief systems, contemporary psychiatric anthropology focuses on the local construction of meaning through action (Kirmayer, 1992; Kleinman, 1986; Kleinman, 1988). Culture is not an homogeneous medium that affects everyone identically—it emerges from processes of invention, transmission, negotiation and contestation of shared beliefs and practices. Understanding behaviour at this level may resolve some of the inconsistencies across studies of suicide and mental health based on communities with different histories, cultural practices and current social, political and economic predicaments. Ethnography leads to local knowledge about specific situations and communities that can be generalized to communities that share salient features of social and historical context.

A central problem for cross-cultural work concerns the translation of instruments. Generally, this has been dealt with by checking translations by back-translation to ensure semantic equivalence. However, this may be insufficient and newer methods which involve examining the latent structure of questionnaires with statistical methods may prove more effective. As well, it is increasingly recognized that questionnaires must employ items that are culturally meaningful in that they utilize familiar language and tap cultural “idioms of distress”—conventional means of expressing and understanding problems (Manson et al., 1985). Without this modification of instruments, it is possible to verify that problems parallel to those found in the dominant society exist while missing a whole range of concerns that are expressed in a culturally distinctive fashion (Kirmayer, 1989a; Kleinman, 1988). The most valid methods of determining the level, nature and correlates of suicide then involve integrating epidemiological and ethnographic methods. To date, this approach has been used in only a few studies of Native American groups (Manson et al., 1985; O’Neill, 1989). It has not yet been applied to the problem of suicide among most Canadian aboriginal groups.

## APPENDIX B.

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## REFERENCES

- Absolon, K. (1994). Building health from the medicine wheel: Aboriginal program development. In First Nations Community Mental Health Workers Training Workshop. Winnipeg, Manitoba, March 6-8, 1994: Native Physicians' Association in Canada.
- Adam, K. S. (1985). Attempted suicide. Psychiatric Clinics of North American, 8(2), 183-201.
- Aldridge, D. & St. John, K. (1991). Adolescent and preadolescent suicide in Newfoundland and Labrador. Canadian Journal of Psychiatry, 36(6), 432-436.
- American Psychiatric Association (1987). Diagnostic and Statistical Manual, Edition 3 Revised (3 revised ed.). Washington, DC: American Psychiatric Association.
- American School Health Association et al. (1989) The National Adolescent Health Survey: A Report on the Health of America's Youth. Oakland, CA: Third Party Publishing.
- Appleby, L. (1992). Suicide in psychiatric patients: Risk and prevention. British Journal of Psychiatry, 161, 749-758.
- Appleby, L. & Warner, R. (1993). Parasuicide: Features of repetition and the implications for intervention. Psychological Medicine, 23, 13-16.
- Apter, A., Plutchik, R. & van Prang, H. M. (1993). Anxiety, impulsivity and depressed mood in relation to suicidal and violent behavior. Acta Psychiatrica Scandinavica, 87, 1-5.
- Armstrong, H. (1978). Providing psychiatric care and consultation in remote Indian villages. Hospital and Community Psychiatry, 29(10), 678-680.
- Association of Canadian Universities for Northern Studies (1990). Ethical principles for the conduct of research in the North. Northern Health Research Bulletin, 2(1 & 2), 13-14.
- Bachman, R. (1992). Death and Violence on the Reservation: Homicide, Family Violence, and Suicide in American Indian Populations. New York: Auburn House.
- Bagley, C. (1991). Poverty and suicide among Native Canadians: A replication. Psychological Reports, 69, 149-150.
- Bagley, C. (1992). Changing profiles of a typology of youth suicide in Canada. Canadian Journal of Public Health, 83(2), 169-170.
- Bagley, C., Wood, M. & Khumar, H. (1990). Suicide and careless death in young males: Ecological study of an aboriginal population in Canada. Canadian Journal of Community Mental Health, 29, 127-142.
- Balikci, A. (1961). Suicidal behavior among the Netsilik Eskimos. In B. Blishen (Eds.), Canadian Society: Sociological Perspectives Chicago: Free Press of Glencoe.
- Bancroft, J. H. J., Skrimshire, A. M. & Simkin, S. (1975). The reasons people give for taking overdoses. British Journal of Psychiatry, 128, 538-548.

- Beck, A. T., Rush, A. J., Shaw, B. F. & Emery, G. (1979). Cognitive Therapy of Depression. New York: Guilford.
- Beck, A. T., Steer, R. A., Kovacs, M. & Garrison, B. (1985). Hopelessness and eventual suicide: A 10 year prospective study of patients hospitalized with suicidal ideation. American Journal of Psychiatry, 142(5), 559-563.
- Beiser, M. & Manson, S. (1987) Prevention of emotional and behavioral disorders in North American Native children. Journal of Preventive Psychiatry, 3, 225-240.
- Bellah, R. N., Madsen, R., Sullivan, W. M., Swidler, A. & Tipton, S. M. (1985). Habits of the Heart: Individualism and Commitment in American Life. Berkeley: University of California Press.
- Berger, C. J. & Tobeluk, H. A. (1990). Community-based suicide prevention programs in rural Alaska: Self-determination as a new approach. In Circumpolar Health 90
- Berlin, I. N. (1985). Prevention of adolescent suicide attempts among Native American tribes. Adolescent Psychiatry, 12, 77-93.
- Berlin, I. N. (1987). Suicide among American Indian adolescents: An overview. Suicide and Life-Threatening Behavior, 17(3), 218-232.
- Berry, J. W. (1976). Acculturative stress in Northern Canada: Ecological, cultural and psychological factors. In R. Shepard & S. Itoh (Eds.), Circumpolar Health '74 (pp. 490-497). Toronto: University of Toronto Press.
- Berry, J. W. (1985). Acculturation among circumpolar peoples: Implications for health status. Arctic Medical Research, 40, 21-27.
- Berry, J. W. (1993). Psychological and social health of Aboriginal peoples in Canada. Paper presented at Workshop on Children's Mental Health and Wellness in First Nations Communities, Victoria, BC, March, 1993.
- Beskow, J., Runeson, B. & Åsgård, U. (1991). Ethical aspects of psychological autopsy. Acta Psychiatrica Scandinavica, 84, 482-487.
- Bland, R. C., Newman, S. C., Dyck, R. J. & Orn, H. (1990). Prevalence of psychiatric disorders and suicide attempts in a prison population. Canadian Journal of Psychiatry, 35(5), 407-413.
- Blum, R. W., Harmon, B., Harris, L., Bergeisen, L. & Resnick, M. D. (1992). American Indian-Alaska Native youth health. Journal of the American Medical Association, 267(12), 1637-1644.
- Bonner, R. L. (1992). Isolation, seclusion and psychosocial vulnerability as risk factors for suicide behind bars. In R. W. Maris, A. L. Berman, J. T. Maltzberger & R. I. Yufit (Eds.), Assessment and Prediction of Suicide (pp. 398-419). New York: Guilford.
- Boor, M. (1980). Relationship between unemployment rates and suicide rates in eight countries: 1962-1967. Psychological Reports, 47, 1095-1101.
- Borst, S. R., Noam, G. G. & Bartok, J. A. (1991). Adolescent suicidality: A clinical-developmental approach. Journal of the American Academy of Child Psychiatry, 30(5), 796-803.

- Bourque, L. B., Cosand, B. J. & Kraus, J. F. (1983). Comparison of male and female suicide in a defined community. Journal of Community Health, 9, 7-17.
- Brant, C. C. (1990). Native ethics and rules of behaviour. Canadian Journal of Psychiatry, 35, 534-539.
- Brant, C. C. (no date). Suicide in Canadian Aboriginal Peoples: Causes and prevention. , Shannonville, Ontario: Native Mental Health Association.
- Brent, D. A., Perper, J. A. & Allman, C. J. (1987). Alcohol, firearms and suicide among youth. Journal of the American Medical Association, 257, 3369-3372.
- Brent, D. A., Perper, J. A., Allman, C. J., Moritz, G. M., Wartella, M. E. & Zelenak, J. P. (1991). The presence and accessibility of firearms in the homes of adolescent suicides: A case-control study. Journal of the American Medical Association, 271, 2989-2995.
- Brent, D. A., Perper, J. S., Kolko, D. J. & Zelenak, J. P. (1988). The psychological autopsy: Methodological considerations for the study of adolescent suicide. Journal of the American Academy of Child Psychiatry, 27, 362-368.
- Brent, D. A., Perper, J. A., Mortiz, G., Liotus, L., Schweers, J., Balach, L. & Roth, C. (1994). Familial risk factors for adolescent suicide: A case control study. Acta Psychiatrica Scandinavica, 89, 52-58.
- Brent, D. A., Perper, J.A., Mortiz, G., Allman, C., Friend, A., Schweers, J., Roth, C., Balach, L. & Harrington, K. (1992). Psychiatric effects of exposure to suicide among the friends and acquaintances of adolescent suicide victims. Journal of the American Academy of Child Psychiatry, 31, 629-640.
- Briere, J. (1993). Child Abuse Trauma: Theory and Treatment of the Lasting Effects. Newbury Park: Sage Publications.
- Briggs, J. L. (1970). Never in Anger: Portrait of an Eskimo Family. Cambridge: Harvard University Press.
- Briggs, J. L. (1982). Living dangerously: The contradictory foundations of value in Canadian Inuit society. In E. Leacock & R. Lee (Eds.), Politics and History in Band Societies (pp. 109-131). Cambridge: Cambridge University Press.
- Briggs, J. L. (1983). Conflict management and socialization among Canadian Inuit. Delivered at Institute of Eskimology, Copenhagen, May 1983.
- Brod, T. M. (1975). Alcoholism as a mental health problem of Native Americans: A review of the literature. Archives of General Psychiatry, 32(11), 1385-1391.
- Brown, G. & Harris, T. (1978). The Social Origins of Depression. New York: The Free Press.
- Brown, G. L., Linnoila, M. I. & Goodwin, F. K. (1992). Impulsivity, aggression, and associated affects: Relationship to self-destructive behavior and suicide. In R. W. Maris, A. L. Berman, J. T. Maltzberger & R. I. Yufit (Eds.), Assessment and Prediction of Suicide (pp. 589-606). New York: Guilford.
- Byrne, A., Kirby, B., Zibin, T. & Ensminger, S. (1991). Psychiatric and neurological effects of chronic solvent abuse. Canadian Journal of Psychiatry, 36, 735-738.

- Carlson, G. A. (1990). Suicidal behavior and psychopathology in children and adolescents. Current Opinion in Psychiatry, 3, 449-452.
- Carrithers, M., Collins, S. & Lukes, S. (Ed.). (1985). The Category of the Person. Cambridge: Cambridge University Press.
- Cawte, J. (1990). Fourth World Suicide and Stress: Contrasting Reactions in North America and Australia. Sydney, Australia: Division of Health Services Planning, Eastern Sydney Area Health Service.
- Cheifetz, P. N., Posener, J. A., La Haye, A., Zaidman, M. & Benierakis, C. E. (1987). An epidemiologic study of adolescent suicide. Canadian Journal of Psychiatry, 32, 656-659.
- Cimolic, P. & Jobes, D. (1990). Youth Suicide. Springfield, Ill: Charles C. Thomas.
- Clark, D. C., Sommerfeldt, L., Schwarz, M., Hedeker, D. & Watel, L. (1990). Physical recklessness in adolescence—Trait or byproduct of depressive suicidal states. Journal of Nervous and Mental Disease, 178(7), 423-434.
- Clayer, J. R. & Czechowicz, A. S. (1991). Suicide by aboriginal people in South Australia: Comparison with suicide deaths in the total urban and rural populations. Medical Journal of Australia, 154, 683-685.
- Condon, R. G. (1982). Seasonal variation and interpersonal conflict in the central Canadian Arctic. Ethnology, 21, 151-164.
- Condon, R. G. (1983). Seasonal photoperiodism, activity rhythms, and disease susceptibility in the central Canadian arctic. Arctic Anthropology, 20(1), 33-48.
- Conte, J. R. (1991). Overview of child sexual abuse. In A. Tasman & S. M. Goldfinger (Eds.), Annual Review of Psychiatry (pp. 283-307). Washington: American Psychiatric Press.
- Cormier, H. J. & Klerman, G. L. (1985). Unemployment and male-female participation as determinants of changing suicide rates of males and females in Quebec. Social Psychiatry, 20, 109-114.
- Coyne, J. C. (1976). Toward an interactional description of depression. Psychiatry, 39, 28-40.
- Cushman, P. (1990). Why the self is empty: Toward a historically situated psychology. American Psychologist, 45(5), 599-611.
- Davenport, J. A. & Davenport, J., III (1987). Native American suicide: A Durkheimian analysis. Social Casework, 68(Nov), 533-539.
- Davidson, L. E., Rosenberg, M. L., Mercy, J. A., Franklin, J. & Simmons, J. T. (1989). An epidemiologic study of risk factors in two teenage suicide clusters. Journal of the American Medical Association, 262, 2687-2692.
- De Man, A. F., Leduc, C. P. & Labrèche-Gauthier, L. (1992). Correlates of suicide ideation in French-Canadian adults and adolescents: A comparison. Journal of Clinical Psychology, 48(6), 811-816.

- DeBruyn, L. M., Hymbaugh, K. & Valdez, N. (1988). Helping communities address suicide and violence: The Special Initiatives Team of the Indian Health Service. American Indian and Alaska Native Mental Health Research, 1(3), 56-65.
- Devereux, G. (1961). Mohave Ethnopsychiatry and Suicide: The Psychiatric Knowledge and the Psychic Disturbances of an Indian Tribe. Washington, D.C.: U.S. Government Printing Office.
- Deykin, E. Y., Perlow, R. & McNamarra, J. (1985). Non-fatal suicidal and life-threatening behavior among 13 to 17 years old adolescents seeking emergency medical care. American Journal of Public Health, 75, 90-92.
- Dingman, C. W. & McGlashan, T. H. (1988). Characteristics of patients with serious suicidal intentions who ultimately commit suicide. Hospital and Community Psychiatry, 39(3), 295-299.
- Dodge, H. & Austin, R. L. (1990). Household structure and elderly Japanese female suicide. Family Perspective, 24(1), 83-97.
- Dryfoos, J. G. (1990). Adolescent at Risk. New York: Oxford University Press.
- Duberstein, P. R., Conwell, Y. & Caine, E. D. (1993). Interpersonal stressors, substance abuse and suicide. Journal of Nervous and Mental Disease, 181(2), 80-85.
- Durkheim, E. (1897/1951). Suicide: A Study in Sociology. Glencoe, IL: Free Press.
- Dyck, R. J., Bland, R. C., Newman, S. C. & Orn, H. (1988). Suicide attempts and psychiatric disorders in Edmonton. Acta Psychiatrica Scandinavica, 77, 64-71.
- Earls, F., Escobar, J. I. & Manson, S. M. (1991). Suicide in minority groups: Epidemiologic and cultural perspectives. In S. J. Blumenthal & D. J. Kupfer (Eds.), Suicide Over the Life Cycle (pp. 571-598). Washington, D.C.: American Psychiatric Press.
- Eastwood, M. R. & Peter, A. M. (1988). Epidemiology and seasonal affective disorder. Psychological Medicine, 18, 799-806.
- Eaton, W. W. & Kessler, L. G. (1985). Epidemiologic Field Methods in Psychiatry: The NIMH Epidemiologic Catchment Area Program. Orlando, FL: Academic Press.
- Edgerton, R. B. (1992). Sick Societies: Challenging the Myth of Primitive Harmony. New York: The Free Press.
- Eisenberg, L. (1986). Does bad news about suicide beget bad news? New England Journal of Medicine, 315(11), 705-707.
- Ellis, J. B. & Range, L. M. (1991). Differences between Blacks and Whites, women and men, in reasons for living. Journal of Black Studies, 21(3), 341-347.
- Ellis, J. B. & Range, L. M. (1992). Mood influences on reasons for living in older adolescents. Psychiatry, 55, 216-222.
- Everstine, D. S., Bodin, A. M. & Everstine, L. (1977). Emergency psychology: A mobile service for police crisis calls. Family Process, 16(3), 281-292.

- Ewan Cotterill and Associates (1990). Coming Together Because We Care: A Grass Roots Forum on the Prevention of Suicide, Rankin Inlet, Northwest Territories, March 30th - April 2nd, 1990 (Final Report) Department of Social Services, Government of the Northwest Territory.
- Farmer, R. D. T. (1988). Assessing the epidemiology of suicide and parasuicide. British Journal of Psychiatry, 153, 16-20.
- Felner, R. D., Adan, A. M. & Silverman, M. M. (1992). Risk assessment and prevention of youth suicide in schools and educational contexts. In R. W. Maris, A. L. Berman, J. T. Maltzberger & R. I. Yufit (Eds.), Assessment and Prediction of Suicide (pp. 420-447). New York: Guilford.
- Fienup-Riordan, A. (1986). The real people: The concept of personhood among the Yup'ik Eskimos of Western Alaska. Études Inuit Studies, 10(1-2), 261-270.
- Fischler, R. S. (1985). Child abuse and neglect in American Indian communities. Child Abuse and Neglect, 9, 95-106.
- Fossey, E. & Shapiro, C. M. (1992). Seasonality in psychiatry—A review. Canadian Journal of Psychiatry, 37, 299-308.
- Fouls, E. F. (1980). Psychological continuities: From dissociative states to alcohol use and suicide in Arctic populations. Journal of Operational Psychiatry, 11(2), 156-161.
- Freilich, M., Raybeck, D. & Savishinsky, J. (Ed.). (1991). Deviance: Anthropological Perspectives. New York: Bergin and Garvey.
- Garro, L. (1988). Suicide by status Indians in Manitoba. In H. Linderholm (Eds.), Circumpolar Health '87 Oulu: Nordic Council for Arctic Medical Research.
- Garland, A. F. & Zigler, E. (1993). Adolescent suicide prevention. American Psychologist, 48, 169-182.
- Garnefski, N., Diekstra, R. F. W. & de Heus, P. (1992). A population-based survey of the characteristics of high school students with and without a history of suicidal behavior. Acta Psychiatrica Scandinavica, 86, 189-196.
- Garrison, C. Z. (1992). Demographic predictors of suicide. In R. W. Maris, A. L. Berman, J. T. Maltzberger & R. I. Yufit (Eds.), Assessment and Prediction of Suicide (pp. 484-498). New York: Guilford.
- Gasquet, I. & Choquet, M. (1993). Gender role in adolescent suicidal behavior: Observations and therapeutic implications. Acta Psychiatrica Scandinavica, 87, 59-65.
- Gelles, R. J. & Conte, J. R. (1990). Domestic violence and sexual abuse of children: A review of research in the 80s. Journal of Marriage and the Family, 52(4), 1045-1058.
- Goldberg, D. & Huxley, P. (1992). Common Mental Disorders: A Bio-Social Model. London: Tavistock/Routledge.
- Goldstein, R. B., Black, D. W., Nasrallah, A. & Winokur, G. (1991). The prediction of suicide: Sensitivity, specificity, and predictive value of a multivariate model applied to suicide

- among 1906 patients with affective disorders. Archives of General Psychiatry, **48**, 418-422.
- Gould, M. S., Wallenstein, S. & Kleinman, M. (1990). Time space clustering of teenage suicide. American Journal of Epidemiology, **131**, 71-78.
- Grossi, V. & Violato, C. (1992). Attempted suicide among adolescents: A stepwise discriminant analysis. Canadian Journal of Behavioural Science, **24**(3), 410-412.
- Grossman, D. C., Milligan, B. C. & Deyo, R. A. (1991). Risk factors for suicide attempts among Navajo adolescents. American Journal of Public Health, **81**(7), 870-874.
- Group for the Advancement of Psychiatry (GAP) (1989). Suicide and Ethnicity in the United States. New York: Brunner/Mazel.
- Grove, O. & Lynge, J. (1979). Suicide and attempted suicide in Greenland: A controlled study in Nuuk (Godthaab). Acta Psychiatrica Scandinavica, **60**(8), 375-391.
- Grundlach, J. (1990). Absence of family support, opportunity, and suicide. Family Perspective, **24**(1), 7-14.
- Haggag, A., Eklund, B., Linaker, O. & Gotestam, K. G. (1990). Seasonal mood variation: An epidemiological study in northern Norway. Acta Psychiatrica Scandinavica, **81**, 141-145.
- Haig-Brown, C. (1988). Resistance and Renewal: Surviving the Indian Residential School. Vancouver: Tillacum Library.
- Hansen, T., Bratlid, T., Lingjärde, O. & Brenn, T. (1987). Midwinter insomnia in the subarctic region: Evening levels of serum melatonin and cortisol before and after treatment with bright artificial light. Acta Psychiatrica Scandinavica, **75**, 428-434.
- Hart, E. E. & Williams, C. L. (1987). Suicidal behavior and interpersonal network. Crisis, **8**(2), 112-124.
- Harvey, E. B. (1985). Psychiatric consultation and social work at a secondary school for Eskimo, Indian, and Aleut students in Alaska. In R. Fortuine (Eds.), Circumpolar Health 84 (pp. 517-525). Seattle: University of Washington Press.
- Hasselback, P., Lee, K. I., Mao, Y., Nichol, R. & Wigle, D. T. (1991). The relationship of suicide rates to sociodemographic factors in Canadian census divisions. Canadian Journal of Psychiatry, **36**, 655-659.
- Hawton, K. (1986). Suicide and Attempted Suicide Among Children and Adolescents. Newbury Park, CA: Sage.
- Hawton, K. (1987). Assessment of suicide risk. British Journal of Psychiatry, **150**, 145-153.
- Hawton, K., Fagg, J. & Simkin, S. (1988). Female unemployment and attempted suicide. British Journal of Psychiatry, **152**, 632-637.
- Hazell, P. (1991). Postvention after teenage suicide: An Australian experience. Journal of Adolescence, **14**, 335-342.

- Hellekson, C. J. & al., e. (1986). Phototherapy for seasonal affective disorder in Alaska. American Journal of Psychiatry, 143(8), 1035-1037.
- Hellon, C. P. & Solomon, M. I. (1980). Suicide and age in Alberta, Canada, 1951 to 1977: The changing profile. Archives of General Psychiatry, 37, 505-510.
- Hendin, H. (1981). Psychotherapy and suicide. American Journal of Psychotherapy, 35(4), 469-480.
- Hendin, H. (1991). Psychodynamics of suicide with particular reference to the young. American Journal of Psychiatry, 148, 1150-1158.
- Herman, J. (1992). Trauma and Recovery. Boston: Harvard University Press.
- Henriksson, M. M., Aro, H. M., Marttunen, M. J., Heikkinen, M. E., Isometsä, E. T., Kuoppasalmi, K. I. & Lönnqvist, J. K. (1993). Mental disorders and comorbidity in suicide. American Journal of Psychiatry, 150(6), 935-940.
- Hlady, W. G. & Middaugh, J. P. (1988). Suicides in Alaska: firearms and alcohol. American Journal of Public Health, 78(2), 179-180.
- Hoberman, H. M. & Garfinkel, B. D. (1988). Completed suicide in youth. Canadian Journal of Psychiatry, 33, 494-504.
- Holinger, P. C. & Lester, D. (1991). Suicide, homicide, and demographic shifts: An epidemiological study of regional and national trends. Journal of Nervous and Mental Disease, 179, 574-575.
- Holinger, P. C. & Offer, D. (1982). Prediction of adolescent suicide: A population model. Archives of General Psychiatry, 139, 302-307.
- Howard-Pitney, B., LaFromboise, T. D., Basil, M., September, B. & Johnson, M. (1992). Psychological and social indicators of suicide ideation and suicide attempts in Zuni adolescents. Journal of Consulting and Clinical Psychology, 60(3).
- Indian Health Service (1990) A National Plan for American Indian and Alaska Native Mental Health Services, MD: Indian Health Service.
- Indian Health Service and University of Minnesota Adolescent Health Program (1992). The State of Native American Youth Health. Minneapolis, Minnesota: University of Minnesota.
- Irwin, C. (1989). Lords of the Arctic: Wards of the state. Northern Perspectives, 17(1), 2-12.
- Jacobs, D. (1983). Evaluation and care of suicidal behavior in emergency settings. International Journal of Psychiatry in Medicine, 12(4), 295-310.
- Jeanneret, O. (1992). A tentative approach to suicide prevention in adolescence. Journal of Adolescent Health, 13, 409-414.
- Jilek-Aall, L. (1988). Suicidal behaviour among youth: A cross-cultural comparison. Transcultural Psychiatric Research Review, 25, 87-105.

- Katt, M. (1994). To sustain a nation: Mental health needs in Nishawbe-Aski. In First Nations Community Mental Health Workers Training Workshop. Winnipeg, Manitoba, March 6-8, 1994: Native Physicians' Association in Canada.
- Kempton, T. & Forehand, R. (1992). Suicide attempts among juvenile delinquents: The contribution of mental health factors. Behaviour Research and Therapy, *30*(5), 537-541.
- Kettl, P. A. & Bixler, E. O. (1991). Suicide in Alaska natives, 1979-1984. Psychiatry, *54*, 55-63.
- Kienhorst, C. W. M., de Wilde, E. J., Diekstra, R. F. W. & Wolters, W. H. G. (1991). Construction of an index for predicting suicide attempts in depressed adolescents. British Journal of Psychiatry, *159*, 676-682.
- Kienhorst, C. W. M., de Wilde, E. J., van den Bout, J., van der Burg, E., Diekstra, R. F. W. & Wolters, W. H. G. (1993). Two subtypes of adolescent suicide attempters. Acta Psychiatrica Scandinavica, *87*, 18-22.
- Killias, M. (1993). International correlations between gun ownership and rates of homicide and suicide. Canadian Medical Association Journal, *148*(10), 1721-1725.
- Kirmayer, L. J. (1989a). Cultural variations in the response to psychiatric disorders and emotional distress. Social Science and Medicine, *29*(3), 327-339.
- Kirmayer, L. J. (1989b). Psychotherapy and the cultural concept of the person. Santé, Culture, Health, *6*(3), 241-270.
- Kirmayer, L. J. (1992). The body's insistence on meaning: Metaphor as presentation and representation in illness experience. Medical Anthropology Quarterly, *6*(4), 323-346.
- Kirmayer, L. J., Corin, E., Corriveau, A. & Fletcher, C. (1993). Culture et santé mentale chez les Inuit du Québec. Santé Mentale au Québec, *18*(1): 53-70.
- Kirmayer, L. J., Malus, M. (1993a). Suicide attempts and ideation among Inuit youth of Nunavik (Native Mental Health Research Group Report No. 3). Institute of Community & Family Psychiatry, Sir Mortimer B. Davis—Jewish General Hospital.
- Kirmayer, L. J., Malus, M. & Delage, M. (1993b). Characteristics of completed suicides among the Inuit of the East Coast of Hudson Bay, 1982-1991: A chart review study (Native Mental Health Research Group Report No. 4). Institute of Community & Family Psychiatry, Sir Mortimer B. Davis—Jewish General Hospital.
- Kirmayer, L. J., Robbins, J. M., Dworkind, M. & Yaffe, M. (1993c). Somatization and the recognition of depression and anxiety in primary care. American Journal of Psychiatry, *150*(5): 734-741.
- Kleinfeld, J. & Bloom, J. (1977). Boarding schools: Effects on the mental health of Eskimo adolescents. American Journal of Psychiatry, *134*, 4, 411-477.
- Kleinman, A. (1986). Social Origins of Distress and Disease. New Haven: Yale University Press.
- Kleinman, A. (1988). Rethinking Psychiatry. New York: Free Press.

- Knockwood, I. (1992). Out of the Depths: The Experiences of Mi'kmaw Children at the Indian Residential School at Shubenacadie, Nova Scotia. Lockeport, Nova Scotia: Roseway Publishing.
- Korn, M. L., Botsis, A. J., Kotler, M., Plutchik, R., Conte, H. R., Finkelstein, G., Grosz, D., Kay, S., Brown, S.-L. & van Praag, H. M. (1992). The Suicide and Aggression Survey: A semistructured instrument for the measurement of suicidality and aggression. Comprehensive Psychiatry, 33(6), 359-365.
- Koslowsky, M., Bleich, A., Apter, A., Solomon, Z., Wagner, B. & Greenspoon, A. (1992). Structural equation modelling of some determinants of suicide risk. British Journal of Medical Psychology, 65, 157-165.
- Koslowsky, M., Bleich, A., Greenspon, A., Wagner, B., Apter, A. & Solomon, Z. (1991). Assessing the validity of the Plutchik Suicide Risk Scale. Journal of Psychiatric Research, 25(4), 155-158.
- Kovacs, M. & Beck, A. T. (1978). Maladaptive cognitive structures in depression. The American Journal of Psychiatry, 135(5), 525-533.
- Kowalski, G., Faupel, C. & Starr, P. (1987). Urbanism and suicide: A study of American counties. Social Forces, 66(1), 85-101.
- Kralik, K. M. & Danforth, W. J. (1992). Identification of coping ideation and strategies preventing suicidality in a college-age sample. Suicide and Life-threatening Behavior, 22(2), 167-186.
- Kraus, R. F. (1971). Changing patterns of suicidal behavior in North Alaska Eskimo. Transcultural Psychiatric Research Review, 9, 69-71.
- Kraus, R. F. & Buffler, P. A. (1975). Suicide in Alaska natives: A preliminary report. In Proceedings of the Third International Symposium on Circumpolar Health, (pp. 556-557). University of Toronto.
- Kraus, R. F. & Buffler, P. A. (1979). Sociocultural stress and the American Native in Alaska: An analysis of changing patterns of psychiatric illness and alcohol abuse among Alaska Natives. Culture, Medicine and Psychiatry, 3, 111-151.
- Kreitman, N. & Casey, P. (1988). Repetition of parasuicide: An epidemiological and clinical study. British Journal of Psychiatry, 153, 792-800.
- Kurosu, S. (1991). Suicide in rural areas: The case of Japan 1960-1980. Rural Sociology, 56(4), 605-618.
- Ladame, F. (1992). Suicide prevention in adolescence: An overview of current trends. Journal of Adolescent Health, 13, 406-408.
- Lafromboise, T. D. (1988). American Indian mental health policy. American Psychologist, 43(5), 388-397.
- Larose, F. (1989). L'environnement des réserves indiennes est-il pathogène? Réflexions sur le suicide et l'identification des facteurs de risque en milieu amérindien québécois. Revue québécoise de psychologie, 10(1), 31-44.

- Leenaars, A. A. & Wenckstern, S. (Ed.). (1991). Suicide Prevention in Schools. New York: Hemisphere.
- Leighton, A. & Hughes, C. C. (1955). Notes on Eskimo patterns of suicide. Southwestern Journal of Anthropology, 11(4), 327-338.
- Lester, D. (1991). Does suicidal intent mean the same in completed suicides as it does in attempted suicides? Psychological Reports, 69, 50.
- Lester, D. (1992a). Alcoholism and drug abuse. In R. W. Maris, A. L. Berman, J. T. Maltzberger & R. I. Yufit (Eds.), Assessment and Prediction of Suicide (pp. 321-336). New York: Guilford.
- Lester, D. (1992b). Demographic determinants of youth suicide. Journal of Nervous and Mental Disease, 180(5), 272.
- Lester, D. (1992c). State initiatives in addressing youth suicide: Evidence for their effectiveness. Social Psychiatry and Psychiatric Epidemiology, 27, 75-77.
- Lester, D. & Bean, J. (1992). Attribution of causes to suicide. Journal of Social Psychology, 132(5), 679-680.
- Levy, J. E. & Kunitz, S. (1971). Indian reservations, anomie, and social pathologies. Southwestern Journal of Anthropology, 27(2), 97-128.
- Levy, J. E. & Kunitz, S. J. (1987). A suicide prevention program for Hopi youth. Social Science and Medicine, 25(8), 931-940.
- Levy, J. E., Kunitz, S. J. & Henderson, E. B. (1987). Hopi deviance in historical and epidemiological perspective. In J. Jorgensen & L. Donald (Eds.), Themes in Ethnology and Culture: Essays in Honor of David F. Aberle Berkeley: Folklore Institute.
- Lewy, A. J., Kern, H. A., Rosenthal, N. E. & Wehr, T. A. (1982). Bright artificial light treatment of a manic-depressive patient with a seasonal mood cycle. American Journal of Psychiatry, 139, 1496-1498.
- Liberman, R. P. & E., T. (1981). Behavior therapy vs insight-oriented therapy for repeated suicide attempters. Archives of General Psychiatry, 38, 1126-30.
- Linehan, M. M. (1983). Reasons for staying alive when you are thinking of killing yourself: The Reasons for Living Inventory. Journal of Consulting and Clinical Psychology, 51, 276-286.
- Linehan, M. M., Armstrong, H. E., Suarez, A., Allmon, D. & Heard, m. L. (1991). Cognitive-behavioral treatment of chronically parasuicidal borderline patients. Archives of General Psychiatry, 48, 1060-1064.
- Loevinger, J. (1966). The meaning and measurement of ego development. American Psychologist, 27, 195-206.
- Lujan, C., Debruyne, L. M., May, P. A. & al., e. (1989). Profile of abused and neglected American Indian children in the southwest. Child Abuse and Neglect, 13, 449-461.

- MacLeod, A. K., Williams, J. M. G. & Linehan, M. M. (1992). New developments in the understanding and treatment of suicidal behavior. Behavioural Psychotherapy, 20, 195-218.
- Magne-Ingvar, U., Öjehagen, A. & Träskman-Bendz, L. (1992). The social network of people who attempt suicide. Acta Psychiatrica Scandinavica, 86, 153-158.
- Manson, S. M., Beals, J., Dick, R. W. & Duclos, C. (1989). Risk factors for suicide among Indian adolescents at a boarding school. Public Health Reports, 104, 609-614.
- Manson, S. M., Shore, J. H. & Bloom, J. D. (1985). The depressive experience in American Indian communities: A challenge for psychiatric theory and diagnosis. In A. M. Kleinman & B. Good (Eds.), Culture and Depression (pp. 331-368). Berkeley: University of California Press.
- Mao, Y., Hasselback, P., Davies, J. W., Nichol, R. & Wigle, D. T. (1990). Suicide in Canada: An epidemiological assessment. Canadian Journal of Public Health, 81(4), 324-328.
- Maris, R. W. (1992). The relationship of nonfatal suicide attempts to completed suicides. In R. W. Maris, A. L. Berman, J. T. Maltzberger & R. I. Yufit (Eds.), Assessment and Prediction of Suicide (pp. 362-380). New York: Guilford.
- Maris, R. W., Berman, A. L., Maltzberger, J. T. & Yufit, R. I. (Ed.). (1992). Assessment and Prediction of Suicide. New York: Guilford.
- Markus, H. R. & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. Psychological Review, 98(2), 224-253.
- Marsella, A. J., DeVos, G. & Hsu, F. L. K. (Ed.). (1985). Culture and Self: Asian and Western Perspectives. New York: Tavistock.
- Marttunen, M. I., Aro, H. M. & Lönnqvist, J. K. (1992). Adolescent suicide: Endpoint of long-term difficulties. Journal of the American Academy of Child and Adolescent Psychiatry, 31(4), 649-654.
- Marttunen, M. J., Aro, H. M., Henrikson, M. M. & Lönnqvist, J. K. (1991). Mental disorders in adolescent suicide: DSM-III-R axes I and II diagnoses in suicides among 12- to 19-year-olds in Finland. Archives of General Psychiatry, 48, 834-839.
- May, P. A. (1990). A bibliography on suicide and suicide attempts among American Indians and Alaska natives. Omega: Journal of Death and Dying, 21(3), 199-214.
- May, P. A. & Dizmang, L. A. (1974). Suicide and the American Indian. Psychiatric Annals, 4(2), 22-28.
- McIntosh, J. L. (1983-84). Suicide among Native Americans: Further tribal data and considerations. Omega: Journal of Death and Dying, 14(3), 303-316.
- McNamee, J. E. & Offord, D. R. (1990). Prevention of suicide. Canadian Medical Association Journal, 142(11), 1223-1230.
- Medical Services Branch Steering Committee on Native Mental Health (1991). Statistical Profile on Native Mental Health (Background Report of the Statistical and Technical Working

Group No. 1). Mental Health Advisory Services, Indian and Northern Health Services, Medical Services Branch, Ottawa, Ontario.

- Meehan, P. J., Lamb, J. A., Saltzman, L. E. & O'Carroll, P. W. (1992). Attempted suicide among young adults: Progress toward a meaningful estimate of prevalence. American Journal of Psychiatry, 149(1), 41-44.
- Michel, K. & Valach, L. (1992). Suicide prevention: Spreading the gospel to general practitioners. British Journal of Psychiatry, 160, 757-760.
- Moller, H. J. (1989). Efficacy of different strategies of aftercare for patients who have attempted suicide. Journal of the Royal Society of Medicine, 82, 643-647.
- Moscicki, E.K., O'Carroll, P.W., Rae, S., Locke, B.Z., Roy, A.G. (1989) Suicidal ideation and attempts: The Epidemiologic Catchment Area study. In: Report of the Secretary's Task Force on Youth Suicide, Volume 4: Strategies for the Prevention of Youth Suicide, Washington, D.C.: U.S. Government Printing Office.
- Motto, J. A., Heilbron, D. C. & Juster, R. P. (1985). Development of a clinical instrument to estimate suicide risk. American Journal of Psychiatry, 142, 680-686.
- Muir, B. L. (1988). Health Status of Canadian Indians and Inuit — Update 1987. Ottawa: Health and Welfare Canada.
- Muskox Program Development Ltd. (1991). Working Together Because We Care: A Grassroots Forum on the Prevention of Suicide in the Fort Smith Region, October 28-31, 1991, Department of Social Services, Government of the Northwest Territories.
- Myers, K., McCauley, E., Calderon, R. & Treder, R. (1991). The 3-year longitudinal course of suicidality and predictive factors for subsequent suicidality in youths with major depressive disorder. Journal of the American Academy of Child Psychiatry, 30(5), 804-810.
- Nayha, S. (1985). Seasonal variation in suicide and mental depression in Finland. In R. Fortune (Eds.), Circumpolar Health 84 (pp. 312-315). Seattle: University of Washington Press.
- Nelson, S. H., McCoy, G. H. & Vanderwagen, W. C. (1992). An overview of mental health services for American Indians and Alaska Natives in the 1990s. Hospital and Community Psychiatry, 43(3), 257-261.
- Norris, M. J. (1990). The demography of Aboriginal people in Canada. In S. S. Halli, F. Trovato & L. Driedger (Eds.), Ethnic Demography: Canadian Immigrant, Racial and Cultural Variations (pp. 33-59). Ottawa, Ontario: Carlton University Press.
- O'Carroll, P. W., Mercy, J. A. & Steward, J. A. (1988). CDC recommendations for a community plan for the prevention and containment of suicide clusters. Morbidity and Mortality Weekly Reports, 37(8-6), 1-12.
- O'Neil, J. D. (1983). Is it cool to be an Eskimo?: A study of stress, identity, coping and health among Canadian Inuit young adult ment (Ph.D. thesis. No. University of California, Berkeley,).

- O'Neil, J. D. (1984). Self-determination and Inuit youth: Coping with stress in the Canadian North. In R. Fortune (Eds.), Circumpolar Health 84 (pp. 438-442). Seattle: University of Washington Press.
- O'Neil, J. D. (1986). Colonial stress in the Canadian Arctic: An ethnography of young adults changing. In C. R. Janes, R. Stall & S. M. Gifford (Eds.), Anthropology and Epidemiology (pp. 249-274). Dordrecht: D. Reidel.
- O'Neil, T. D. (1989). Psychiatric investigations among American Indians and Alaska Natives: A critical review. Culture, Medicine and Psychiatry, 13(1), 51-87.
- Paris, J., Brown, R. & Nowlis, D. (1987). Long-term follow-up of borderline patients in a general hospital. Comprehensive Psychiatry, 28(6), 530-535.
- Paris, J., Nowlis, D. & Brown, R. (1989). Predictors of suicide in borderline personality disorder. Canadian Journal of Psychiatry, 34, 8-9.
- Pell, B. & Watters, D. (1982). Newspaper policies on suicide stories. Canada's Mental Health, 30, 8-9.
- Pescosolido, B. & Georgianna, S. (1989). Durkheim, suicide and religion: Toward a network theory of suicide. American Sociological Review, 54, 33-48.
- Peters, R. (1981). Suicidal behavior among Native North Americans: An annotated bibliography. White Cloud Journal, 2(3), 9-20.
- Petrie, K. & Brook, R. (1992). Sense of coherence, self-esteem, depression and hopelessness as correlates of reattempting suicide. British Journal of Clinical Psychology, 31, 293-300.
- Pfeffer, C. R., Newcorn, J., Kaplan, G., Mizruchi, M. S. & Plutchik, R. (1988). Suicidal behavior in adolescent psychiatric inpatients. Journal of the American Academy of Child Psychiatry, 27, 357-361.
- Phillips, D. P. & Carstensen, L. L. (1986). Clustering of teenage suicides after television news stories about suicide. New England Journal of Medicine, 315(11), 685-689.
- Phillips, D. P., Lesyna, K. & Paight, D. J. (1992). Suicide and the media. In R. W. Maris, A. L. Berman, J. T. Maltzberger & R. I. Yufit (Eds.), Assessment and Prediction of Suicide (pp. 499-519). New York: Guilford.
- Pine, C. J. (1981). Suicide in American Indian and Alaska Native tradition. White Cloud Journal, 2(3), 3-8.
- Platt, S., Bille-Brahe, U., Kerkhof, A., Schmidtke, A., Bjerke, T., Crepet, P., De Leo, D., Haring, C., Lonqvist, J., Michel, K., Philippe, A., Pommereau, X., Querejeta, I., Salander-Renberg, E., Temesvary, B., Wasserman, D. & Faria, J. S. (1992). Parasuicide in Europe: The WHO/EURO multicentre study on parasuicide. I. Introduction and preliminary analysis for 1989. Acta Psychiatrica Scandinavica, 85, 97-104.
- Pokorny, A. D. (1992). Prediction of suicide in psychiatric patients: Report of a prospective study. In R. W. Maris, A. L. Berman, J. T. Maltzberger & R. I. Yufit (Eds.), Assessment and Prediction of Suicide (pp. 105-139). New York: Guilford.

- Power, A. C. & Cowen, P. J. (1992). Fluoxetine and suicidal behaviour: Some clinical and theoretical aspects of a controversy. British Journal of Psychiatry, 161, 735-741.
- Ramsay, R. & Bagley, C. (1985). The prevalence of suicidal behaviors, attitudes and associated social experiences in an urban population. Suicide and Life-Threatening Behavior, 15(3), 151-167.
- Resnick, H. L. P. & Dizmang, L. H. (1971). Observations on suicidal behavior among American Indians. American Journal of Psychiatry, 127(7), 882-887.
- Rich, C. L., Warsratt, G. M., Nemiroff, R. A., Fowler, R. C. & Young, D. (1991). Suicide, stressors, and the life cycle. American Journal of Psychiatry, 148, 524-527.
- Richman, J. (1979). The family therapy of attempted suicide. Family Process, 18, 131-142.
- Rodgers, D. D. (1982). Suicide in the Canadian Northwest Territories 1970-1980. In R. Harvald & J. P. Hart-Hansen (Eds.), Circumpolar Health 81 (pp. 492-495). Nordic Council for Arctic Medical Research Report.
- Rodgers, D. D. (1991). Community crisis intervention in suicide epidemics. In B. Postl, P. Gilbert, J. Goodwill, M. E. K. Moffatt, J. D. O'Neil, P. A. Sarsfield & T. K. Young (Eds.), Circumpolar Health 90 (pp. 276-280). Winnipeg: University of Manitoba Press.
- Rogler, L. H. (1992). The role of culture in mental health diagnosis: The need for programmatic research. Journal of Nervous and Mental Disease, 180(12), 745-747.
- Rogler, L. H., Malgady, R. G. & Tryon, W. W. (1992). Evaluation of mental health: Issues of memory in the Diagnostic Interview Schedule. Journal of Nervous and Mental Disease, 180(4), 215-222.
- Rosenberg, M. L., Smith, J. C., Davidson, L. E. & Conn, J. M. (1987). The emergence of youth suicide: An epidemiologic analysis and public health perspective. Annual Review of Public Health, 8, 417-440.
- Rosenthal, N. E., Sack, D. A., Gillin, J. C., Lewy, A. J., Goodwin, F. K., Davenport, Y., Mueller, P. S., Newsome, D. A. & Weher, T. A. (1984). Seasonal affective disorder: A description of the syndrome and preliminary findings with light therapy. Archives of General Psychiatry, 41, 72-80.
- Ross, C. & Davis, B. (1986). Suicide and parasuicide in a Northern Canadian Native community. Canadian Journal of Psychiatry, 31(4), 331-334.
- Rothberg, J. R. & Geer-Williams, C. (1992). A comparison and review of suicide prediction scales. In R. W. Maris, A. L. Berman, J. T. Maltzberger & R. I. Yufit (Eds.), Assessment and Prediction of Suicide (pp. 202-217). New York: Guilford.
- Royal Commission on Aboriginal Peoples (1993). Ethical guidelines for research Ottawa.
- Roy, A. (1992). Genetics, biology, and suicide in the family. In R. W. Maris, A. L. Berman, J. T. Maltzberger & R. I. Yufit (Eds.), Assessment and Prediction of Suicide (pp. 574-588). New York: Guilford.
- Rubinstein, D. H. (1983). Epidemic suicide among Micronesian adolescents. Social Science and Medicine, 17, 657-665.

- Rudd, M. D., Dahm, P. F. & Rajab, M. H. (1993). Diagnostic comorbidity in persons with suicidal ideation and behavior. American Journal of Psychiatry, 150(6), 928-934.
- Runeson, B. S. & Rich, C. L. (1992). Diagnostic comorbidity of mental disorders among young suicides. International Review of Psychiatry, 4, 197-203.
- Rutz, W., Carlsson, P., von Knorring, L. & Wälinder, J. (1992). Cost-benefit analysis of an educational program for general practitioners by the Swedish Committee for the Prevention and Treatment of Depression. Acta Psychiatrica Scandinavica, 85, 457-464.
- Rutz, W., von Knorring, L. & Wälinder, J. (1989). Frequency of suicide on Gotland after systematic postgraduate education of general practitioners. Acta Psychiatrica Scandinavica, 80, 151-154.
- Ryland, D. H. & Kruesi, M. J. P. (1992). Suicide among adolescents. International Review of Psychiatry, 4, 185-195.
- Sakinofsky, I. & Roberts, R. S. (1990). Why parasuicides repeat despite problem resolution. British Journal of Psychiatry, 156, 399-405.
- Sakinofsky, I., Roberts, R. S., Brown, Y., Cumming, C. & James, P. (1990). Problem resolution and repetition of parasuicide. British Journal of Psychiatry, 156, 395-399.
- Sampath, H. M. (1974). Prevalence of psychiatric disorders in a Southern Baffin Island Eskimo settlement. Canadian Psychiatric Association Journal, 19, 363-367.
- Sampath, H. M. (1992). The changing pattern of Inuit suicide and attempted suicide. In M-J. Dufour & F. Therien (Eds.) Looking to the Future: Papers from the 7th Inuit Studies Conference, (pp. 141-148) Ste. Foy: Université Laval.
- Sampson, E. E. (1988). The debate on individualism: Indigenous psychologies of the individual and their role in personal and societal functioning. American Psychologist, 43(1), 15-22.
- Samy, M. (1989). Suicide et adolescence: Une approche socio-analytique. In M. Soulé (Eds.), Adolescence et Suicide Paris: Editions ESF.
- Samy, M. (1993). Preventing adolescent suicide: The role of the family practitioner. Canadian Journal of CME, 5(1).
- Schneidman, E. S. (1993). Suicide as psychache. Journal of Nervous and Mental Disease, 181(3), 145-147.
- Shaffer, D., Garland, A., Gould, M., Fisher, P. & Trautman, P. (1988). Preventing teenage suicide: A critical review. Journal of the American Academy of Child and Adolescent Psychiatry, 27(6), 675-687.
- Shaffer, D., Vieland, V., Garland, A., Rojas, M., Underwood, M. & Busner, C. (1990). Adolescent suicide attempters: Response to suicide prevention programs. Journal of the American Medical Association, 264, 3151-3155.
- Shafii, M., Carrigan, S., Whittinghill, J. R. & Derrick, A. (1985). Psychological autopsy of completed suicide in children and adolescents. American Journal of Psychiatry, 142, 1061-1064.

- Shaunesey, K., Cohen, J. L., Plummer, B. & Berman, A. (1993). Suicidality in hospitalized adolescents: Relationship to prior abuse. American Journal of Orthopsychiatry, *63*(1), 113-119.
- Shkilnyk, A. M. (1985). A Poison Stronger Than Love: The Destruction of an Ojibway Community. New Haven: Yale University Press.
- Shore, J. H. (1975). American Indian suicide—fact and fantasy. Psychiatry, *38*, 86-91.
- Shweder, R. (1991). Thinking Through Culture: Expeditions in Cultural Psychology. Cambridge: Harvard University Press.
- Sievers, M. L., Nelson, R. G. & Bennett, P. H. (1990). Adverse mortality experience of a southwestern American Indian community: Overall death rates and underlying causes of death in Pima Indians. Journal of Clinical Epidemiology, *43*(11), 1231-1242.
- Slap, G. B., Vorters, D. F., Khalid, N., Margulies, S. R. & Forke, C. M. (1992). Adolescent suicide attempters: Do physicians recognize them? Journal of Adolescent Health, *13*, 286-292.
- Sletten, I. W. & Barton, J. L. (1979). Suicidal patients in the emergency room: A guide for evaluation and disposition. Hosp Comm Psychiatry, *30*(6), 407-412.
- Smith, D. H. & Hackathorn, L. (1982). Some social and psychological factors related to suicide in primitive societies: A cross-cultural comparative study. Suicide and Life-Threatening Behavior, *12*(4), 195-211.
- Solomon, M. I. & Hellon, C. P. (1980). Suicide and age in Alberta, Canada, 1951 to 1977: Cohort analysis. Archives of General Psychiatry, *37*, 511-513.
- Spaulding, J. M. (1986). Recent suicide rates among ten Ojibwa Indian bands in Northwestern Ontario. Omega: Journal of Death and Dying, *16*(4), 347-354.
- Spirito, A., Overholser, J., Ashworth, S., Morgan, J. & Benedict-Drew, C. (1988). Evaluation of a suicide awareness curriculum for high school students. Journal of the American Academy of Child and Adolescent Psychiatry, *27*, 705-711.
- Spirito, A., Plummer, B., Gispert, M., Levy, S., Kurkijian, J., Lewander, W., Hagberg, S. & Devost, L. (1992). Adolescent suicide attempts: Outcome at follow-up. American Journal of Orthopsychiatry, *62*(3), 464-468.
- Stack, S. (1992). Marriage, family, religion, and suicide. In R. W. Maris, A. L. Berman, J. T. Maltzberger & R. I. Yufit (Eds.), Assessment and Prediction of Suicide (pp. 540-552). New York: Guilford.
- Stack, S. & Lester, D. (1991). The effect of religion on suicide. Social Psychiatry and Psychiatric Epidemiology, *26*, 168-170.
- Stairs, A. (1992). Self-image, world-image: Speculations on identity from experiences with Inuit. Ethos, *20*(1), 116-126.
- Steering Committee, Medical Services Board, Health and Welfare Canada (1991). Agenda for First Nations and Inuit Mental Health Health and Welfare Canada, Ottawa.

- Stivers, C. (1991). Promotion of self-esteem in the prevention of suicide. In A. A. Leenaars & S. Wenckstern (Eds.), Suicide Prevention in Schools New York: Hemisphere.
- Stout, M. D. (1994). An indigenous perspective on healing and wellness. In First Nations Community Mental Health Workers Training Workshop. Winnipeg, Manitoba, March 6-8, 1994: Native Physicians' Association in Canada.
- Strosahl, K., Chiles, J. A. & Linehan, M. (1992). Prediction of suicide intent in hospitalized parasuicides: Reasons for living, hopelessness, and depression. Comprehensive Psychiatry, 33(6), 366-373.
- Symonds, R. L. (1991). Books reconsidered: Suicide, A Study in Sociology: Emile Durkheim. British Journal of Psychiatry, 159, 739-741.
- Taiminen, T. J. (1993). Effect of psychopharmacology on suicide risk in psychiatric inpatients. Acta Psychiatrica Scandinavica, 87, 45-47.
- Tanney, B. L. (1992). Mental disorders, psychiatric patients, and suicide. In R. W. Maris, A. L. Berman, J. T. Maltzberger & R. I. Yufit (Eds.), Assessment and Prediction of Suicide (pp. 277-320). New York: Guilford.
- Thompson, T. R. (1987). Childhood and adolescent suicide in Manitoba: A demographic study. Canadian Journal of Psychiatry, 32(4), 264-269.
- Thompson, J. W. & Walker, R. D. (1990). Adolescent suicide among American Indians and Alaska natives. Psychiatric Annals, 20(3), 128-133.
- Thompson, P. J. & Jones, D. P. H. (1990). Child abuse. Current Opinion in Psychiatry, 3, 472-476.
- Thornton, R. (1987). American Indian Holocaust and Survival: A Population History Since 1492. Norman: University of Oklahoma Press.
- Thorslund, J. (1990). Inuit suicides in Greenland. Arctic Medical Research, 49, 25-34.
- Thorslund, J. (1991). Suicide among Inuit youth in Greenland 1974-86. In B. D. Postl, P. Gilbert, J. Goodwill, M. E. K. Moffatt, J. D. O'Neil, P. A. Sarsfield & T. K. Young (Eds.), Circumpolar Health 90 (pp. 299-302). Winnipeg: University of Manitoba Press.
- Thorslund, J. (1992) Why do they do it?—Proposals for a theory of Inuit suicide. In M-J. Dufour & F. Therien (Eds.) Looking to the Future: Papers from the 7th Inuit Studies Conference, (pp. 149-161) Ste. Foy: Université Laval.
- Tousignant, M., Bastien, M.-F. & Hamel, S. (1993). Famille, écologie sociale et comportements suicidaires à l'école secondaire, Rapport final remis au CQRS, Laboratoire de recherche en écologie humaine et sociale, Montreal..
- Tousignant, M. & Mishara, B. L. (1981). Suicide and culture: A review of the literature (1969-1980). Transcultural Psychiatric Research Review, 18, 5-31.
- Tower, M. (1989) A suicide epidemic in an American Indian community. American Indian and Alaska Native Mental Health Research, 3(1): 34-44.
- Travis, R. (1983). Suicide in Northwest Alaska. White Cloud Journal, 3(1).

- Trovato, F. (1991). Sex, marital status, and suicide in Canada: 1951-1981. Sociological Perspectives, 34(4), 427-445.
- Tsuang, M. T., Simpson, J. C. & Fleming, J. A. (1992). Epidemiology of suicide. International Review of Psychiatry, 4, 117-129.
- Valentine, V. F. (1992). Off reserve Aboriginal population: A thumbnail sketch by numbers No. NCC Sociodemographics Research and Analysis Project, Ottawa.
- van Egmond, M. & Diekstra, R. F. W. (1990). The predictability of suicidal behavior: The results of a meta-analysis of published studies. Crisis, 11(2), 57-84.
- Van Winkle, N. W. & May, P. A. (1986). Native American suicide in New Mexico, 1957-1979: A comparative study. Human Organization, 45(4), 296-309.
- Vassilas, C. A. (1993). Suicide and deliberate self-harm. Current Opinion in Psychiatry, 6, 216-220.
- Velez, C. N. & Cohen, P. (1988). Suicidal behavior and ideation in a community sample of children: Maternal and youth reports. Journal of the American Academy of Child Psychiatry, 27, 349-356.
- Vieland, V., Whittle, B., Garland, A., Hicks, R. & Shaffer, D. (1991). The impact of curriculum-based suicide prevention programs for teenagers: An 18-month follow-up. Journal of the American Academy of Child Psychiatry, 30(5), 811-815.
- Vogel, V. J. (1970/1990). American Indian Medicine. Norman: University of Oklahoma Press.
- Ward, J. A. & Fox, J. A. (1977). A suicide epidemic on an Indian reserve. Canadian Psychiatric Association Journal, 22(8), 423-426.
- Wasserman, D. (1988). Separation: An important factor in suicidal actions. Crisis, 9(1), 49-63.
- Wasserman, I. M. (1992). Economy, work, occupation, and suicide. In R. W. Maris, A. L. Berman, J. T. Maltzberger & R. I. Yufit (Eds.), Assessment and Prediction of Suicide (pp. 520-539). New York: Guilford.
- Webb, J. P. & Willard, W. (1975). Six American Indian patterns of suicide. In N. L. Farberow (Eds.), Suicide in Different Cultures (pp. 17-33). Baltimore, MD: University Park Press.
- Weishaar, M. E. & Beck, A. T. (1992). Clinical and cognitive predictors of suicide. In R. W. Maris, A. L. Berman, J. T. Maltzberger & R. I. Yufit (Eds.), Assessment and Prediction of Suicide (pp. 467-483). New York: Guilford.
- Weissman, M. M. (1974). The epidemiology of suicide attempts, 1960 to 1971. Archives of General Psychiatry, 30, 737-746.
- Weissman, M. M., Klerman, G. L., Markowitz, J. S. & Ouellette, R. (1989). Suicidal ideation and suicide attempts in panic disorder and attacks. New England Journal of Medicine, 321, 1209-1214.
- Wetzel, R. D., Reich, T., Murphy, G. E., Province, M. & Miller, J. P. (1987). The changing relationship between age and suicide rates: Cohort effect, period effect or both? Psychiatric Developments, 3, 179-218.
- Worden, W. (1983). Grief Counseling and Grief Therapy. London: Tavistock.

- York, G. (1990) The Dispossessed: Life and Death in Native Canada, Boston: Little, Brown & Co.
- Young, L. T., Hood, E., Abbey, S. E. & Malcolmson, S. A. (1993). Psychiatric consultation in the Eastern Arctic. II. Referral patterns, diagnoses and treatment. Canadian Journal of Psychiatry, 38, 28-31.
- Young, T. J. (1990). Poverty, suicide, and homicide among Native Americans. Psychological Reports, 67, 1153-1154.