RISK AND PROTECTIVE FACTORS FOR ALCOHOL USE
AMONG NATIVE AMERICAN YOUTH

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ABSTRACT

Alcohol is the number one drug of choice for youth in the United States. Native American youth have the highest rates of alcohol use and alcohol-related mortality among all other ethnic groups in the United States. Not only does alcohol use jeopardize health and development, but it is frequently associated with other problem behaviors. Problem Behavior Theory can be used as a framework to guide understanding of adolescent alcohol use. The purpose of this project is to present a review of the literature on alcohol use and abuse among Native American youth based on Problem Behavior Theory. Problem Behavior Theory is presented, and gaps in the literature are identified as suggestions for future research. Comprehensive understanding of risk and protective factors for alcohol use and abuse among Native American youth will assist in the development of successful prevention and intervention programs.
CHAPTER ONE

The Problem

Introduction

In this chapter the problem, background and purpose of the project are presented. The chapter concludes with a discussion of the significance of the problem to nursing and the definition of the following terms: risk factors, protective factors, alcohol use, alcohol use disorder, alcohol abuse, alcohol dependence, alcohol tolerance, alcohol withdrawal, Native American and youth.

Problem

Alcohol is the number one drug choice for youth in the United States (Johnston, O’Malley & Bachman, 2003). Data suggest Native American youth have higher rates of alcohol use and suffer more serious health problems such as anxiety, depression and substance use compared to other ethnic youth (Blum, Harmon, Harris, Bergeisen, & Resnick, 1992). Alcohol use jeopardizes the health, development and future wellness of Native American adolescents. Compared with other ethnic groups, Native American youth use alcohol at an earlier age and more frequently (Barnes, Welte, & Hoffman, 2002; Cameron, 1999; Okwumabua & Duryea, 1987). In addition, over 40 percent of persons who begin drinking prior to age 13 will develop alcohol use disorder (AUD) as adults (Brown, Tapert, Granholm & Delis, 2000).

Alcohol use among adolescents has significantly increased. Incidence of adolescent alcohol use nearly doubled from 2.2 million new users in 1990 to 4.1 million in 2000 (Substance Abuse and Mental Health Services Administration [SAMHSA],
Native American youth are particularly vulnerable to alcohol misuse. Prevalence of alcohol use among Native American youth is higher (27.9 percent) than among other ethnic groups (13.7 percent) (The National Household Survey on Drug Abuse Report [NHSDA], 2003). In 2002, rates of substance abuse and dependence were highest among Native Americans 14.1 percent followed by Hispanics, 10.4 percent, Blacks, 9.5 percent, Whites, 9.3 percent and Asians, 4.2 percent. Of these 3 million, only 400,000 received alcohol treatment suggesting treatment needs for this population have not been met (SAMHSA, 2003a).

Alcohol misuse is the most important contributing factor to premature death and preventable injuries among Native American youth. Leading causes of death among Native American youth 10 through 18 years are the result of unintentional injuries (Centers for Disease Control, 2004a). Native American youth have the highest rates of injury-related death including suicide than youth from other ethnicities. In 2001 death rates for suicide among Native American males 15 to 24 years were 24.7 percent compared to 9.1 percent, 9.5 percent and 13.0 percent for Asians, Hispanics and Blacks respectively (Arias, Anderson, Kung, Murphy, & Kochanek, 2003). Between 1997-1998 the highest rates of Native American youth suicide were in Alaska, South Dakota and Arizona. Suicide rates in these areas were six to eight times greater than the national average (Centers for Disease Control, 2004b).

Little is known about variations in alcohol use and risk factors among youth from other ethnic backgrounds, particularly Native American youth. This is a critical limitation because not only is the health status of Native American youth below that of
the general adolescent population, but death rates among this group are double that of adolescents from other ethnicities (Cameron, 1999). Research on risk and protective factors for alcohol use and abuse among Native American youth is needed to better understand variables contributing to alcohol initiation, which will direct the focus for prevention and intervention efforts.

Background

Native Americans live throughout the United States and their population is expected to grow. There are over 2.4 million Native Americans and over 500 federally recognized tribes across the United States (Office of Native American and Insular Affairs, n.d.). The Native American population grew from 0.78 percent in 1990 to 0.90 percent of the United States population in 2000. With 34 percent of the entire Native American population under the age of 18 and a median age of 30 years, Native Americans are a fairly young group. Since 35.9 percent of Native Americans are of childbearing age, this population is expected to grow. Therefore, it is important to address current health concerns of Native American youth and anticipate future healthcare needs (United States Census Bureau, 1990, 2000).

Behaviors play an important role in adolescent health. Depending on whether behaviors promote or prevent wellness, they have the potential of leading to long-term health and social consequences (Jessor, Turbin & Costa, 1998). From a health perspective, it is crucial to understand the circumstances leading to problem drinking among Native American youth so prevention programs can be designed to meet this population’s needs. Not only is alcohol use a problem in itself, but it is notably
accompanied by other risk behaviors such as substance use, risky sexual behaviors and self harm behaviors (Barnes et al., 2002; SAMHSA, 2002a; SAMHSA, 2003b; Shaughnessy, Doshi & Jones, 2004). A review of factors contributing to problem drinking among Native American youth will help identify research needs. Enhanced understanding of the problem through research will ultimately lead to the development of culturally relevant prevention strategies. In addition to reducing problem drinking among Native American youth, early intervention and prevention strategies will serve to minimize negative health consequences associated with premature alcohol use and abuse.

Significance and Purpose

Most Native Americans live in Western States, including California, Arizona, New Mexico, South Dakota, and Alaska (Surgeon General, n.d.). Since Arizona has a considerable Native American population, being familiar with risk and protective factors for alcohol use and abuse among Native American youth is important for identifying individuals at risk for health problems. Advanced practice nurses must have comprehensive knowledge of risk factors for alcohol use and abuse for proper screening, identification, evaluation and management of patients. Nurse researchers play a crucial role in filling gaps of knowledge related to prevention of alcohol use and abuse among this population. Comprehensive understanding of risk and protective factors for alcohol use and abuse among Native American youth will assist in the development of successful prevention and intervention programs.

The purpose of this project is to present a review of the literature on alcohol use and abuse among Native American youth based on Problem Behavior Theory. Problem
Behavior Theory is presented, and gaps in the literature are identified as suggestions for future research.

Definition of Terms

Risk Factors: Variables that increase one’s chances of engaging in problem behaviors (Jessor, 1987).

Protective Factors: Variables that decrease ones chances of engaging in problem behaviors (Jessor, 1987).

Alcohol Use: Consumption of alcohol that may impair functioning. Does not meet diagnostic criteria for alcohol use disorder, but may lead to alcohol use disorder.

Alcohol Use Disorder (AUD): Disorders associated with alcohol caused by the consumption of alcohol which leads to health and social problems. A general term that includes alcohol dependence and/or alcohol abuse. (American Psychiatric Association, 2000).

Alcohol Abuse: Recurrent use of alcohol leading to significant impairment in functioning. Classified by one or more of the following occurring within one year: 1) continued use of alcohol resulting in neglect of school, job, or household responsibilities; 2) use of alcohol in physically dangerous circumstances; 3) continued use despite alcohol-related legal problems; and 4) continued use despite its negative effects on social and interpersonal relationships (American Psychiatric Association, 2000).

Alcohol Dependence: A specific type of substance dependence involving three or more of the following: 1) consumption of larger amounts over time than intended; 2) unsuccessful efforts at controlling consumption; 3) excessive time spent on efforts to
obtain alcohol; 4) neglect of important social/occupational responsibilities; 5) continued use despite the presence of problems caused by alcohol; and 6) physiological dependence on alcohol manifested by tolerance and/or withdrawal (American Psychiatric Association, 2000).

*Alcohol Tolerance:* greater amounts of alcohol are needed to produce intoxication or the usual amount of alcohol consumed no longer has the same effect (American Psychiatric Association, 2000).

*Alcohol Withdrawal:* The presence of at least two of the following symptoms: autonomic hyperactivity, hand tremors, insomnia, psychomotor agitation, anxiety, nausea, vomiting, seizures or hallucinations (American Psychiatric Association, 2000).

*Native American:* Descendent of the Indigenous people of North America who lived across the continent since its exploration in the 15th century. Includes other classifications such as American Indian and Alaska Natives (Office of Native American and Insular Affairs, n.d.).

*Youth:* Within this paper, synonymous with adolescent. Refers to individuals between 12 and 19 years of age (Bowden, Dickey & Greenberg, 1998).
CHAPTER TWO

Associated Effects of Alcohol Use

Introduction

This chapter presents a discussion of general consequences and problems related to premature alcohol use among youth. Topics covered include financial effects, neurocognitive effects, health problems, and alcohol’s association with increased risk of injury, violence and psychological disorders.

Costs of Premature Alcohol Use

In 1998 total estimated costs of underage drinking was over $58 billion per year. These costs are attributed to consequences of alcohol use such as medical consequences of alcohol consumption, motor vehicle accidents, lost earnings due to crime, property damage and lost earnings due to premature death (National Institute on Alcohol Abuse and Alcoholism, 2000).

Effects on the Adolescent Brain

Regular use of alcohol during adolescence can lead to changes in brain structure, functioning and cognitive impairment. Adolescence is a time of development when the body undergoes significant changes. Not only are there hormonal alterations, but there are neurocognitive changes as well. The hippocampus and prefrontal cortex develop more rapidly during adolescence, while other cortical structures decrease in volume. Specific cortical structures decrease during adolescence as the brain removes half of all synaptic connections present at age six through a mechanism called pruning. In other words, the brain decides which neuronal connections to keep and which to destroy. If
done appropriately, the adolescent matures neurocognitively into adulthood (Stahl, 2002). Alcohol exposure to the brain during this time may interrupt crucial steps in brain maturation leading to neurodevelopmental disorders. Research on adolescent brain development suggests early alcohol use may have negative effects on physical brain structure and cognition.

The hippocampus is the part of the brain that creates long-term memories from events and facts such as what one did the night before or someone’s name. In addition to transferring new events and facts from short-term to long-term memory, the hippocampus is part of the limbic system, which plays an important role in feelings and emotion. Researchers have found alcohol significantly affects the hippocampus by impairing its ability to function. Impaired functioning may lead to memory impairments and blackouts (White, Matthews & Best, 2000). Not only does alcohol impair memory, but it also affects long-term cognition and the physical size of the hippocampus.

Debellis, Clark & Beers (2000) used magnetic resonance imaging to compare hippocampal volumes of adolescents with AUD with a control group of healthy adolescents matched for age and gender. Findings showed subjects with AUD had smaller hippocampal volumes than control subjects; suggesting adolescence is a vulnerable time for hippocampal toxicity. Since maturation of the hippocampus continues throughout adolescence, drinking during this time may hinder hippocampal development. Decreased hippocampal volume has been associated with major depression. Studies have found decreased hippocampal volumes in adult women with
major depression (Sheline, Sanghavi, Mintun, & Gado, 1999). For purposes of this review it is important to understand alcohol and depression are correlated.

Alcohol use during adolescence may alter other areas of the brain as evidenced by impaired neuropsychological functioning. Giancola and Mezzich (2000) compared neuropsychological deficits of female adolescents diagnosed with SUD and matched controls. Measures of intelligence, executive functioning, language and academic achievement were significantly lower for SUD subjects than matched controls. Results suggest substance use has a negative affect on adolescent neurocognitive development.

Similar results were found by Brown et al. (2000) who conducted a longitudinal study comparing cognitive functioning of alcohol-dependant adolescents, with a healthy control group. Control subjects were matched with alcohol dependent subjects on age, gender, education, socioeconomic status, and family history of alcohol dependence. Results showed significant neuropsychological impairments among the alcohol-dependant group such as: poor memory, altered visuospatial perception, and verbal skill deficiencies. Impairments observed in the alcohol-dependant group persisted even after several weeks of alcohol cessation; suggesting alcohol induced brain alterations have long-lasting effects. Therefore, alcohol use during adolescence may adversely affect cognitive functioning, putting alcohol-dependant adolescents further behind in school, and increasing their risk of having future socioeconomic problems.

*Alcohol-Related Health Problems*

Native American youth who use alcohol are at risk for alcohol-related health problems. Chronic liver disease and cirrhosis are more prevalent among Native
Americans than the general population (Beauvais, 1998). Evidence suggests an adolescent’s increased tendency to engage in problem behaviors is inversely related to their propensity for engaging in health maintaining behaviors. Since Native American youth have high prevalence rates of problem behaviors, they are theoretically at risk for poor health and engaging in health compromising behaviors (Donovan, Jessor & Costa, 1991). Most studies on the effects of alcohol on health have largely focused on adult populations; few studies have examined health consequences of alcohol use among Native American youth.

Alcohol use is associated with increases in self-reported health problems (Aarons et al., 1999; Hansell & White, 1991; Newcomb & Bentler, 1987). One study examined the physical effects of alcohol on a diverse sample of adolescents (between 14 and 18 years of age), by comparing the health status of adolescents with AUD to the health status of adolescents without AUD. Subjects completed a health problems checklist, had physical exams and had blood drawn for an evaluation of serum liver enzymes. Data revealed adolescents with AUD had more self-reported health problems, elevated liver enzymes and more abnormalities in their physical exams. Self-reported health problems included cardiopulmonary concerns, problems with sleeping, and symptoms related to depression and anxiety. Liver enzymes were elevated in the AUD group compared to the control group. Adolescents with AUD had higher levels of gamma-glutamyl transpeptidase (mean 20.7) compared to the control group (mean 14.9); and higher levels of alanine aminotransferase (mean 23.2) compared to the control group (13.5). Although liver enzymes were elevated in the AUD group, values were not above the normal
threshold for this age group. Oral and dental irregularities were observed more frequently in the AUD group. Even though reported health problems and physical examination findings were minimal, elevated liver enzymes suggest adolescents with AUD are in the initial stages of liver injury. Since physical manifestations of alcohol use among adolescents are not obvious, it is important to screen this population for alcohol use. Through screening, adolescents who use alcohol and are at risk for alcohol-related health problems can be identified. Once at risk youth are identified, they can receive appropriate interventions for physical and mental health problems (Clark, Lynch, Donovan & Block, 2001).

Adolescent females are at particularly high risk for having alcohol-related health problems. High alcohol use may increase a female adolescent’s risk of developing breast cancer and other substance abuse problems. A study of adolescent females found those who consumed high levels of alcohol had higher levels of estradiol and testosterone relative to females who did not drink. High levels of estrogen have been associated with specific diseases such as breast cancer, and high levels of testosterone have been implicated with increased risk of substance use (Martin et al., 1999).

Alcohol use is associated with risky sexual behaviors. Adult women who drink alcohol are five times as likely as abstainers to engage in sexual intercourse, and over 30 percent less likely to use condoms (The National Center on Addiction and Substance Abuse at Columbia University, 1996). Similarly, 44 percent of adolescents reported they were more likely to have sex if they had been drinking, and 17 percent said they were less likely to use protection after drinking (Strunin & Hingson, 1992). Such behaviors can
lead to pregnancy and serious health problems from sexually transmitted diseases. Not only is alcohol use related to risky sexual behavior that puts an adolescent at risk for serious health problems, but it has been implicated in over 60 percent of all sexual assault cases among adolescents (Office of the Inspector General, US Department of Health and Human Services 1992).

Risk and Injury

Native American youth who drink alcohol are at risk for suffering unintentional injuries related to alcohol. Emergency department visits related to drugs and alcohol for youth 12 to 19 years of age increased over 12 percent from 88,982 visits in 1998 to 100,464 in 2002 (Department of Health and Human Services, 2002).

A high proportion of emergency department visits are attributed to alcohol-related motor vehicle injuries. Nearly 8,000 drivers between 15 and 20 years of age were involved in fatal crashes in 1995. Of these, 20 percent had blood alcohol levels above zero (National Highway Traffic Safety Administration [NHTSA], 1997). Statistically, youth are overrepresented in fatalities related to car accidents. Although only 7 percent of licensed drivers in 2000 were between 15 and 20 years of age, they represented 13 percent of drivers involved in vehicle fatalities (NHTSA, 2002). Not only are intoxicated youth more likely to get into a vehicle with an intoxicated driver, but also less likely to use their seatbelts (Bonnie & O’Connell, 2004).

Native American youth have higher rates of alcohol-related injury compared to youth from other ethnicities. Up to 67 percent of fatal motor vehicle crashes involving Native American Arizona residents were associated with alcohol (Campos-Outcalt,
Prybylski, Watkins, Rothfuss & Dellapenna (1997). Native American youth in the state of Washington had higher rates of injury related hospitalizations when compared to all other youth in the state. Motor vehicle accidents were the most common cause of injury requiring hospitalization (Johnson, Sullivan & Grossman, 1999). Motor vehicle injury rates may be attributed to the fact that Native American youth are more likely to be intoxicated while driving and thus, less likely to wear seatbelts (Grossman et al., 1997).

**Violence**

Data suggest alcohol is highly associated with acts of homicide, aggression and suicide. Since 50 percent of violent crimes are alcohol related (Harwood, Fountain, & Livermore, 1998), youth who use alcohol are more likely to be involved in violent and aggressive behaviors. In 2000, homicide was the second leading cause of death among those 15 through 24 years of age. Coincidentally alcohol has been implicated in the involvement of 36 percent of homicides involving those less than 21 years of age (Centers for Disease Control and Prevention, 2000). A national survey found adolescents between 12 and 17 years who engaged in acts of violence in the past year reported higher rates of alcohol use compared to adolescents who did not engage in violent acts (Office of Applied Studies, 2002).

Alcohol use has been directly related to acts of sexual aggression. Up to 60 percent of all sexual assault cases among adolescents involve alcohol. Of a sample of male high school students, 39 percent reported it was alright for a boy to force sex on a female who is drunk (Office of the Inspector General, US Department of Health and Human Services 1992).
Self-Harm Behavior

Alcohol use among adolescents is significantly associated with contemplating, planning, attempting and completing suicide (Garrison et al., 1993). Windle, Miller-Tutzauer & Domenico (1992) found prevalence of suicide attempts among a national sample of adolescents was up to four times greater among those who used alcohol compared to abstainers. These findings which suggest a correlation between alcohol use and increased tendency to engage in self-harm behaviors are consistent with more current research.

Shaughnessy et al., (2004) analyzed survey results completed by Native American 9th through 12th graders enrolled in schools funded by the Bureau of Indian Affairs. Results found students who attempted suicide were more likely than students who did not attempt suicide to engage in risky behaviors such as alcohol use. Students who attempted suicide were more likely to engage in violent and unintentional injury behaviors, sexual risk behaviors, tobacco use and alcohol use. Although the study did not elaborate on why subjects who attempted suicide were more likely to engage in other risk behaviors, findings are useful. For example, recognizing risk factors associated with suicide will help health professionals identify Native American youth at heightened risk of committing suicide. In addition, results suggest it is important to address mental health issues in alcohol abuse prevention and intervention programs for Native American youth. Finally, results emphasize findings from other studies, which highlight the association between alcohol use and engaging in other risk behaviors (Barnes et al., 2002; Newcomb & McGee, 1989; Welte & Wieczorek, 1999).
Illicit Drugs and Delinquent Behavior

Native Americans who initiate alcohol use at an early age are more likely to use illicit drugs and be involved in delinquent behavior. A sample of 7th through 12th grade male and female students from different ethnic backgrounds completed a comprehensive questionnaire, which collected information on: demographics, family structure, alcohol consumption, alcohol problems, substance use and delinquency. Results showed Native American youth began drinking at an earlier age, had higher rates of illicit drug use and engaged in more delinquent behavior than Asians, Hispanics, Blacks and Whites. In addition, earlier age of initial alcohol use was associated with illicit drug use and delinquent behavior. Results suggest early alcohol intervention and prevention programs may be beneficial in reducing initial alcohol use among youth, and in decreasing the overall impact early alcohol use has on illicit drug use and delinquent behavior (Barnes et al., 2002). Finally, contribute to evidence from other studies showing adolescent alcohol use is associated with other problem behaviors (Newcomb & McGee, 1989; Shaughnessy et al., 2004; Welte & Wieczorek, 1999).

Mental Disorders

Mental disorders are frequently correlated with alcohol use disorders. It is undetermined whether alcohol use increases one’s susceptibility of developing a mental disorder, or whether mental disorders increase one’s susceptibility of developing an AUD. For purposes of this review, it is important to recognize the two are correlated. Research shows there is an association between alcohol use and depression among adolescents. Information obtained from the Third National Health and Nutrition
Examination Survey was analyzed to understand patterns and associations among adolescent problem behaviors (National Center for Health Statistics, 1994). A strong correlation between alcohol use and depression was found among adolescents between 12 and 16 years of age. Adolescents who used alcohol were more than four times as likely to meet diagnostic criteria for depression compared to their abstaining counterparts. The correlation between alcohol use and depression was the same across all ethnicities (Hanna, Yi, Dufour, & Whitmore, 2001). These results are consistent with other studies that have found correlations between alcohol use and depression (Clark et al., 2001; Burns and Teeson, 2002; King, Bernardy, & Hauner, 2003; Roeloffs, Fink, Unutzer, Tang, & Wells, 2001).

In addition to depression, studies have found alcohol use among adolescents is correlated with anxiety. In a study of adolescents between 14 and 18 years of age, those with AUD self-reported symptoms of depression and anxiety more frequently than control subjects who did not have an AUD (Clark et al., 2001). The correlation between anxiety and alcohol use is consistent with other studies (Burns and Teeson, 2002; King et al., 2003).

It is beyond the scope of this review to discuss causal relationships between alcohol use and depression. However, research suggests the hippocampus may be vulnerable to the effects of alcohol, to the extent that chronic exposure may decrease its volume. Decreased hippocampal volumes have been associated with recurrent major depression among healthy adult women (Sheline et al., 1999). Although no known studies have been done to assess the association between depression, alcohol use and
hippocampal volumes among Native American youth, alcohol-induced changes in hippocampal volume may account for the correlation between alcohol use and depression. Additional research in this area is needed to draw further conclusions (De Bellis et al., 2000).

**Long-Term Effects**

Early onset alcohol use during adolescence has been associated with a greater tendency to be involved in violence later in life. Adults who began drinking before age 14 were 11 times more likely to be involved in a fight while drinking, than adults who began drinking at the legal drinking age (Hingson, Heeren, & Zakocs, 2001). In addition, early onset alcohol use has been associated with later development of AUD and personality disorders in adulthood (Brook, Cohen, & Brook, 1998; Hesselbrock, Hesselbrock & Stabenau, 1985; Robins & Przybeck, 1985). In their attempt to examine the degree to which AUD in adolescence is a risk factor for AUD in adulthood, Rohde, Lewinsohn, Kahler, Seeley & Brown (2001), found high levels of continuity for AUD among adults who began drinking during adolescence. Compared to adolescents without AUD, those with AUD had higher levels of future AUD, substance use disorder, depression, anxiety, and antisocial personality disorder. This longitudinal study contributes to the understanding of the continuity of behavior from adolescence to adulthood. Alcohol use among youth is a serious problem that is not resolved with time. Rather, onset of alcohol use during adolescence may be a sign of long-term psychological dysfunction as an adult. Appropriate prevention and interventions including treatment programs are necessary, not only for adolescents with AUD, but also for those at risk for
early onset alcohol use. Appropriate prevention and management will decrease likelihood of future physical and mental health disorders. Similar longitudinal studies with Native American samples are needed to better understand the continuity of AUD among Native Americans from adolescence into adulthood.

Summary

This chapter reviewed conditions and behaviors correlated with alcohol use. From the available literature on Native American youth problem behaviors are correlated with alcohol use. These include: driving under the influence of alcohol, suicide, delinquent behavior, and illicit drug use. Further research must be done with Native American samples to better understand the problem of alcohol use disorder and its effects on mental and physical health.
CHAPTER THREE
Theoretical Framework

Introduction

This chapter begins by discussing the basis for choosing Problem-Behavior Theory to understand alcohol use among Native American youth, presents the social-psychological framework of Problem-Behavior Theory, and concludes with a commentary on how it may be used as a tool to identify Native American youth at risk for alcohol use.

Introduction to Problem Behavior Theory

Problem-Behavior Theory is an appropriate model to understand and address adolescent alcohol use for two reasons. First, adolescent alcohol use is a problem behavior, which may interfere with normal adolescent development and the preparation for the transition into adulthood. Second, risk factors proposed by the theory may be used to identify adolescents at risk for compromised health or alcohol use. Risk factor understanding and identification is crucial in understanding the cause of health disparities and equally important for the development of prevention and intervention strategies (Jessor, 1991). Most people are familiar with biological risk factors. For example, high blood pressure and high serum cholesterol put an individual at risk for cardiovascular disease. Problem Behavior Theory is similar; however it focuses on factors that put an individual at risk for engaging in problem behaviors, such as alcohol use. Both behavioral and biological risk factors can compromise health equally. The following section describes each system of Problem Behavior Theory.
Problem-Behavior Theory

Problem-Behavior Theory is a social-psychological framework designed to illustrate factors impacting adolescent behaviors. In the framework, adolescent behavior is characterized as either problem behavior or conventional behavior. Problem behaviors are undesirable and socially unacceptable to conventional norms of society. Problem behaviors generally lead to social rejection, sanctions or incarceration. Examples of problem behaviors include: underage alcohol use, substance abuse and criminal behavior. On the other hand, conventional behaviors are socially accepted by society. Examples of conventional behaviors include involvement in sports, church attendance and school participation (Jessor & Jessor, 1977).

The framework of Problem-Behavior Theory incorporates three systems of variables, which effect adolescent risk taking behavior; these include the personality system, perceived environment system and behavior system. Each system influences risk taking behavior in a different way and has different variables that trigger or protect against problem behavior. A balance between variables that trigger or protect within each of the three systems governs how prone an adolescent is to engage in problem behavior. Thus, the likelihood of an adolescent engaging in problem behaviors is high if the individual has more variables that trigger problem behavior than variables that protect against problem behavior. Similarly, if an adolescent has more protective variables than trigger variables, the likelihood of this individual engaging in problem behaviors is very low. Considered together, the three systems can be used to predict and explain
adolescent behavior. Variables in each of the three systems may are also referred to as psychosocial risk factors. Some risk factors within each system have stronger relationships that directly implicate problem behavior, whereas other risk factors have more indirect relationships with problem behavior (Jessor & Jessor, 1977). The discussion that follows describes the three systems of Problem Behavior Theory.

**Personality System**

Psychosocial risk factors under the personality system generally reflect social attitudes and developmental experience. Risk factors within this system are divided into three structures: the motivational-instigation structure, personal belief structure and personal control structure. A discussion of each structure within the personality system follows (Jessor, 1987).

The *motivational-instigation structure* is composed of risk factors related to goals and expectations. Low expectations of reaching valued goals, such as academic achievement would be considered a risk factor for problem behavior. Problem behavior such as getting drunk to forget about one’s problems may be a way of coping with the failure and frustration of having low expectations for reaching goals. Similarly, low expectations of reaching academic goals may lead to alternative ways of reaching goals, such as cheating on an exam. Thus, low expectations for achieving goals, whatever they may be are risk factors for problem behavior (Jessor, 1987).

The *personal belief structure* of the personality system is composed of risk factors that serve as controls and have indirect effects on problem behavior. Risk factors in this structure are social criticism, alienation, self-esteem, and internal-external locus of
control. Social criticism refers to a rejection of social values and norms. Alienation refers to being isolated from society and having a sense of worthlessness in one’s daily role as a student, for example. Increased social criticism and alienation are risk factors for problem behavior because they reduce controls against problem behavior. Low self-esteem is a risk factor for engaging in problem behavior; low self-worth suggests there is nothing at stake to be lost if one participates in problem behavior. Similarly, believing in an external locus of control is also a risk factor. An external control orientation regards everything as happening by chance or luck, making the notion of appropriate behavior meaningless. Thus, social criticism, alienation, low self-esteem and external locus of control are risk factors for problem behavior within the personal belief structure of the Personality system (Jessor, 1987).

Similar to the personal belief structure of the personality system, the *personal control structure* is composed of risk factors that serve as controls, but have more direct effects on problem behavior. Risk factors in this structure are attitudes toward tolerance of deviance, religiosity and positive-negative functions discrepancy. The relationship between these risk factors and increased risk for problem behavior are more obvious and direct. For example, an attitude that tolerates deviance signifies offenses are not considered wrong or inappropriate. Similarly, not being involved with religion implies an individual minimally applies moral values to behavior and decision-making. Finally, there is increased risk for engaging in problem behavior when the positive reasons for engaging in problem behavior outweigh negative reasons or consequences. A positive reason for engaging in underage problem drinking would be that it makes parties more
fun, whereas a negative reason for engaging in problem drinking would be that it causes hepatic and cognitive complications. A positive-negative function discrepancy is a risk factor for problem behavior and occurs when the positive reasons of unconventional behavior outweigh negative reasons or consequences. Thus, attitudes that tolerate deviance, low involvement in religion and the positive-negative function discrepancy are risk factors for problem behavior within the personal control structure of the personality system (Jessor, 1987).

Perceived Environment System

Psychosocial risk factors under the perceived environment system include environmental supports, influences, controls, models and expectations. Risk factors within this system are divided into two structures: the distal structure and the proximal structure (Jessor, 1987). A discussion of each structure within the perceived environment system follows.

The *distal structure* is composed of risk factors that characterize whether an adolescent’s social perspective is regulated more by parents or peers. Greater orientation toward peers than parents suggests increased risk for involvement in unconventional societal norms, and heightened exposure to patterns of problem behavior. Risk factors in this structure are: parental support, parental controls, friend support, friend controls, parent-friend compatibility, and parent-friend influence. Thus, whether through: minimal parent support/control, parent-friend incompatibility or greater friend than parent influence; greater peer than parent orientation is a risk factor for problem behavior within the distal structure of the perceived environment system (Jessor, 1987).
The proximal structure is composed of risk factors that characterize social perspectives in terms of whether models that approve problem behavior are more prevalent than models that disapprove of problem behavior. Risk factors in this structure are: parent approved problem-behavior, friend’s approval of problem-behavior and parents/peers as models of problem behavior. Thus, in the proximal structure of the perceived environment system, there is an increased risk of problem behavior if: parent disapproval of problem behavior is low, peer approval of problem behavior is prominent and parents and/or peers model or engage in problem behaviors (Jessor, 1987).

Behavior System

Psychosocial risk factors under the behavior system are divided into two structures, which include the problem-behavior structure and conventional behavior structure (Jessor, 1987). A discussion of each structure within the perceived environment system follows.

The problem-behavior structure is composed of risk factors or behaviors that are unconventional or socially unaccepted by society. Involvement in any one of the risk factors in this structure increases the chances of becoming involved in other problem behaviors. Risk factors in this structure include: marijuana use, sexual intercourse, alcohol use, deviant, and multiple-problem behavior. Closely related is the conventional behavior structure, which is composed of conventional behaviors that are socially accepted. These behaviors include: church attendance and academic performance. Thus, an individual is at increased risk of being involved in problem behavior if they are
more involved in unconventional behavior such as alcohol use, and less involved in
conventional behaviors such as church attendance and academics (Jessor, 1987).

Application of Problem Behavior Theory to Adolescent Drinking

Jessor (1987) applied Problem-Behavior Theory to adolescent problem drinking
in a four-year, longitudinal study of 432 male and female junior high students.
Questionnaire data was collected over four years and cross-sectional analyses were done
at each of the four waves of data collection. Results showed psychosocial risk factors
within each of the three systems of Problem Behavior Theory significantly predicted
alcohol use among adolescents.

Multiple correlations among the three systems created a profile of psychosocial
risk factors that can be used to explain or predict adolescent problem drinking. Risk
factors making an individual prone to problem drinking under the **personality system**
included: 1) lower value on academics, 2) high value on independence, 3) lower
expectation for academic recognition, 4) greater tolerance for deviant behavior and 5)
less religiosity. Risk factors making an individual prone to problem drinking under the
**perceived environment system** included: 1) less influence from parents than friends, 2)
friend’s approval and modeling of deviant behavior. Risk factors making an individual
prone to problem drinking under the **behavior system** included: 1) involvement in
delinquent behavior, 2) use of marijuana and 3) less church attendance. The study’s
psychosocial risk factor profile of alcohol use supports Problem Behavior Theory and
demonstrates a rejection of societal norms and values. In addition, the study found a
positive relationship between adolescent drinking and other problem behaviors such as
cigarette smoking, illicit drug use, deviant behavior and sexual experience. One limitation of this study is the longitudinal four-year design with high attrition. However, the study is important because it shows Problem Behavior Theory is a useful framework, which accounts for differences in drinking behavior between abstainers and problem drinkers. Thus Problem-Behavior theory can be used to screen and predict problem drinking through the assessment of psychosocial risk factors within each of the three systems (Jessor, 1987).

Donovan et al., (1991) explored the relationship between conventional behavior, unconventional behavior and health-related behaviors. Problem Behavior Theory was used as a framework for the study. Conventional behavior is that which is socially accepted and unconventional behavior is synonymous with problem behavior. In the study, a health questionnaire designed to measure health behavior, conventional behavior and unconventional behavior was completed by 7th grade through 12th grade male and female students. Health behaviors assessed in the questionnaire included frequency of regular physical activity, usual hours of sleep, use of safety belts, attention to healthy diet and healthy food preferences. Risk factors under Problem Behavior Theory were used in the questionnaire to measure conventional and unconventional behaviors. Risk factors assessed in the questionnaire included value on achievement, value on independence, independence-achievement value discrepancy, expectations for academic achievement, attitudinal intolerance of deviance, religiosity, parent-friend compatibility, parent versus friend influence, friends as models for problem behavior and parental disapproval/approval of drinking. Results showed greater conventionality was related to
greater involvement in health-maintaining behaviors and unconventionality was related to less involvement in health-maintaining behaviors. This finding was consistent across all three systems of Problem Behavior Theory, all age samples, both genders, and across different health-related behaviors. One limitation of the study was the length of the questionnaire, which may have contributed to subject fatigue leading to missing or unreliable data. Secondly, even though Hispanics, Asians, African Americans and Native Americans were included, the sample primarily included Anglo subjects. Thus, generalization of results to Native Americans may be unwarranted. Despite limitations, the study is important for several reasons. First, it demonstrates a relationship between personality (ones values, beliefs and attitudes) and behaviors that influence health. In addition, it incorporates health behaviors into Problem Behavior Theory suggesting health behaviors are linked to a larger system of adolescent behavior. Finally, since problem behaviors were associated with less health-maintaining behaviors, adolescents with unconventional behavior may be at increased risk for health problems. Further research is needed with samples of Native American youth to determine if the same relationships apply and whether health-maintaining behaviors are protective factors against alcohol abuse and other problem behaviors.

Jessor et al (1998) studied the role of protective factors in adolescent health-enhancing behaviors among a group of male and female adolescents. The framework for the study was Problem Behavior theory and included Hispanic, Anglo and African American high school students. The study was conducted over four years with a sample of 1,493 subjects. The administered questionnaire assessed five categories of health-
enhancing behavior (eating a healthy diet, getting enough sleep, regular exercise, good hygiene, avoiding injury); three health-related risk factors (friends who model eating junk food, friends who model sedentary lifestyle, parents who smoke cigarettes, stress, high susceptibility to peer pressure); as well as health-related proximal protective factors (value on health, perceived health effects, internal locus of control for health, parents as models for health behavior, friends who model health behavior); and conventional-related distal protective factors (orientation to school, religiosity, orientation to parents, positive relations with adults, friends as models for conventional behavior, social activities, church attendance). Results indicated proximal and distal protective factors were positively related to health-enhancing behavior. Protective factors significantly regulated risk factors and contributed to the development of health-enhancing behaviors. This finding suggests proximal and distal protective factors may promote healthy behavior in adolescence. Fundamental health-related proximal protective factors were value on health, perceived effects of harmful behaviors such as skipping breakfast, and parents as models for health behavior. Fundamental conventional-related distal protective factors were positive orientation toward school, friends as models of conventional behavior, involvement in social activities and religiosity. Health specific risk factors that related negatively to engaging in health-enhancing behavior were stress and friends who eat junk food. Limitations of the study were that subjects were lost to attrition and data was based on self-report. Nonetheless, this study is important because it has implications for prevention and intervention programs. Based on results, manipulating proximal and distal protective factors may serve as an intervention to improve health-enhancing
behaviors among adolescents. Second, unlike other studies focused on negative health behaviors, this study focused on factors associated with health-enhancing behaviors. Third, results of this study can be used to assist in the development of health promoting interventions in adolescence.

Summary

Understanding psychosocial risk and protective factors that influence or hinder problem behavior can help in predicting and explaining unconventional behavior. Adolescent alcohol use is considered an unconventional or problem behavior. Since adolescent alcohol use is a problem behavior, it can be considered under the framework the Problem Behavior Theory. Thus, risk factors under Problem Behavior Theory can be used to explain adolescent problem drinking. Although studies using Problem Behavior Theory to understand alcohol use among Native American youth have not been done, the function of risk and protective factors are expected to be similar for this population. However, since Native American youth have the highest rates of alcohol use and alcohol-related injuries among all ethnic youth in the United States (Barnes et al., 2002; Centers for Disease Control, 2002), it imperative that theory based studies with samples of Native American youth be done to guide development of culturally appropriate screening, intervention and prevention efforts.
CHAPTER FOUR
Native American Youth and Alcohol

Introduction

This chapter presents a discussion of social and cultural factors expected to play a role in alcohol use among Native American youth. Issues related to acculturation and enculturation are discussed. Problem behavior co-variance addresses the association between alcohol use and other problem behaviors among Native American youth. The chapter concludes with a presentation of relationships between alcohol use and risk and protective factors. For purposes of this project, only three variables are discussed as potential risk or protective factors. They include: parents, peers and refusal skills.

Social and Cultural Factors

Social changes have challenged the traditional Native American way of living. Of particular concern are changes experienced by family networks as Native Americans move off reservation land into mainstream society. Not only is the transition from reservation to mainstream society a stressful change, but family closeness, interdependence and parenting styles are threatened (Cameron, 1999).

Studies evaluating effects of urbanization on Native American families are scant. However, in order to understand effects of urbanization on Native American families it is important to understand traditional roles of the family unit. Traditionally, Native American extended family units were the means through which values and cohesion were enforced. The extended family played a role in raising children that has significantly affected current Native American parenting styles. When the traditional family structure
was intact, children’s needs were met by extended family members such as grandparents, aunts, uncles and cousins. Within the traditional structure, it was not considered appropriate for the father or mother to assume all care and discipline responsibilities of the child. As families moved off reservations into mainstream society, these traditional beliefs remained. However, extended family members were no longer available to help raise the children. Subsequently, Native American parents who moved off reservations were expected to assume the unfamiliar role of providing total care and discipline for their children. Consequently, in comparison to parenting styles of modern America, Native American parenting styles have been labeled as permissive (Machamer & Gruber, 1998; Redhorse, Lewis, Fest & Decker, 1978).

Permissive parenting styles and threatened family closeness may play a role in alcohol use among Native American youth. Permissive, non-authoritative parenting styles are associated with lower perceptions of family connectedness. Findings from a survey administered to an ethnically diverse group of high school students showed the lowest levels of family connectedness were reported by Native American youth (Machamer & Gruber, 1998). Since high levels of family connectedness serve as protective factors against risk behaviors such as alcohol use (Cummins, Ireland, Resnick, & Blum, 1999; Resnick, Harris & Blum, 1993), it is hypothesized that low family connectedness resulting from permissive parenting styles may be a risk factor for alcohol use among Native American youth. Living in mainstream society away from extended family can create overwhelming stress, contributing to alcohol use among youth. Moving off reservations and leaving behind traditional family structure, may make Native
American youth more vulnerable to the negative influences of mainstream culture. With the loss of traditional family structure, the means through which values and responsibilities were customarily learned is lost as well (Machamer & Gruber, 1998).

*Acculturation and Enculturation*

Literature on alcohol use among Native American adolescents is limited. However, studies on Native American adults suggest that cultural factors play a significant role in predicting an individual’s misuse of alcohol. Herman-Stahl, Spencer and Duncan (2003) interviewed 2,449 Native American adults from nine reservations in South Dakota. Interviews provided data on cultural orientation, alcohol and illicit drug use, and substance abuse and dependence. Results showed those more likely to misuse alcohol reported lower orientation with Native American culture and greater acculturation. Acculturation represents the extent to which an individual adopts another culture’s traditions (Vega & Gil, 1998). Those with greater acculturation were 4.4 times more likely to be problem drinkers compared to more traditionally oriented subjects.

Psychological stress experienced through discrimination and acculturation may contribute to alcohol use among Native American youth (Herman-Stahl et al., 2003). A study of Native American youth between 11 and 14 years of age, found a correlation between high levels of alcohol use and low rates of involvement in traditional culture. In the study, 57 percent of males and 51 percent of females reported using alcohol. Even though each subject identified with a tribe, only 24.5 percent reported being significantly involved in traditional tribal activities (Ma, Toubbeh, Cline & Chisholm, 1998).
Whereas acculturation may be a risk factor for alcohol use among Native American youth; enculturation may be a protective factor. Enculturation represents the extent to which an individual is involved in traditional cultural practices. Examples of enculturation include speaking one's native language and participating in spiritual customs. According to the literature, Native American adults with stronger ties to traditional culture are less likely to abuse alcohol than Native American adults who do not engage in traditional practices (Whitbeck, Chen, Hoyt, & Adams, 2004). Although more research is necessary to conceptualize cultural orientation’s effect on alcohol use, these studies advance the understanding of how culture may influence health behaviors. Results suggest traditional cultural orientation among Native Americans may be a protective factor for alcohol misuse, a concept crucial to the development and implementation of alcohol prevention and intervention strategies.

*Problem Behavior Co-Variance*

Alcohol is considered a gateway drug that leads to use of other drugs such as marijuana and cocaine (Cameron, 1999). Studies on adolescents have shown a relationship between alcohol use and involvement in other problem behaviors such as risky sexual behavior, illicit drug use, driving under the influence and delinquency (Barnes et al., 2002; SAMHSA, 2002a; SAMHSA, 2003b). In fact, the more risk factors an adolescent possesses, the more frequently they will engage in risky behaviors (Moncher, Holden, and Trimble, 1990).

Prevalence of problem behaviors among adolescents is highest among Native American youth (Bachman et al., 1991). Neumark-Sztainer et al. (1996) surveyed 132
adolescents regarding high risk behaviors. The subjects were enrolled in grades 6, 9 and 12 and represented Native American, African American, Hispanic, Asian American and White youth. Results showed significant positive associations among all problem behaviors, suggesting substance abuse, delinquent behavior, risky sexual behavior and risk for suicide frequently co-occur. Prevalence rates of health-compromising behaviors were highest among Native American youth and lowest among Asian American youth. Differences in prevalence among ethnicities imply there may be cultural factors influencing adolescent behavior. Results emphasize Native American youth are at high risk for mortality and morbidity associated with problem behaviors.

Another study of Native American youth found covariance between alcohol use and other problem behaviors. Potthoff et al. (1998) initiated the largest health behavior study among Native American youth to examine co-existence of risk behaviors. A sample of Native American 7th through 12th grade youth belonging to over 50 tribes completed self-report surveys. Findings were consistent with other studies demonstrating covariance between alcohol use and other risk behaviors (Barnes et al., 2002; SAMHSA, 2002a; SAMHSA, 2003b; Shaughnessy et al., 2004). Data analysis showed high correlations among alcohol, tobacco, other drugs; risky sexual behavior; delinquency; violence, and suicidal behavior.

Risk behavior screening as well as culturally sensitive prevention and intervention programs must be developed and implemented to decrease the prevalence of problem behaviors among Native American youth. Such efforts will likely decrease morbidity and mortality rates while improving health and wellness among this population. In
addition, the high correlation between suicide and alcohol use is a concern highlighting the need for programs that address coping strategies for dealing with stress.

Despite higher rates of suicide, mortality and alcohol use than other ethnic youth, not all Native American youth participate in risky behaviors. In addition to the cultural factors previously discussed, the following sections explore three variables that may serve as potential risk or protective factors for alcohol use among Native American youth.

*Introduction to Parents, Family & Peers*

It is suggested that parents and peers contribute to adolescent alcohol use (Kafka & London, 1991; Kendel, 1985; McLaughlin, Baer, Burnside & Pokorny, 1985). Parents and peers are thought to influence adolescent alcohol use through their attitudes and behaviors. Depending on their attitudes and behaviors, they may serve as either a risk or protective factor. Thus, parents and peers who have positive attitudes towards alcohol and model drinking would be a risk factor; whereas those who have negative attitudes toward alcohol and abstain from alcohol would be considered protective factors (Kuther, 2002). Kendal (1985) suggests individuals who initiate alcohol use acquire their attitudes, behaviors and intentions to use from other alcohol users. The following sections examine literature suggesting the importance of parents and peers as factors that influence adolescents to engage in risky behavior such as alcohol use.

*Parents & Family*

Several studies have identified parent and family dynamics as predictors of adolescent alcohol use (Bray, Getz, & Baer, 2000; Kandel & Andrews, 1987; Kosterman,
Hawkins, Guo, Catalano, & Abbott, 2000). One longitudinal study found children who were more closely supervised and monitored by parents were less likely to use alcohol during adolescence (Chilcoat & Anthony, 1996). The following is a discussion of how parental and family influences affect initiation of alcohol use among adolescents. General findings are discussed followed by a presentation of available data on Native American youth.

Parent disapproval of substance use is associated with decreased use of substances among youth. Only 9.4 percent of youth who perceived their parents would strongly disapprove of them smoking reported having used cigarettes in the past month, compared to 44.0 percent of youth who perceived their parents would not strongly disapprove of them smoking. Similarly, 5.5 percent of youth who perceived their parents would strongly disapprove of them trying marijuana reported having used marijuana in the past month, compared to 30.2 percent of youth who perceived their parents would not disapprove of them trying marijuana. Prevalence rates of illicit drug use among 12 to 17 year-olds were lower (11.3 percent) for those who reported having discussed dangers of alcohol, tobacco and drug use with parents, compared to youth who had not had this discussion (12.1 percent) (SAMHSA, 2003a).

Parent supervision, standard enforcement, and communication exert significant influence on initiation of alcohol use among adolescents. Parents’ drinking behavior and attitudes toward drinking have been positively related with adolescent initiation of alcohol use. Adolescents who reported being warned about the negative effects of alcohol use by their parents and having a close relationship with parents were less likely
to initiate alcohol use (Kandel & Andrews, 1987). These results are supported by a later study that examined patterns and predictors of alcohol initiation among a multi-ethnic sample of adolescents. Results showed parents with stronger standards against underage alcohol use were less likely to have children who used alcohol, compared to parents with low standards against alcohol use. Parents halted alcohol use through communication and setting clear rules against their adolescent’s use of alcohol. Although study results are based on self-reported data, this study has implications for prevention efforts. Given that parents play a role in alcohol initiation among youth, intervention and prevention efforts encouraging parents to be proactive in the management of alcohol use are important (Kosterman et al., 2000).

Family conflict and parent communication have been implicated as factors associated with adolescent alcohol use. One study of minority junior high students found alcohol use was significantly associated with family conflict, and poor parent-adolescent communication. Subjects experiencing high levels of family conflict had lower levels of parent-adolescent communication and consequently higher levels of alcohol use. Increased alcohol use among adolescents experiencing family conflict suggests alcohol use may serve as a coping method to deal with stress. Although results are based on self-report data, the findings have implications for the incorporation of coping skills and stress management into prevention programs (Bray et al., 2000).

Although evidence suggests parental and familial influences are factors related to alcohol use among adolescents, little research has been done examining the relationship of parental and familial influences on alcohol initiation among Native American youth.
The following discussion examines current findings based on samples of Native American youth. Available data reflects traditional Native American values regarding the importance of parents and extended family.

Data from questionnaires administered to Native American youth revealed the most powerful protective factors associated with emotional health for both males and females were perceived family caring and high parental expectations (Cummins et al., 1999). These findings are consistent with other studies that demonstrate parental influence on youth’s decisions to initiate or refrain from alcohol use (Griffin, Botvin, Scheier, Doyle, & Williams, 2003; Ma et al., 1998; Resnick, et al., 1993).

In addition to parents, extended family members significantly affect behaviors and decisions of Native American youth. The Student Needs Assessment survey administered to Native American students in 6th through 8th grade revealed adolescents seek guidance from family members before peers. Results show 74 percent of Native American youth identified parents, immediate family and extended family as having the greatest influence on their behavior and values. Punishment by family for unacceptable behavior was identified as a method of structure and guidance. Similarly, 77 percent regarded parent questioning as an expression of parental care and concern. Results from this study reflect traditional Native American values that incorporate extended family in the rearing of children. Results suggest alcohol screening, prevention and intervention programs for Native American youth should involve parents and extended family (Ma et al., 1998).
Peer Influence

A number of studies have identified peer alcohol use as a strong predictor of adolescent alcohol use (Bray et al., 2000; Griffin et al., 2003; Kosterman et al., 2000; Li, Barrera, Hops, & Fisher, 2002; Sieving, Perry, & Williams, 2000). Social influence, through peers was found to be the most predictive variable for alcohol use among adolescents. In a study of 5536 multi-ethnic adolescent students, alcohol use was greater among subjects who had relationships with: 1) peers who used alcohol, and 2) peers who engaged in delinquent behavior. Although data were based on self-report and the cross-sectional design inhibits analysis of causal relationships, results of this study have implications for prevention efforts (Griffin et al., 2003).

The finding that peer alcohol use is a predictor of alcohol use among adolescents is supported by previous research. One study questioned 1804 adolescents about their use of alcohol and alcohol use patterns of peers. Findings indicated higher levels of peer alcohol use were related to increased levels of alcohol use among subjects. Results of this study reinforce the importance of peer influence on alcohol use among adolescents. This finding suggests peer influence plays a crucial role in alcohol initiation among youth. Prevention programs may include: 1) refusal skill training to assist in overcoming peer alcohol influence, and 2) exposure to peers who exemplify and reinforce healthy options to alcohol consumption (Sieving et al., 2000).

Although, evidence suggests alcohol use by peers is a factor positively related to initiation of alcohol use among adolescents, little research has been done examining the relationship of peer alcohol use and alcohol initiation among Native American youth.
One study on Native American youth found peers played a significant role in influencing alcohol initiation. Native American 6th through 8th graders identified peers and friends as being the most influential factors affecting their decision to use alcohol. Compared to school (28 percent) and community (17 percent) factors, 35 percent identified peers and friends as having the greatest impact on decisions to use alcohol. Evidence from this study suggest alcohol prevention and intervention programs for Native American youth should involve strategies that include peer resistance and build on the positive values exhibited by minority of peers. Communities should expand opportunities for peer teaching and peer modeling prevention programs (Ma et al., 1998).

In addition to the correlation between peer use of alcohol and alcohol initiation, one study on Native American youth found a correlation between peer identification with traditional Native American culture and alcohol use (May & Moran, 1995). Findings indicated Native American youth most likely to use alcohol had relationships with peers who did not identify with traditional Native American culture and used alcohol. Evidence from this study has implications for incorporating traditional culture into prevention efforts.

**Refusal Skills**

Over a decade of research has shown refusal skills are effective in preventing alcohol and drug use among youth (Botvin, 2000; Shope, Copeland, Maharg, Dielman & Butchart, 1993). Nevertheless, most research has ignored the potential differences across ethnic groups. Although prevalence of alcohol use among Native American youth is
high, little research has been done to examine strategies employed by this group in passing up offers to use alcohol or drugs.

Refusal skills or the tendency for an individual to refrain from any behavior have been associated with lower rates of alcohol use among adolescents. Poor refusal skills were associated with higher rates of alcohol use in a sample of 6th through 10th graders. Subjects underwent refusal skill assessment before and after attending alcohol prevention program sessions aimed at developing social skills to resist peer pressure. Post-program results showed students with better refusal skills in 7th and 8th grade were less likely to misuse alcohol compared to grades six, nine and ten. Results suggest it may be best to utilize refusal skill training at the end of junior high for two reasons. First, not only did the effects of refusal skill training peak among 7th and 8th grader (Wynn, Schulenberg, Kloska, & Laetz, 1997), but another study found a rapid increase in alcohol use among 7th and 8th graders (Scheier, Botvin, Griffin, & Diaz, 1999b). This study is limited because ethnic differences were not analyzed, and results cannot be generalized to Native American youth. Nevertheless the study identifies a gap in the literature by highlighting the fact more research is needed to understand variation in refusal skill effectiveness across different stages of adolescent development, and among Native American youth (Wynn et al., 1997).

Youth more prone to engage in risk taking behaviors tend to have lower refusal assertiveness than youth who refrain from risky behavior. A study of middle school and high school students found risky behavior and refusal skill assertiveness influenced alcohol initiation. Adolescents who were high risk takers reported more alcohol use and
less refusal assertiveness. Meanwhile, adolescents who were low risk takers reported less alcohol use and more refusal assertiveness. Since refusal skill assertiveness affects alcohol initiation among youth, prevention and intervention efforts should incorporate activities designed to increase the use of refusal skills. In doing so, the frequency of alcohol use, and quite possibly other risk taking behaviors may be reduced. Although samples of Native American youth must be incorporated into similar studies for conclusions to be drawn, similarities may exist between Native American youth and youth from other ethnicities (Epstein, Griffin, & Botvin, 2001).

One study on Native American youth found three culturally appropriate refusal strategies employed to avoid offers of drugs or alcohol. A sample of 19 Native American high school students participated in a qualitative study aimed at understanding drug resistance strategies employed by Native American youth. Data from focus groups and semi-structured interviews showed: 1) redirecting or changing the topic of discussion away from drugs or alcohol; 2) avoiding, or leaving the situation; and 3) refusing or saying “no” were the three most prevalent strategies used to avoid offers of alcohol or drugs. All three strategies are consistent with traditional Native American non-confrontational social norms, allowing them to continue relationships with peers or family. Since the study sample was small, and involved subjects who belonged to only one tribe, results cannot be generalized to all Native American youth. Nonetheless, this study is valuable because it provides information on strategies used to resist drugs and alcohol that are specific to Native American youth. Information from this study can be
incorporated into culturally based prevention and intervention programs (Okamoto, Hurdle, & Marsiglia, 2001).

Summary

According to the literature, social and cultural factors play important roles in the initiation of alcohol use among Native American youth. Whereas acculturation has proven to play a role as a risk factor, enculturation and strong ties to traditional Native American culture act as protective factors for alcohol initiation. Numerous studies on adolescents and available studies on Native American youth have shown parents and peers can either act as risk or protective factors for alcohol initiation based on their attitudes and behaviors. In addition, although few studies examining refusal skills among Native American youth have been done, research on other adolescent populations suggest refusal assertiveness is a protective factor against alcohol use. Results from the few studies done on Native American youth reflect results from similar studies done on youth from other ethnic backgrounds (Cummins et al., 1999; Griffin et al., 2003; Ma et al., 1998; Kosterman et al., 2000; Okamoto et al., 2001; Epstein et al., 2001). Cultural factors aside, this relationship suggests similarities among risk and protective factors for alcohol initiation among youth from different ethnic backgrounds may exist. It is equally important to recognize Native Americans are not a homogenous group; there are over 500 nationally recognized tribes in the United States (United States Census Bureau, 2000). Just as more research is needed on various aspects of alcohol use among Native American youth, it is equally important to understand intertribal differences and similarities.
Approaches toward alcohol prevention have been developed over the years, however many are generic and not designed to meet the needs of different ethnic groups. More research on the influence of parents and peers on alcohol initiation among Native American youth, as well as resistance strategies employed by this population are needed. Once culturally specific factors and strategies are understood and tested, they can be included into culturally based programs intervention and prevention programs.
CHAPTER FIVE

Recommendations

Prevention

Utilizing Problem-Behavior Theory as an approach to understanding alcohol use among Native American youth suggests environmental, behavioral and social risk factors contribute to initiation of alcohol use among youth. With this in mind, one can contend that the more risk factors possessed by an adolescent, the higher the chances are of engaging in risky behavior such as alcohol use. Conversely, an adolescent who possesses more protective factors than risk factors will be less likely to engage in risky behaviors. Theoretically, intervention and prevention efforts aimed at reducing risk factors and increasing protective factors should be successful in decreasing rates of alcohol use and co-occurring problem behaviors among Native American youth. Although more research focusing on alcohol initiation among Native American youth is imperative, issues are further complicated by the fact that Native Americans are a heterogeneous group made up of hundreds of different tribes across the United States. As a result, they cannot be treated as a homogenous group. Intertribal differences must be considered in research efforts and the development of prevention and intervention strategies.

Understanding and identifying potential factors related to the initiation of alcohol use among Native American youth will permit the design of effective prevention and intervention programs. Prevention efforts appear to be efficacious to the general adolescent population. In 2002, youth who had seen or heard drug prevention messages outside of school had a lower rate of drug use (11.3 percent) relative to those who had not
seen or heard (13.2 percent) drug prevention messages. Similarly, youth exposed to drug
prevention messages at school had lower incidence of drug use than students who were
not exposed to drug prevention messages (SAMHSA, 2003b).

In order to be successful with this population, prevention interventions should
address acculturation issues. It is important to help Native American youth achieve
bicultural competence, or comfort within traditional and mainstream cultures.
Acculturation theorists suggest minority youth do not develop skills needed to securely
interact within both mainstream and traditional cultures. Stress among minority youth
develops as a result of not having specific skills. Consequently, alcohol as a means of
coping is implemented to deal with interpersonal and environmental stressors. Therefore,
an important objective of prevention intervention programs should be to help Native
American youth develop skills in bicultural competence (Beauvais, 1998; Moncher et al.,
1990).

Practitioners who are aware of the risk factors associated with alcohol use among
Native American youth are more likely to identify indications of alcohol abuse and make
referrals to mental health professionals such as Psychiatric Mental Health Nurse
Practitioners (PMHNP) for evaluation and management. Since adolescents are less likely
to manifest social and physical signs of alcohol problems such as losing a job or organ
damage, it is important for practitioners to screen for alcohol problems. Asking
adolescents direct questions such as if they use alcohol, how much they use, and how
frequently they use can help practitioners identify individuals who may need further
intervention. Since there is a tendency to either not report or underreport alcohol use,
indirect inquires about parents, peers, family life and participation in other risk taking behaviors may be useful in screening Native American youth who may be at risk for alcohol use. If possible, a separate interview with parents may be useful in gathering useful information. Aside from treating symptoms that lead alcohol use, it may be necessary for the PMHNP to refer these individuals to community 12-step programs so alcohol use can be restrained. An awareness of the social and cultural context of alcohol use as well as a nonjudgmental, trusting relationship based on listening, rapport, and flexibility should optimize therapeutic encounters with Native American youth (May & Moran, 1995).

Research

Native American youth have the highest rates of alcohol use and alcohol-related mortality of all youth in the United States. Not only is alcohol associated with other problem behaviors, but it jeopardizes the health, development and future wellness of this population. The literature suggests participation in problem behaviors, orientation toward traditional culture, parental concern, family connectedness, peers and refusal skills are factors that can predict alcohol use among Native American youth. Despite these findings further research is needed to understand factors that not only contribute to alcohol initiation but to alcohol rejection as well.

Research efforts must focus on cultural risk and protective factors. Although, greater orientation toward traditional culture appears to be a protective factor for alcohol use this factor is not clearly defined. Specific forms of traditional participation and orientation must be explored so they may be incorporated into prevention and
intervention efforts. Similarly, since Native Americans are not a homogenous group, intertribal variations must be further explored.

Little research on factors that lead Native American youth to refrain from alcohol is available. Nurses can contribute to research efforts aimed at understanding groups of Native American youth who do well in school, abstain from alcohol and successfully transition into adulthood. Research on real-world strategies employed by Native American youth to refrain from alcohol use would provide valuable information that could be applied to intervention and prevention efforts aimed at decreasing alcohol use. A better understanding of factors that influence alcohol rejection will serve as a basis for the development of prevention and intervention programs. Early intervention and prevention strategies will serve to minimize negative health consequences associated with premature alcohol use such as alcohol-related injuries, alcohol-related mortality, as well as physical and mental health problems.
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