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**Adolescents' purpose in life and engagement in risky behaviors:
Differences by gender and ethnicity**

Sayles, Martha L., Ph.D.

The University of North Carolina at Greensboro, 1994

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ADOLESCENTS' PURPOSE IN LIFE AND ENGAGEMENT
IN RISKY BEHAVIORS : DIFFERENCES BY
GENDER AND ETHNICITY

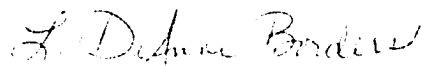
by

Martha L. Sayles

A Dissertation Submitted to
the Faculty of the Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

Greensboro
1994

Approved by



Dissertation Advisor

SAYLES, MARTHA, L., Ph.D. Adolescents' Purpose in Life and Engagement in Risky Behaviors: Differences by Gender and Ethnicity. (1994). Directed by Dr. L. DiAnne Borders. 132 pp.

This study investigated how the relationship between adolescent purpose in life and risky behavior changed under varying conditions of gender, levels of adolescent egocentrism, and ethnicity (African-American, Anglo-American, Hispanic-American). High school students ($n=582$) in an ethnically diverse school system in the Southwestern United States participated in the study. Independent variables included purpose in life (measured by the Purpose in Life Test), gender, adolescent egocentrism (measured by the Adolescent Egocentrism Scale), and ethnicity; the dependent variable was risky behaviors (measured by the Youth Risk Behavior Survey).

A Pearson Product Moment Correlation indicated that students who scored low in purpose or meaning in life reported significantly greater participation in risky behaviors (drinking, smoking tobacco & marijuana, drinking & driving, and hard drug use). This relationship held true across gender and across the three ethnic groups represented in the sample. One-way analysis of variance results indicated that males reported significantly greater participation in risky behavior than females. The Adolescent Egocentrism Scale was used to examine the effect of egocentrism on risky behaviors. One-way analysis of variance results indicated that, contrary to expectation, students low in egocentrism reported higher levels of risky behavior participation. Regarding ethnic differences on the various measures, African-American youth reported significantly higher levels of purpose in life than Hispanic-American or Anglo-Americans; Anglo-American adolescents reported engaging in more risky behaviors than their minority classmates. The interaction of purpose in life, ethnicity, and risky

behaviors resulted in one purely moderating effect, with the relationship weakening significantly for African-American versus Anglo-Americans.

These results suggested that the Purpose in Life Test could be used as a tool to help identify those students likely to engage in risky behaviors. Appropriate counseling intervention strategies could be implemented to help these students form both short and long term goals aimed at increasing their purpose in life, and thus reduce the number of students lost to drunk driving and alcohol/drug abuse.

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APPROVAL PAGE

This dissertation has been approved by the following committee of the Faculty of the Graduate School at The University of North Carolina at Greensboro.

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March 21, 1999
Date of Final Oral Examination

ACKNOWLEDGEMENTS

Many individuals have provided encouragement, support, and guidance throughout the process of conducting this study, writing the dissertation, and completing the doctoral program. My dissertation committee has earned my respect and appreciation: Dr. DiAnne Borders, for meeting me where I was and going with me to where I needed to be; Dr. Kay Pasley, for teaching me more about models and modeling than she realizes; Dr. James Benshoff, for providing support and filling the void left by Dr. Jack Bardon's death; and Dr. Lloyd Bond, for his enthusiasm for the statistical process and the results.

Several other individuals shared this effort with me and to them I owe my collegial respect and friendship: the Cohort of 1991 whose encouragement and words of support will be with me always, particularly Craig who walked the path with me, Al, Dan, Darryl, Kim, Patty, and Sylvia; the school district personnel in Texas that allowed me to survey their students and ask the questions when they weren't sure they wanted the answers; Francie who helped carried the load at the Personal and Family Counseling Center; and my friends in Texas who opened their homes to me while I collected my data, Cheri, Greg, Rhonda, Nancy, and Martin.

My family supplied me with on-going confidence, both in words and in spirit: in memory of my mother, JoAnne, and grandmother, Madeleine, who taught me about facing obstacles and believing in my God given gifts and talents; my father, David Sr., who all my life has allowed me the freedom to be me; my brothers, Jonathon and David Jr., who supported and encouraged me now, as always; and finally Mary Lou, who went first, setting the standard, and whose faith in me was a constant source of support, understanding, patience, friendship, and confidence.

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CHAPTER I

INTRODUCTION

Adolescents, as a group, have a higher incidence of drug use (Arnett, 1992; Shaw, Wagner, Arnett, & Adler, 1992), sexually transmitted diseases (Metzler, Noell, & Biglan, 1992), and driving accidents than any other age group (Arnett, 1992; Windle, Miller-Tutzaurer, & Domenico, 1992). Such at risk behaviors are characteristic of both students who are academic underachievers and those who are academic achievers (Morris, 1992). A recent Who's Who survey of nearly 2,000 students with a "B" or better average offered a disturbing look behind adolescents' risky health behaviors. Among the findings was that these young people had a

startling lack of responsibility about their physical welfare. AIDS doesn't scare them. Pregnancy does but not enough to make them take precautions consistently. And drinking is a way of life, even behind the wheel. Krouse, the publisher, said there is a sense of invulnerability during the teen years, the belief, that it can't happen to me." (Greensboro News and Record, October 19, 1993, p. 2)

Clearly, these findings should alarm all professionals and individuals who have a vested interest in the health, safety, and lives of our youth.

Risky Behaviors

The term "risky behavior" has many connotations, including the likelihood to drop out of school, to be several grade levels behind one's peers in school, and health risks which reduce one's life expectancy. It was the latter definition that is the focus of this study; these health risks include tobacco use, use of alcohol, and chemical use.

Similar alarming figures are available for other risky behaviors. Dryfoos (1990) drew on information provided by the National Survey of High School Seniors to examine the prevalence of chemical, tobacco, and alcohol use in American schools. She reported that, within the adolescent group, there are almost one million regular cigarette smokers, more than two million heavy drinkers, half a million marijuana users, and another half a million students using hard drugs on a regular basis. There is, according to Irwin and Millstein (1986), a well established relationship between car accidents and alcohol use. They cited Center for Disease Control statistics which indicate that 42% of fatal car accidents for the age group 16-24 are attributable to alcohol. In other words, car accidents are the leading cause of death for this age group with or without alcohol compounding the problem (Arnett, 1992).

Adolescents' risky behaviors are not limited to actions that affect the individual alone. The impact of teenagers' drinking and driving accidents extends well beyond the world of the individual teenager. Parents and siblings are touched by the decisions made by teens. In addition, society is impacted by health care costs and the loss of abilities and skills that these future adult citizens never acquired. Taken in its totality, this information points to the heavy cost and consequences of risky behaviors of adolescents today.

Two factors known to affect adolescents' decision to engage in risky behaviors are gender and ethnicity. There is evidence that adolescent males are more likely to be involved in drinking and driving (Farrow, 1987), males drink more than females (Sokol-Katz, & Ulbrich, 1992), Hispanics have higher multiple drug use than other minorities (Schinke, Moncher, Palleja, Zayas, & Schilling, 1988), and substance abuse is a major health problem for African-Americans (Adlaf, Smart, & Tan, 1989; Thompson & Simmons-Cooper, 1988). Since Hispanics are the fastest growing minority in the United States (Schinke et al., 1988) and girls are catching up with boys in both alcohol and drug

use (Gilbert & Alcocer, 1988), health care professionals and counselors need to know the predictors of risky behaviors before the incidence worsens.

There also is reason to believe that other, more intrapersonal characteristics may affect adolescents' decisions to engage in risky behaviors. Two such characteristics are purpose in life and adolescent egocentrism. A sense of meaning and purpose in life emphasizes a striving for goals and personal meaning to counteract feelings of existential neurosis and alienation (Frankl, 1955). Having meaning in life implies that (a) one is committed to some goal, (b) meeting this goal is of importance, and (c) once having fulfilled this goal, a sense of satisfaction is achieved (Battista & Almond, 1973).

Frankl (cited in Soderstrom & Wright, 1975) offered evidence that youth around the world are being engulfed by an existential vacuum which results in feelings of emptiness, boredom, valuelessness, and meaninglessness. Adults and college students who lack meaning or purpose in life have been shown to have higher incidence of alcoholism (Crumbaugh & Henrion, 1988; Harlow & Newcomb, 1990; Schlesinger, Susman, & Koenisberg, 1990), drug abuse (Harlow, Newcomb, & Bentler, 1986; Nurmi, 1991; Padelford, 1974; Shean & Fechtmann, 1971), suicidal ideation (Baum & Stewart, 1990; Harlow, Newcomb, & Bentler, 1986; Harlow & Newcomb, 1990), and risk-taking behaviors (Walters, Walters, & McKenry, 1986).

There are few investigations, however, of adolescents' meaning in life (Shek, 1992). Only four studies were found in which the purpose in life of teenagers was investigated; only two of these related purpose in life to risky behaviors. Padelford (1974) linked adolescent marijuana use to low purpose in life, and Walters and Klein (1980) reported a relationship between risky behavior and adolescent purpose in life. In the other two studies of adolescents' purpose in life, DeVogler and Ebersole (1983) found that teenagers were able to identify, conceptualize, and prioritize purpose and meaning in their lives, and Shek (1992) found a relationship between purpose in life and psychological well-

being in Chinese students. Of the four studies, only two studies included responses from ethnic adolescent populations: a Chinese population in Hong Kong (Shek, 1992) and Mexican-American teens in the United States (Padelford, 1974). These studies suggest that purpose in life may have a strong relationship with risky behaviors, similar to the association found in a number of studies with adults. Additional studies are needed, however, particularly those in which gender and ethnic differences are explored. Such studies have important implications for designing intervention strategies that may reduce the harmful and destructive consequences of adolescents' risky behaviors.

A second intrapersonal characteristic that may affect the decision to engage in risky behaviors is adolescent egocentrism. According to Elkind (1978), adolescent egocentrism is composed of an imaginary audience, the misperception that everyone is looking at the adolescent, and a personal fable, a misperception that the teenager is so unique that he or she is invincible to the dangers that harm others. Elkind (1978) postulated that adolescent egocentrism (conceptualizing oneself as invulnerable and immune to the consequences of risky behaviors) may result in tragic outcomes such as automobile accidents, and drug experimentation. Elkind's work is often cited as a reason why teens are more likely to engage in risky behaviors than other age groups. Several researchers have verified the effects of adolescent egocentrism on risky behaviors, including automobile accidents (Elkind, 1978), drug experimentation (Dolcini, Cohn, Adler, Millstein, Irwin, Kegeles, & Stone, 1989; Elkind, 1978), and smoking (Urberg, 1982). If egocentrism is a phenomenon specific to adolescence, identifying the circumstances under which it affects risky behaviors could prove to be significant.

Purpose of the Study

Given the high and increasing incidence of adolescents' risky behaviors and the resulting harmful consequences of these behaviors for their families and society, the present study was designed. The purpose of this study was to investigate how meaning or purpose in life predicts the decisions of African-American, Anglo-American, and Hispanic-American adolescent populations to participate in risky behaviors. The study also determined how certain factors (e.g., adolescent egocentrism, ethnicity, and gender) moderated the relationship between purpose in life and risky behavior. This study was one of a select few that examines the existential theorem of meaning in life in adolescents or includes any ethnic minority. The inclusion of a major Hispanic population as a significant segment of the sample was particularly unique.

Need for the Study

The information gained from this study will assist school and community agency counselors as they struggle with the task of keeping adolescent students alive. In particular, efforts need to be made to learn about the Hispanic adolescent and the struggles specific for this ethnic group, since they are the most rapidly growing minority in the United States (Delgado, 1988; Schinke et al., 1988). Intervention strategies aimed at helping teenagers construct life goals and then pursue these goals have the potential to elicit a personal sense of well-being (Zika & Chamberlain, 1992) and thus lower engagement in risky behaviors. Gender differences in meaning in life may have the potential to help both boys and girls develop appropriate life goals. The ability to formulate life plans and set about accomplishing them has the potential to change lives, according to Yalom (1980). As Walters and Klein (1980) stated,

Although few studies have addressed directly the issue of a lack of a sense of purpose in life among adolescents, it has been speculated that this psychological characteristic could provide part of the explanation for many adolescent behaviors - notably school achievement and preparation for college or the lack of it. (p. 1065)

School and community agency counselors face other concerns that include keeping adolescents off drugs, preventing tobacco use, and drinking and driving. If adolescents who are low in purpose in life react and take risks the same as college students and adults who have been studied, then school counselors may be able to implement intervention and prevention strategies to influence the hazardous outcomes.

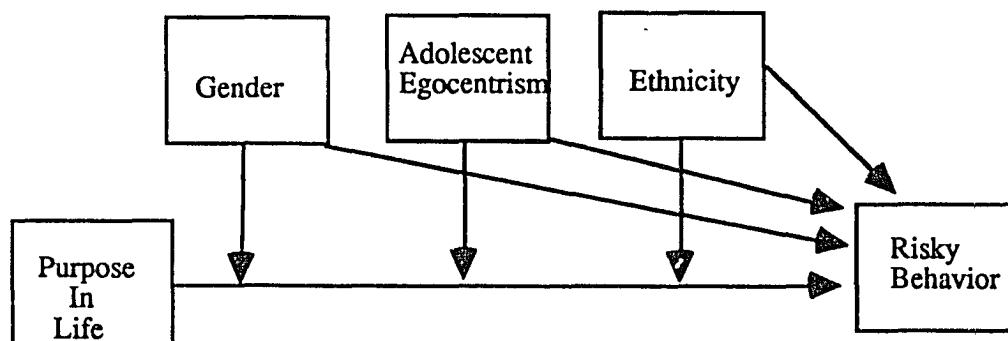
Statement of the Problem

This study was an investigation of how the intrapersonal variable of purpose in life predicts the decisions of African-American, Anglo-American, and Hispanic-American adolescents in an urban Southwestern United States city to engage in risky behaviors. Further, the study identified how certain individual characteristics (i.e., high versus low levels of egocentrism, male versus female, Anglo American versus African American versus Hispanic-American) affect the primary relationship of interest.

Conceptual Model

Figure 1

Conceptual Model of Purpose in Life and Risky Behaviors



The conceptual model (see Figure 1) that was the foundation of this study was based in an overall existential theory and the empirical work supporting the theory. The primary intrapersonal independent variable was purpose in life, and it was hypothesized to be negatively related to the dependent variable, risky behavior. That is, as purpose in life increased, risky behavior would decrease. In addition, the main effects of adolescent egocentrism and ethnicity on adolescents' risky behaviors were studied along with the interaction effect between gender and purpose in life and risky behaviors.

Research Questions

Research questions for this study were the following:

1. What is the relationship between purpose in life, as measured by Crumbaugh and Maholick's (1981) Purpose in Life Test, and the risky behaviors of adolescents, as measured by the Youth Risk Behavior Survey (CDC, 1989)?
2. What is the effect of adolescent egocentrism, as measured by the Adolescent Egocentrism Scale (Enright, Lapsley & Shukla, 1979), on risky behaviors, as measured by the Youth Risk Behavior Survey (CDC, 1989)?
3. What is the effect of ethnicity of adolescents on risky behaviors, as measured by the Youth Risk Behavior Survey (CDC, 1989)?
4. What is the effect of gender on risky behaviors, as measured by the Youth Risk Behavior Survey (CDC, 1989)?
5. How does adolescent gender, egocentrism, and ethnicity, affect the relationship between purpose in life as measured by Crumbaugh and Maholick's (1981) Purpose in Life Test, and risky behaviors, as measured by the Youth Risk Behavior Survey (CDC, 1989)?

Definition of Terms

For the purposes of this study the following definitions were used:

Adolescents - young people ranging in age from 14-19, those typically enrolled in public high schools.

Adolescent egocentrism - a combination of personal fable and the imaginary audience that results in the adolescent viewing himself/herself as invulnerable and immune to the consequences of risky behaviors and as being the center of others' attention (Elkind, 1967). For the purpose of this study, adolescent egocentrism was measured by the Adolescent Egocentrism Scale (Enright et al., 1979).

African-American - any student who self-identified the choice of African-American on the demographic form.

Anglo-American - any student who self-identified the choice of Anglo-American on the demographic form.

Hispanic-American - any student who self-identified the choice of Hispanic-American on the demographic form, indicating heritage of Hispanic-American decent (e.g., Mexicans, Colombians, Cubans, Hondurans, El Salvadorans, or persons from other South or Central American countries).

Purpose in Life - the degree to which an individual experiences a sense of meaning in life and a striving for goals. For the purposes of this study, purpose in life was measured by the Purpose in Life Test (Crumbaugh & Maholick, 1981).

Risk-Taking Behaviors - behaviors that are dangerous and hazardous to one's health, including alcohol and chemical abuse, drinking and driving, tobacco use, and unsafe sexual practices. For the purposes of this study, risky behaviors was measured by the Youth Risk Behavior Survey (Center for Disease Control, 1989).

Organization of the Study

This study is presented in five chapters. Chapter I is a brief overview of the conceptual literature and empirical research findings on purpose in life and the engagement in risky behaviors when adolescent egocentrism, ethnicity, and gender are addressed. The purpose of the study, need for the study, conceptual model, research questions, definition of terms, and organization of the study are described.

Chapter II, a complete review of related literature, is composed of five sections. In the first section the theoretical foundations of existential theory and its application to adolescents are identified. There is an introduction of the consequences and categories of purpose and meaning in life in section two. The common risky behaviors and how the incidence of these behaviors differs for ethnic groups and genders are identified in section three. The concept of adolescent egocentrism and how it contributes to teenagers' decisions to engage in risky behaviors are examined in section four. In the last section a critique of the relevant research is provided.

Chapter III describes the methodology used in the study. It includes hypotheses, instruments, participants, procedures, and data analysis.

Chapter IV describes the results of the data analysis. Discussion of the analysis and results parallel the research questions and hypotheses.

Chapter V includes a summary of the study, discussion of the conclusions, and implications for school counselors, community agency counselors, and private practitioners. An examination of the limitations of the study and recommendations for further research also are included.

CHAPTER II

REVIEW OF RELATED LITERATURE

The literature relevant to this study can be divided into four sections: (a) the existential philosophical foundation, (b) empirical studies of how purpose in life affects the decision by adolescents and adults to engage in risky behaviors, (c) a description of the major risky behaviors teens engage in that have a detrimental effect on their health, and (d) how adolescent egocentrism may relate to both purpose in life and risky behavior. The chapter concludes with a critique of the major research.

Existential Philosophy

Existentialism has its origins in the works of Kierkegaard, Nietzsche, Heidegger, and Satre and has been molded by Frankl and May (Corey, 1986). Existentialism is concerned with the nature of humanity and the meaning of this existence to the individual. Yalom (1980) defined existential psychotherapy as a "dynamic approach to therapy which focuses on concerns that are rooted in the individual's existence" (p. 5). This theory is rooted in four ultimate concerns: death, freedom, isolation, and meaninglessness. Death is the one certainty of life, and the fear of ceasing to exist is believed to be responsible for much anxiety in today's society. Freedom, the second concern, is connected to responsibility. Yalom (1980) stated that it is because human beings are free they must accept responsibility for the choices they make in life and the directions in which they choose to go. The third concern of isolation, or aloneness, is part of the human condition and compels humans to confirm their own existence and to create the meaning that guides their lives. The final core of the existential philosophy, and the

foundation on which this paper is based, is the idea of meaning or its counterpart, meaninglessness. Yalom (1980) cited this distinctly human characteristic as the struggle for significance and purpose in life.

The existential vacuum and its by-product, noogenic neurosis, result from the sense of meaninglessness in the lives of people today (Frankl, 1955). The symptoms of this condition are boredom, depression, and frustration, and these symptoms are common to adults and teenagers alike. Frankl (1963) maintained that this existential vacuum leads to a state of tension between what one has already achieved and what one still wants to accomplish. Logotherapy and the principles behind Frankl's (1955) view of "man's search for meaning" are the basis for Crumbaugh and Maholick's Purpose in Life Test (1981). The aims of this theoretical approach are to help people find a purpose to their existence and to help them actualize that potential.

Purpose in Life

Purpose in life is viewed as a multidimensional concept that refers to an individual's attempts to relate to one's existence. This sense of meaning includes one's world view which dictates goals, priorities, beliefs, actions, and perceptions (Orbach, Iluz, & Rosenheim, 1987). In this section, factors contributing to a purpose in life are explored as well as the effects of a lack of purpose in life on the individual, how purpose in life benefits adolescents, and categories of purpose in life for adolescents and adults. Finally, reported ethnic differences in purpose in life are summarized.

Factors that Contribute to Purpose in Life

The constructs related to purpose in life, as postulated by Frankl (1955) and Yalom (1980), include death, freedom, isolation, and meaning. These factors motivate humankind to act in ways that derive significance from the inevitability of death, the need for freedom in one's life, the fear of isolation, and a quest for meaning of one's existence. Researchers have identified other beliefs significant to possessing a greater meaning and

purpose in life. These include internal locus of control (Yarnell, 1971), mature religious commitment (Soderstrom & Wright, 1975), sense of direction in life associated with one's world view, and perception of excitement with life (Molcar & Stuempfig, 1987). Other authors have found that persons with high purpose in life are more adjusted, actualized, happy, and/or mentally stable (Ebersole & Kobayakawa, 1989); in other words, they demonstrate better personal adjustment (Molcar & Steumpfig, 1987). Personal maturity, integration, and well-being (Orbach et al., 1987), a sense of control over life, few inner conflicts, a high level of self-esteem, and a satisfactory relationship with the environment (Battista & Almond, 1973) are other benefits of having a sense of meaning and purpose in life.

The greatest amount of research related to purpose in life surrounds the idea that acceptance of death is vital to experiencing a meaningful life (Orbach et al., 1987). Orbach et al. (1987) stated, "Almost all existential theories proclaim that a meaningful life is dependent upon one's acceptance of death" (p. 228). Durlak (1972) found that subjects who reported a high purpose and meaning in their lives tended to fear death less and had a more positive and accepting attitude toward it. Subjects who reported less purpose and meaning in life showed a higher fear of death and evaluated their purpose in life negatively. Kuiken and Madison's (1987-88) findings concurred with Durlak's, in that persons who reflect deeply on their mortality are expected to adopt more meaningful goals and commitments to those goals. The researchers found that death anxiety and avoidance of death contemplation are correlated with a lack of meaning in life. Bolt (1978) found that higher perceived purpose in life was associated with less fear of death. However, it is difficult to know the direction of effects. Denne and Thompson (1991) summarized this quandary by saying, "Acceptance of death may increase purpose in life, or strong meaning and purpose may allow acceptance of death" (p. 112). Important to

this study is that the research validates the existential theorem that acceptance of death is an integral part of one's having meaning and purpose in life.

Consequences of Low Purpose in Life

As noted above, there have been numerous studies identifying the consequences of low purpose in life for adults. Few studies, however, have focused on the consequences of low purpose in life for adolescents (DeVogler & Ebersole, 1980). For adults, lack of meaning has been found to be associated with psychopathology (Yalom, 1980) and found it related to depression and suicide (Baum and Stewart, 1990). Other aberrant behaviors associated with low purpose for adults include drug involvement (Coleman, Kaplan, & Downing, 1986; Nurmi, 1991; Padelford, 1974; Ruffin, 1984), alcoholism (Harlow et al., 1986; Jacobson, Ritter, & Muller, 1977; Schlesinger et al., 1990), marijuana use (Shean & Fechtmann, 1971), and engaging in risky behaviors (Walters & Klein, 1980). Harlow, Newcomb, and Bentler (1986) viewed purpose in life and meaningfulness as one end of an emotional continuum, with hopelessness and meaninglessness at the other end. As such, anxiety surrounding a sense of meaninglessness is not considered an abnormal condition (Ruffin, 1984). It appears, however, that people often respond to this sense of anxiety in pathological ways, and two of the pathological ways of responding are of interest to the present study: alcohol and drug abuse.

Drug involvement. In much of the research investigating low purpose in life and drug involvement, Crumbaugh and Maholick's Purpose in Life Test (1981) has been used as the tool to measure the independent variable. Coleman, Kaplan, and Downing (1986) found that young adult drug addicts are less likely to have a well-defined meaning in life than non-addicts. In a study of college students, Harlow et al. (1986) found lower purpose in life was related to higher drug experimentation, particularly for females, whereas male were more likely to consider suicide when suffering from low purpose in life. These researchers postulated that purpose in life may be a more important buffer for

males when they are considering suicide and for women when they are contemplating substance abuse. They concluded, "A lack of purpose in one's life, with the accompanying sense of boredom and futility, could be an integral mediating link between self-derogation and substance use, especially in a young population" (p. 18).

Alcoholism. A study of purpose in life for an adult alcoholic population was carried out by Jacobson, Ritter, and Mueller (1977). The PIL was administered to a volunteer sample within the first week of admittance to and in the fourth week of a rehabilitation program. The first administration resulted in PIL scores in the "indecisive" range; follow-up results were significantly higher for males, with females showing only a marginal increase in scores. The authors concluded that one effect of the comprehensive rehabilitation process was an increase in purpose or meaning in life, although they also indicated that their results should be regarded as tentative. A second study (Schlesinger et al., 1990) used female adult alcoholics and controlled for age, race, marital status, and employment status. Findings included a significant difference between the mean PIL score of alcoholic females ($M = 85.5$) and non alcoholic females ($M = 112.0$), again suggesting low purpose in life is associated with alcoholism. These findings concurred with Frankl's premise (1963) that an underlying condition of alcoholism is the existential vacuum.

Purpose in Life for Adolescents

Adolescence is a period when forming a sense of identity and answering the developmental questions of who am I, why am I here, and where am I going are critical tasks to be faced (Erickson, 1963). Studies of purpose in life for younger adolescents seem to be critical, considering Frankl's (1955) postulate that youth all over the world are being engulfed by the existential vacuum. Soderstrom and Wright (1975) and Shek (1992) characterized this existential vacuum in adolescents as being manifested in feelings of emptiness, boredom, valuelessness, and meaninglessness. Of the few studies

using older adolescent respondents, purpose in life has been shown to affect decisions college students make regarding substance abuse (Harlow, Newcomb, & Bentler, 1986), unprotected sexual activity with its subsequent risk of AIDS (Harlow & Newcomb, 1990), depression (Phillips, 1980), and marijuana use (Shean & Fechtmann, 1971). In an adolescent high school population, purpose in life has been found to affect pregnancy (Walters & Klein, 1980), drug use (Padelford, 1974), psychological well-being (Shek, 1992), and career choice (Nurmi, 1991).

Walters and Klein (1980) reported "some research evidence has been found among adolescents for the relationship between perception of purpose in life and risk taking behaviors as well as between perception of purpose in life and adolescent pregnancy" (p. 1065). These authors also stated that an instrument like the PIL could be used to systematically examine the relationship between adolescents' general attitude toward life and their performance in academic settings and different types of risky behaviors. They believed high school counselors should consider use of the PIL when working with diverse adolescent groups, particularly those youth who are having or are likely to have school-related problems or social-emotional problems that may affect school performance.

Both Walters and Klein (1980) and DeVogler and Ebersole (1983) argued that few studies have examined how purpose in life affects adolescents' decision making processes. "Although few studies have addressed directly the issue of a sense of purpose in life among adolescents, it has been speculated that this psychological characteristic could provide part of the explanation for many adolescent behaviors" (Walters & Klein, 1980, p. 1065). Shek (1992) reported that as of 1992, no study of the relationship between meaning in life and psychological well-being in adolescent samples had been conducted, and he also advocated for use of adolescent samples.

Benefits of Purpose in Life for Adolescents and Young Adults

Some studies have supported the above contentions that when teenagers and college students have a future focus and a purpose in life they have been found to do better academically (Morris, 1992; Walters & Klein, 1980), are less disruptive in school (Morris, 1992), have a positive self-concept (Morris, 1992), and have clear life goals (Zika & Chamberlain, 1992). Yarnell reported (1971) that college students who belonged to a number of campus organizations scored higher on the PIL than those who belonged to no groups or only one organization. These results require replication and further studies so more can be learned about how purpose in life helps teenagers as they mature to adulthood and how the lack of purpose complicates their lives and endangers their existence (DeVogler-Ebersole & Ebersole, 1985). In her study of high school students investigating drug use and purpose in life, Padelford (1974) found purpose in life higher for students with a strong father image, higher for females than males, and higher for Anglo-Americans than Mexican-Americans.

Categories of Purpose in Life

DeVogler and Ebersole (1980, 1981, 1983) attempted to obtain information beyond degree of meaning and purpose, as determined by the PIL, by adding an essay component to their measure. In an effort to categorize the types of meaning in life, college students were asked to describe and rank their three most important meanings in life and give a concrete example of each. DeVogler and Ebersole's (1980) original study with 106 college undergraduate volunteers resulted in eight categories of purpose: (a) understanding (gaining more knowledge), (b) relationships (interpersonal orientation toward family, friends, and romantic interests), (c) service (helping, giving orientation), (d) belief (living according to one's beliefs), (e) expression (concrete expression of self through art, music, or athletics), (f) obtaining (obtaining possessions, respect, or responsibility), (g) growth (striving toward developing potential and obtaining goals), and

(h) existential hedonistic (general expressions that pleasure and daily life are most meaningful). Of these categories, students identified relationships as the most important meaning in life (36%), with service, beliefs, and growth ranking second (14%), third (13%), and fourth (13%). When DeVogler and Ebersole (1983) repeated this procedure with eighth grade students, three new categories were identified. The new categories were activities, appearance, and school. These results suggested that adolescents are able to identify sources of meaning in their lives. In another study, Denne and Thompson (1991) concluded that interpersonal relationships were the most consistent spontaneously identified source of meaning for 19 college age subjects. Regardless of the ethnic representation of an adult population, the importance of relationships as a source of meaning in life was verified by Jennerson-Madden, Ebersole, and Romero's (1992) study of Mexican-Americans.

Purpose in Life and Ethnicity

As Jenerson-Madden et al. (1992) reported, "there has been an almost exclusive focus of research on Caucasians" (p. 152) in this area. In a recent study investigating purpose in life in adult Anglo-Americans and Mexican-Americans, no significant differences were found between the two ethnic groups in degree of meaning in their lives (Jenerson-Madden et al., 1992). The authors did find, however, that the Mexican-American subjects reported relationships to be most important, especially relationships with their children, in contrast to Anglo-Americans. White subjects did report relationships as important but one third fewer chose this category as most meaningful compared to the Mexican-Americans. It was interesting to note that Mexican-Americans viewed the family focus as being oriented toward aiding their children getting an education whereas, for the Anglo-Americans, education seemed to be regarded as taken for granted and was not so strongly seen as a means for changing their lives. This is one of only two studies found using a significant Mexican-American population and

measurement of purpose in life (Jennerson-Madden et al., 1992; Padelford, 1974). The subjects in Jennerson-Madden et al.'s (1992) were limited to adults with a mean age of 37 years for the Mexican-Americans and 39 years for the Anglo-Americans.

In an earlier study (Padelford, 1974) of drug involvement and purpose in life among high school students, two-thirds of the subjects were Anglo-American and one-third were Mexican-American. The major hypothesis of a negative relationship between purpose in life and drug involvement was confirmed. When the author investigated subgroup comparisons, the findings were valid for males and Anglo-Americans, but not for females or Mexican-Americans. In the secondary hypotheses regarding drug involvement examined and identified by Padelford, (a) drug involvement was greater for students with low purpose than for those with high purpose in life; (b) it was greater for males than females; and (c) it was greater for minorities other than Mexican-American than it was for Anglo-Americans.

Shek (1991) administered a Chinese version of the PIL (C-PIL) and several other instruments to over 2,000 secondary school students, ages 11-20, in Hong Kong. The purpose of the study was to investigate whether purpose in life could accurately predict psychological well-being. Shek conceptualized an affective aspect of purpose in life (quality of existence) and a cognitive aspect (purpose of existence). From these two constructs, Shek then proposed four levels of existential status: (a) high quality and high purpose, (b) high quality and low purpose, (c) low quality and high purpose, and (d) low quality and low purpose of existence. Along with the administration of the C-PIL, students were given a health questionnaire, a state-trait anxiety inventory, the Beck Depression Inventory, the Chinese Somatic Scale, a self-assessment of general anxiety, an ego strength scale, and a self-image differential scale. Shek (1991) reported that C-PIL total scores and the two subscales correlated "with all the measures of psychological well-being" (p. 195).

Summary

It appears that one of the functions of purpose in life for adults and teenagers is to provide a sense of future focus and goal orientation. This focus of moving toward a goal and feeling a sense of relationship to others may prevent unhealthy choices by teens and adults. The long range consequences of helping adolescents find their intrapersonal meaning in life and then helping them move toward that goal would appear to potentially reduce the risky behaviors of our nation's teenagers. It will be crucial to determine how meaning differs by gender and ethnicity as opportunities enlarge for all youth. The ramifications of Jennerson-Madden et al.'s (1992) findings that Mexican-Americans and Anglo-Americans choose relationships as their primary source of meaning illustrates the importance of feeling connected to people in a meaningful way to reduce the existential vacuum Frankl describes (1955). The apparent need of a purpose in life for achievement and direction, the vital link to others, and an acceptance of the brevity of existence warrant further research into existential theory and adolescents.

Studies to date, utilizing mostly college age and adult samples, point to the negative health consequences of low meaning or purpose in life. Adult women and men tend to abuse alcohol and other drugs, commit suicide, and engage in risky behaviors as they grapple with the existential vacuum Frankl reported (1955). The fear of death, the struggle with isolation, and the void of not being directed toward a goal or having important relationships, seem to result in noogenic neurosis, that appears to be eased by withdrawing from reality through chemical or substance abuse. The connection of these behaviors to adolescence remains to be determined. Furthermore, little is known about the generalizability of these findings to other groups beyond the middle class, Anglo-American populations primarily studied to date.

Risky Behaviors

Adolescence has long been looked at as a time of high risk, dangerous choices, and living in the fast lane. Dangerous behaviors that offer few positive outcomes, such as drug use and reckless driving, have become normative features of our contemporary youth culture. These actions are accepted and adored rather than rejected and deplored at this life stage (Baumrind, 1987). Whereas risky behavior connotes various things, in this study risky behavior includes any "behavior that can compromise the psychosocial aspects of successful adolescent development. Substance abuse, unprotected sexual intercourse, driving after drinking are some obvious examples" (Jessor, 1992, p. 378).

Recent evidence indicates adolescence as the only age group that experienced a rise in mortality from 1960 through 1981 (Irwin & Millstein 1986). This fact is alarming, particularly since approximately 75% of deaths for the age group 15 - 24 years of age is from accidents, homicides, and suicides (National Center for Health Statistics, 1984). There are, of course, other causes of death associated with young people, including the consequences of unprotected sexual activity (Arnett, 1992), substance abuse, and motor vehicle accidents (Irwin & Millstein, 1986). Unfortunately, as Mechanic (1991) stated, "efforts to identify general personal orientation or personality types that are generally predictive of risk-taking have been disappointing" (p. 638). A major concern are the antecedents to these decisions by adolescents. As Alexander, Kim, Ensminger, Johnson, Smith, and Dolan (1990) stated, "a measure of risk-taking orientation is potentially useful in identifying young people who are likely to initiate drug and alcohol use or engage in sexual intercourse in their early teenage years" (p. 569) so that prevention strategies may be employed. To make matters worse, findings seem to indicate that young people likely to engage in one risky behavior are likely to engage in others too (Arnett, 1992; Biglan, Metzler, Wirt, Ary, Noell, Ochs, French, Hood, 1990; Irwin & Millstein, 1986; Jessor, 1992; Jessor & Jessor, 1977).

The question of why teenagers seem to participate in more dangerous activities than adults has been investigated. There are several theories postulating reasons why adolescence is such a dangerous time in the lifespan. These theories guide research of adolescents' risky behaviors.

Theories of Adolescent Risk-Taking

Elkind (1978) formulated a theory of adolescent egocentrism which held that youth engage in risky behaviors because they see themselves as immune to the dire consequences of these behaviors and thus are able to laugh in the face of death. The findings of Schneider and Morris (1991) were supportive of this idea, indicating that "during the second decade of life teenagers engage in a series of risky behaviors because they feel invulnerable to the consequences of their actions" (p. 575). A major criticism of Elkind was expressed by Furby and Beyth-Marom (1992), who pointed out that both adults and teens engage in risky behaviors but only the teens are criticized for acting in ways that increase their personal risks. Results of a study by Beyth-Marom, Austin, Fischhoff, Palmgren, and Jacobs-Quadrel (1993) contradicted Elkind's theory of indestructibility. These authors, in a review of the literature, found little evidence of a unique adolescent perception of invulnerability. Even so, many studies have investigated the theory of adolescent egocentrism and identified its presence in teenagers' decision-making processes (Arnett, 1992; Burger & Burns, 1988; deRosenroll, 1987; Dolcini et al., 1989).

Another theory of adolescent risk taking was proposed by Jessor (1992), who posited a concept of inter-relatedness of adolescent problem behavior. His five domains of risk factors which lead to risk behavior include (a) factors of a biological/genetic trait (e.g., a family history of alcoholism), (b) social environmental (e.g., poverty, racial inequality), (c) personality (e.g., low self-esteem, low perceived life chances), (d) behavior (e.g., problem drinking, poor school work), and (e) perceived environment (e.g., models of

deviant behavior). Jessor is seeking the underlying common construct which would account for adolescent risk taking. In a study by Donovan and Jessor (1985), correlations among alcohol misuse, marijuana use, and precocious sexual intercourse were accounted for by a single-factor which they labeled a syndrome of problem behavior. Thus, although theories have been proposed and investigated, no clear answers on precursors to risky behavior have been found.

Alcohol Use and Abuse

The ritual of drinking one's first beer, sipping the first glass of wine, or downing the first mixed drink is one that adolescents, individually and as a group, are anxious to experience. Alcohol is the drug of choice for adolescents and young adults, according to Newcomb and Bentler (1985). Adolescent alcohol use has been researched from an intrapersonal perspective and from the perspective of the social environment and peer influences (Brook, Whiteman, Gordon, Nomura, & Brook, 1986). Findings from an intrapersonal perspective tie alcohol use to a sense of nonconformity, excessive anger, impulsivity, depression, achievement problems, and unconventionality. Brook et al. (1986) found adolescent alcohol use inversely related to academic success and motivation. They also determined there was a strong parental influence regarding drinking for teenage children. Rejecting parents and those who were neither demonstrative nor affectionate raised teens more likely to imbibe. In addition, the peer influence is strong, with peer approval and peer use of alcohol impacting an individual's decision to drink.

It seems that causes of adolescent alcohol use are tied to a number of converging factors. The greater the number of factors for an individual, the greater the chances of becoming an alcohol abuser. Personality traits, parenting styles, relationships with parents, peer influences, and using alcohol at time of transition-proneness (Jessor & Jessor, 1977) cumulatively affect alcohol abuse. In a study by Brook et al. (1986), teens

who drank regularly were found to be the least work oriented and most deviant, experienced greater parental conflict, had unaffectionate relationships with their fathers, and were most involved with an abusing peer group. Nonuser and experimenters in this study were more likely to have a nurturing relationship with their fathers and live in a harmonious home environment.

A disturbing finding connected alcohol use of teens to suicide ideation and suicidal behavior (Windle, Miller-Tutzauer, & Domenico, 1992). The Center for Disease Control (1985) reported that in 1985 suicide was the second leading cause of death for the 15-19 year old age group. The study by Windle et al. (1992) used the National Adolescent Student Health Survey (NASHA) data set from 1989 and examined the connection between alcohol use and suicide. This sample was made up of over 11,000 eighth to tenth graders, and was administered in the fall of 1987. The major finding was the "extremely high level of suicidal ideation among girls in the heavy alcohol consumption group" (p. 323). Among the eighth grade girls who reported heavy drinking patterns, 60% thought about suicide and 37% reported having attempted suicide. The statistic also was significant for the tenth grade girls who reported heavy drinking, with 63% having thought about suicide and 39% having tried to end their lives. The final finding with significant association linked alcohol use and participation in risky behaviors. These results extended the research of Jessor and Jessor (1977) to include risky recreational activities that may increase the potential threat of serious injury or accidental death for teens. The alcohol consumed impaired motor performance, reduced judgmental capacities, and limited self-monitoring skills. These results based on the NASHA survey had representative samples of Blacks and Whites, though gender was a major variable of interest. Overall, however, there is a paucity of research regarding alcohol use and African-American and Hispanic-American teens.

Alcohol use and ethnicity. There appears to be a sizable body of literature on alcohol consumption and youth. There is a paucity of research, however, regarding ethnic differences in consumption of alcohol (Brannock Schandler, Oncley, 1990), including limited studies on the topic of alcohol use and African-American youth (Harper, 1988). Previous studies often were based on stereotypical beliefs about Blacks and were biased in their interpretations of limited data (Dawkins, 1986). Dawkins (as cited in Harper, 1988), using a rural North Carolina high school with 47 Blacks and 64 Whites, found fewer Blacks had experimented with alcohol compared to their White peers. He found that Black adolescents were more likely to get their first drink from their parents, while Whites got it from their friends. He also found that Blacks had less knowledge about alcohol and its effects. In citing results from several research studies, Dawkins (1988) reported that (a) alcohol is strongly associated with serious criminal offense for Blacks and White teens but not Hispanics; (b) alcohol is the single most important predictor of criminal offenses for Black teens, less for Whites, and of little prediction for Hispanics; (c) there is no significant difference between Black and White teenagers' drinking involvement; and, (d) at the college level, intoxication is more common for Whites than Blacks and for males than females. Harper (1988), in giving an overview of the problems of alcohol and Black youth, stated,

... black youth are often at high risk for alcohol problems. Research on black adult drinking indicates blacks suffer as much from alcohol-related problems (e.g., homicide, violence, crime, accidents, employment problems, family disruption, and financial loss) as from the disease of alcoholism itself. There are limited findings suggesting black youth also have a tendency to get into trouble while under the influence of alcohol. (p. 12)

Dawkins (1986) determined that high unemployment among Black teens and their exposure to other social ills which accompany economic difficulties may increase the potential for abuse of alcohol by this segment of the population. When Dawkins reviewed the literature on Black alcoholism he found polar positions on the causes of this problem. One extreme position viewed alcoholism in the Black community as a response to external forces, specifically White racism and oppression. The internal forces extreme viewed the negative values and role modeling in the Black community which encouraged overuse and abuse of alcohol. Implications for Black youth would include the view that both external and internal forces are shaping young people's attitudes toward alcohol use (Harper & Dawkins, 1977). In a study of cross-cultural high school students' drinking patterns by Brannock et al. (1990), it was determined that Whites in this study exhibited the greatest amount of drinking behaviors, but there were no reported differences between African-Americans and Hispanic-Americans. An interesting finding was that African-Americans tended to drink more due to stress than did Hispanic-Americans. It was also found that males drank more than females, consistent with other research.

Very few reviews of literature concern alcohol use and Hispanic youth. Gilbert and Alcocer (1988) stated, "...almost no research has explored treatment approaches and outcome in Hispanic youth populations, nor have prevention strategies attempted with adolescent Hispanics been described or evaluated" (p. 33). This is important because, even though Hispanics currently comprise only 6% of the population, the median age of 23 is lower than that of non-Hispanics (31) and their population is rising rapidly (Galan, 1988). In addition, there are problems and limitations involving the limited studies completed using Hispanic adolescents. When school samples are drawn the findings fail to generalize to Hispanics since 45-50% drop out of school and thus are not in school to be studied or those in school are not representative of the Hispanic adolescent population (Gilbert & Alcocer, 1988). Another limitation is that generally all Spanish-speaking

teens are grouped together, failing to take into account cultural differences between Mexican, Cubans, Puerto Ricans, or other Central or South American individuals. Caetano (cited in Gilbert & Alcocer, 1988) recommend a household survey of Hispanics homes to reduce classroom bias and other limitations.

Despite these difficulties, Gilbert and Alcocer (1988) reported the following cross-cultural survey results for adults: (a) Hispanic men drink more than and Hispanic women drink less than their ethnic counterparts; (b) Hispanic men suffer from greater dependence and problems related to drinking than other Americans; (c) there are differences between Hispanic subgroups, with Mexican-American (either native born or immigrant) drinking more among men and less among women than Puerto-Ricans or Cubans; and (d) there is a high number of alcohol-related arrests in this segment of the population. Gilbert and Alcocer (1988) stated that although the research on Hispanic youth is limited, there is "ample opportunity for innovative and theory-oriented approaches awaiting researchers interested in this field" (p. 36).

When one attempts to determine a baseline of when Hispanic youth first drink, information is contradictory. Several authors have reported that Hispanic adolescents are less likely to drink than their Anglo-American and African-American counterparts (Kandel, Single, & Kessler, 1976; Morgan, Wingard, & Felice, 1984), while other researchers reported the same or higher incidence of drinking in comparison with other ethnic groups (Guinn & Hurley, 1976; Mata, cited in Gilbert & Alcocer, 1988). In a study of college students in south Texas, Trotter (1982) compared drinking patterns between Anglo and Mexican-American males and females. Using a stratified sampling to replicate the ethnic proportion in the university and the surrounding area of south Texas, he found that males' drinking patterns were similar, but the females' patterns differed. The males showed no significant differences in amount, types, or frequency of drinking. The female Hispanics exhibited the lowest amount of drinking and the least frequency of

drinking of all subgroups identified. Although this study made a differentiation by gender, Gilbert and Alcocer (1988) reported a danger when studies fail to differentiate between Hispanic female and male adolescents.

Hispanic girls have, according to many reports, the highest rate of abstinence of any segment of the female population (Morgan et al., 1984; Trotter, 1982). Thus, there is a risk involved in the reported patterns of Hispanic drinkers overall. When examined in aggregate form, the incidence may appear lower due to the high abstinence rate for the girls masking the higher rates for the boys (Gilbert & Alcocer, 1988). This fact becomes obvious when rates of drinking and driving and other alcohol related arrests are investigated for Hispanic youth. It appears that youth of Hispanic ethnicity have both higher rates of drinking and driving arrests and higher rates of public drunkenness (Gilbert & Alcocer, 1988).

Drinking and driving. A rite of passage for adolescents is when one is allowed, for the first time, to drive the family car unaccompanied by parents. Unfortunately, automobile accidents are the leading cause of death among young people aged 16-24 (Alexander et al., 1990; Arnett, 1992a). Adolescence is also a time when consuming alcohol becomes a second rite of passage, often with deadly consequences (Alexander et al., 1990). Teenagers are more likely to drink and drive, tailgate, and drive faster than others; they also use their seatbelts less frequently than others (Jonah, 1986). Arnett (1992) reported that in 1986 "adolescents comprised 18.7% of the licensed drivers, but 38.7% of the drunken drivers involved in fatal accidents" (p. 342). Jonah (1986) found that adolescent drivers had the highest rate of involvement in accidents resulting in serious injuries and deaths. The results of this study are similar to those of Irwin and Millstein (1986), who reported a well established relationship between motor vehicle accidents and alcohol. These authors cited a Center for Disease Control report that

"alcohol was a contributing factor in 42% of fatal motor vehicle accidents among 16-24 year olds" (p. 845).

Farrow (1987) investigated young drivers and their risk taking behaviors. He found that teenage males were more involved with reckless driving than their female counterparts in situations where drinking was and was not involved. Also, it appeared that females were more commonly found in the passenger seat than in the driver's seat. In his study, Farrow found that much of the dangerous driving occurred after drinking. This factor became more dangerous by the teenager's misperception that drinking beer is less hazardous than other forms of alcohol. Other interesting findings of this study were the gender differences in enforcement of laws and parental attitudes toward female driving. It seems parents, peers, and society may be "more permissive with female drivers even when they present in a similar dangerous driving context" (p. 1265), while males suffer more severe consequences of risky driving and drinking and driving.

Drug Use

The prevalence of drug abuse in this country among adolescents, college students, and adults continues to rise (Levine & Singer, 1988). Irwin and Millstein (1986) reported that marijuana use, harder drugs, and alcohol use is likely to begin in middle school. Newspapers and television spots nightly report the danger of drug use, the consequences of drug busts gone bad, and the ill effects on the individual, family, and society. This behavior has long-range consequences for treatment and prevention. The questions of why teens take drugs, what might predict their decision to engage in this illegal behavior, whether drug use differs by gender and ethnicity, and what can be done by our schools, families, and society beg for definitive answers.

It seems that alcohol and drugs have been used to mediate the effects of life stressors and traumas (Morrisey, & Schuckit, 1978). Chief among emotional distress, according to Newcomb and Harlow (1986), was the emotional stress that is associated with feeling life

is meaningless and there is no sense of control over one's life. Adolescents have employed the use of drugs to reduce emotional distress and to cope with stressors in their lives (Carmen, 1979). In a study of rural junior high students, Carmen (1979) found that marijuana, amphetamines, and barbiturates were consumed to cope with life's frustrations, disappointments, and failures.

Alcohol use and drug use have been found to be a result of depression, lack of purpose in life (Crumbaugh, 1977, Jacobson, Ritter, & Mueller, 1977; Padelford, 1974), and a lack of future plans (Mills & Noyes, 1984). It was hypothesized by Newcomb and Harlow (1986) that these factors may reflect a general lack of meaning in life or direction to follow. To test their hypothesis, they collected data as part of a study at Rutgers involving high school and college students and a UCLA study with 20-year-olds. The results of these two studies indicated that "by adolescence a pattern may have developed whereby many teenagers seek solace from alcohol, marijuana, and other drugs in order to relieve a sense of meaninglessness and a lack of direction in life" (p. 574).

It seems that teens often look to the models provided by their parents and the activities engaged in by their peers to determine how they individually will deal with feelings of meaninglessness. As Levine and Singer (1988) stated, "risk-taking attitudes among youth may duplicate the risk-taking attitudes of adults important in the youths' lives" (p. 388). In fact, the powerful message sent by one's peers, especially in adolescence, seems to mitigate other messages sent by the media and one's parents when it comes to drug use (Kandel, 1985; Levine & Singer, 1988).

Kandel (1985) reported that peers are one of the most important factors in the use of legal and illegal drugs by teenagers. In her study of middle class youth in an affluent upstate New York community, there was no difference in drug and alcohol use between boys and girls (Kandel, 1985). The most important predictor of the use of these substances was determined to be a willingness to take risks in a group. Levine and Singer

(1988) found that youths who say their friends are frequent users are themselves more likely to use drugs. A discouraging finding was that teens will not ask for help from parents or other adults in their lives. The findings of Kandel's (1985) study of 18 public high schools in New York was similar to Levine and Singer's (1988). She found that adolescents "coordinate their choice of friends and their values and behaviors, particularly those of marijuana, so as to maximize congruency in the friendship dyad" (p. 139). If an incongruency develops, the teen will either end the relationship and find another friend or will keep the friend and modify his or her behavior. Both of these studies were comprised of mainly Anglo-American subjects; a next step is to investigate differences by ethnicity.

Drugs and ethnicity. The incidence of drug use in this country has been found to differ by ethnicity (Newcomb & Bentler, 1985). In Newcomb and Bentler's (1985) study of 1,600 seventh and eighth graders in Los Angeles County, Anglo-American and Hispanic-Americans reported higher usage of hard alcohol than did African-Americans or Asian-Americans. The Asians had the lowest frequency of marijuana use and Anglos reported higher use than African-Americans. Overall, the Anglo and the Hispanics appeared to be similar in their reported self-use of drugs. Anglo-Americans self-reported the most frequent use of a variety of illegal chemical substances. This study did not differentiate the age of use.

Although Anglo-Americans may use drugs at a greater frequency than African-Americans, the latter begin using drugs and alcohol at an earlier age (Thompson & Simmons-Cooper, 1988). In a major study by Adlaf et al. (1989) that utilized a sample of over 4,700 high school students in Ontario, significant ethnic differences were found for drug and alcohol use. Their findings included the following: (a) those students of Western European origin (Dutch, French, German, Scandinavian) reported the most frequent tobacco and alcohol use and also the highest level of general drug use; (b) those

of Eastern European decent (Austrian, Czechoslovakian, Hungarian, Polish, Ukrainian) had the second highest levels of tobacco, alcohol, and drug use; and (c) those of Jewish decent had the highest rate of marijuana usage. This study did not cover the fastest growing minority in the United States, the Hispanic population.

According to Schinke et al. (1988), Hispanic Americans will be the largest ethnic-racial minority group in this country. These authors stated that among Hispanic adolescents alcohol and drug use is associated with school failure and homicide. These statistics combined with their drug use and other risky behaviors pose a grave problem for the growing numbers of Hispanic-American as well as Anglo and African-American teens in the future (Irwin & Millstein, 1986).

Drugs and purpose in life. Pade!ford (1974) was one of the first researchers to correlate low scores on the PIL and drug involvement in adolescents. Her findings included: (a) a negative relationship between the extent of high school student drug involvement and purpose in life, (b) lower purpose in life for males than females, and (c) higher purpose in life for Anglo-Americans than Mexican-Americans. In 1971, Shean and Fechtman found that college marijuana users scored significantly lower on the PIL than non-users.

Cigarette Smoking

The number of teenagers smoking has continued to increase despite warnings by the Surgeon General and health care centers (Collins, Sussman, Rauch, Dent, Johnson, Hansen, & Flay, 1987). Drawing on a sample of over 3,200 seventh graders in the Los Angeles area, a study (Collins et al., 1987) was conducted to determine predictors of adolescent smoking. The sample, measured at three times during the year, was split 55% to 45% females to males, and 60% Anglo-American, 26% Hispanic-American, and 7% African-American. The strongest predictor of cigarette smoking was a risk-taking/rebelliousness factor, with 88% of the sample correctly classified by this factor and

69.5% of sample B classified correctly. These findings concurred with those of Donovan and Jessor (1985) that the syndrome of risky behaviors includes smoking as well as drug and alcohol use and sexual promiscuity.

Summary

There are numerous studies utilizing high school age subjects and the risky behaviors in which they are likely to engage. Statistics surrounding the causes of death for teens point to the dangers long associated with adolescence. High school students are often the subject of studies investigating alcohol use, drinking and driving, chemical use, and unprotected sexual activity. There are, however, few studies that investigate gender and ethnic differences for risky behaviors. The studies which have examined ethnic differences tend to focus on African-American and Anglo-American adolescents and usually ignore the fastest growing segment of the population, Hispanic-Americans. It is vital to examine risky behaviors, how they differ for boys, girls, African-American, Anglo-American, and Hispanic-Americans, and what ameliorates the chances of survival for this segment of our population.

The question of why teens continue to engage in sexual intercourse without protection, experiment with drugs, and generally participate in risky behaviors may be due to their misconception that they are invulnerable to the consequences of these acts. The efforts by past presidents and their wives to stop drug use and other risky behaviors have met with limited, if not poor results (Greig & Raphael, 1989). Adults, for example, have heeded the warning on cigarette packages and the number of adult smokers has decreased; the number of teenage smokers, however, has in fact increased (Collins et al., 1987). Scare tactics of the 1970's did nothing to reduce the incidence of teenage drug use and it seems the slogan of "Just say no" had similar results (Greig & Raphael, 1989). It appears that teenagers believe, on least one level, that their "invincibility alone will protect them from infection as they continue unsafe sexual activity" (p. 212).

Unfortunately, the numbers point to a different outcome, with the United States having the highest rate of teenage pregnancy in the western world (Kibrick, 1988). The theories of adolescent egocentrism, with its components of personal fable (invulnerability) and imaginary audience (the teen is the center of everyone's attention), may be able to explain this apparent breakdown in thinking resulting in this high loss of teenagers' lives.

Adolescents in this country, regardless of gender or ethnicity, are experimenting with chemicals and life situations that have long-range effects for them and society. The necessity of preventing alcohol, drug, and tobacco use among adolescents impacts health care, the family system, and the government. The cost of care for sufferers of AIDS, alcoholism, crack users, and drunk driving victims continues to send the price attached to hospital admissions through the roof. The slogans of practice safe-sex, friends don't let friends drive drunk, and this is your brain now this is your brain on drugs (with an egg frying in a pan) are out there, but they seem to be falling on deaf ears. Young people, not unlike older adults, feel the dangers will befall the other person, they feel they will luck out and not get pregnant or not get someone else pregnant. It seems that a lack of purpose in life may be common to many of these behaviors, as well as the misperception of invulnerability.

Adolescent Egocentrism

The major task of adolescence, according to Erikson (1959), is the conquest of thought. The ability to think in abstract ways, to reason, to take another's point of view, and to conceptualize one's own thoughts all are part of the formal operational thought process developed in adolescence. The struggle facing an adolescent is to separate his or her preoccupation with self from the misperception that others are as obsessed with him or her as much as he or she believes them to be (Elkind, 1967). This belief that others are as wrapped in him or her as the self constitutes the concept of adolescent egocentrism. It becomes evident in the self-consciousness of adolescents and the perception that all eyes

are on him or her. The teen then creates an imaginary audience that has, at its center, the teenager. Because he or she is so important to so many, the teen begins to regard himself or herself as special, unique, and invincible. An accurate summary of these two constructs is given by deRosenroll (1987), who stated, "adolescents' belief that they are special and eternal is reflected in the Personal Fable, whereas the belief that all others in their immediate locale share their concerns both in their thoughts and behaviors describe the Imaginary Audience" (p. 794).

Risk Perception and Adolescent Egocentrism

Several researchers have investigated the impact of perceived invulnerability on risky behaviors. In one attempt to test the hypothesis between these two ideas, Dolcini et al., (1989) recruited over 200 middle school boys and girls of differing ethnic backgrounds and administered the Adolescent Egocentrism Scale (Enright et al., 1979; Enright et al., 1980). The researchers hypothesized that students high in egocentrism would minimize the dangers of risky behaviors. Contrary to expectations, however, female teens who displayed the greatest degree of self-involvement and self-reflection were the most likely to acknowledge the dangers of smoking cigarettes or marijuana. Males' perceptions of risks were much lower than females. The authors speculated that the results may have been due to experience of risky behaviors, or that boys are socialized to ignore feelings of vulnerability. It seems that egocentrism may produce a feeling of unrealistic optimism or sense of invulnerability.

In a sample of 76 college undergraduates (older adolescents), Weinstein and Lachendro (1982) tested the hypothesis that people expect bad or misfortunate things to happen to others while they remain unharmed. Their results supported this belief, finding that "people seem to give themselves credit for risk-decreasing factors but underestimate or overlook risk-decreasing factors that others have in their favor" (pp. 198-199). It appears these young adults compared their incidence of harm against an inappropriate

standard of the risk for other people. The authors considered this misguided conclusion a result of egocentrism evidenced by the subjects' explaining their risks but ignoring comparisons with others' risks.

This misperception of invulnerability of adolescents and adults was tested by Quadrel, Fischhoff, and Davis (1993) with 86 pairs of low risk teens and their parents and an additional 95 high risk teens. The low risk teens were recruited from high school clubs and the high risk teens recruited from group homes for adolescents with chemical abuse or legal problems. In an attempt to measure perceptions of invulnerability quantitatively, the term was defined in the following three ways: absolute invulnerability (facing little or no risk), strong relative invulnerability (face less risk than others), and weak relative invulnerability (face less risk than others). The three subject groups evaluated "each of eight possible adverse events on each of four dimensions for each of three to four target individuals" (p. 106). The eight events were split between those over which the individual had low control (sickness from air pollution, sickness from pesticides, sickness from radiation poisoning, and injury from a fir explosion) and those over which the individual had high control (auto accident, alcohol dependency, unplanned pregnancy, and mugging). Each event was then rated in terms of probability, controllability, preventive effort, and experience with the event. Finally, after evaluating each event for themselves, the subjects then evaluated targeted individuals (an acquaintance, a friend, parents for their teenager, and teenagers for their parents). The results of this study indicated that low risk adolescents and their parents responded in a similar way; both were moderately overconfident. The high risk teens demonstrated much higher overconfidence, perhaps as a result of "having greater direct experience with these events and participating in substance abuse prevention courses" (p. 113).

Summary

It appears that adolescent egocentrism is related to the decision of teenagers to participate in risky behaviors. The differences in adolescent egocentrism between genders and between ethnic groups remains to be studied. Johnson and Green (1993) stated that future research is needed regarding the influence of ethnic status, adolescent egocentrism, and risky behaviors. The findings of Buis and Thompson (1989) indicated that males and females vary in the different aspects of adolescent egocentrism, imaginary audience, and personal fable. They reported that some scores indicated no differences between the genders, some indicated female superiority, and others male superiority.

Critique of Major Research

The incidence of adolescent risky behaviors has been investigated in many studies. The need to determine what might predict the decision of teens to take risks involving alcohol and other drugs, and drinking and driving has been investigated for decades. Researchers have found certain intrapersonal characteristics and environmental factors which increase the probability that an adolescent will take risks. The peer group with which teenagers associate, the family structure, and parental modeling are all environmental factors identified in the literature as indicators of risk taking. The intrapersonal characteristics, the focus of this study, that appear to enhance one's decision to take risks include depression, impulsivity, and academic achievement. Despite the number of studies into risky behaviors, there remains a paucity of studies investigating risky behaviors by ethnic groups, particularly the Hispanic population.

Purpose in Life

The ethnic and gender differences in purpose and meaning in life for adolescents remains an area to empirically studied. There are many studies of college students and their purpose in life, but due to their cognitive differences it is inappropriate to generalize these findings to younger adolescents. The earlier study by Padelford (1974) examined

teenagers and their lack of purpose in life and drug use. However, this study is twenty years old and its generalizability to teens in the '90's could be questioned. DeVogler and Ebersole (1983) determined young adolescents have the ability to verbalize the deeper existential ideas of meaning in life, thus opening the door to research with this age group. Here, too, differences by ethnicity and adolescents remain to be studied. Jennerson-Madden et al. (1992) studied Mexican-American and Anglo-American adult differences, but not differences among adolescents or other members of the Hispanic community.

Ethnicity

The United States will continue to be a nation of ethnic groups and the largest growing ethnic group to date is the Spanish-speaking group. It needs to be remembered, though, that this group is not one culture or one ethnicity; rather, it is an aggregate of several peoples. The Hispanic-American population includes Mexicans, Puerto-Ricans, Cubans, and many other Central and South Americans. Limitations in the research include: (a) failure to discriminate amongst the ethnic diversity of Hispanics; (b) studying them only in the major Spanish-speaking geographic locations (Texas, Florida, California, and New York) and generalizing findings to all areas; (c) using school samples of adolescents and thus neglecting the 50% of Hispanics who drop out of school; and (d) failing to distinguish gender differences, particularly in alcohol consumption, whereby the extremely low female rate of alcohol use lowers the overall consumption rates hiding the high consumption rates for males.

Adolescent Egocentrism

Researchers who have investigated the concept of personal fable and imaginary audience are beginning to challenge Elkind's (1967) construct of adolescent egocentrism. The long held belief that this developmental stage is a result of formal operational thinking and that it holds true only for teens is coming under attack (Furby & Beyth-Marom, 1992). It is being postulated by Furby and Beth-Marom (1992) that adults also

underestimate their risks and overestimate their invulnerability. However, several other researchers have concluded that the concept of invulnerability is a part of adolescent thinking, but may also be a part of human-kind's thinking as well.

Research into these variables will assist those who work with teenagers in schools and in community agencies, especially where ethnic diversity is a reality. This study was one of the first to investigate indepth the adolescent Hispanic population, their purpose in life, and the incidence of their risky behaviors. The information learned from this study provides knowledge of how purpose in life varies by gender and ethnic groups and how it impacts the decision to engage in risky behaviors by these groups.

CHAPTER III

METHODOLOGY

A review of the related literature supports the hypothesis that possessing a meaning or purpose in life may affect the decision of adolescents to engage in risky behaviors. In addition, the incidence of these behaviors may be affected by adolescent egocentrism, gender, and ethnicity. In this chapter, the design and methodology for the study are presented. Included are the research hypotheses and descriptions of instruments, participants, procedures, and statistical procedures to be used in data analysis.

Hypotheses

Several hypotheses were tested in the study:

1. Purpose in life, as measured by Crumbaugh and Maholick's (1981) Purpose in Life Test, will have a negative relationship with adolescents' risk-taking behaviors, as measured by the Youth Risk Behavior Survey (CDC, 1989).
2. Adolescent egocentrism, as measured by Enright et al.'s (1979) Adolescent Egocentrism Scale, will have an effect on adolescents' risk-taking behaviors, as measured by the Youth Risk Behavior Survey (CDC, 1989), such that those with high levels of egocentrism will report greater involvement in risky behaviors.
3. Ethnicity, as measured by self-identified ethnic group (i.e., African-American, Hispanic-American, Anglo-American), will have a direct effect on adolescents' risk-taking behaviors, as measured by the Youth Risk Behavior Survey (CDC, 1989), such that minority students would report higher levels of risky behavior.

4. Adolescents' risk-taking behaviors, as measured by the Youth Risk Behavior Survey (CDC, 1989), will differ by student gender, such that boys' risky behaviors will be greater than girls'.

5. The relationship between purpose in life, as measured by Crumbaugh and Maholick's (1981) Purpose in Life Test, and risky behavior, as measured by the Youth Risk Behavior Survey (CDC, 1989), will be moderated by student gender, ethnicity, and level of egocentrism, such that the relationship between purpose in life and risky behavior varies under conditions of gender, or adolescent egocentrism, or ethnicity.

Instruments

The Purpose in Life Test

Crumbaugh and Maholick's (1968) Purpose in Life Test (PIL) (Appendix C) measures the degree to which individuals perceive life as meaningful and detects existential vacuum as defined by Frankl (Crumbaugh & Henrion, 1988; Hutzell, 1987; Reker & Cousins, 1979). It is the most popular measure of meaning of life created to date (DeVogler-Ebersole & Ebersole, 1985).

The existential philosophy that underlies the PIL views development of meaning in life as a primary drive of human beings (Frankl, 1955). If an individual is unable to develop this sense of personal purpose, a sense of existential vacuum exists and relieving this state of emptiness becomes vital. This instrument was developed as an objective measure of the state of existential vacuum (Hutzell, 1987). Rather than measure the content or type of meaning in life, it measures the intensity of the meaning (DeVogler-Ebersole & Ebersole, 1985). According to Crumbaugh and Henrion (1988), the PIL has proved useful in individual counseling, vocational and guidance counseling, treating alcoholics, and research and screening. Hutzell (1987) reported that the PIL has been used in many studies to assess the relationship between purpose in life and various

variables, including alcohol abuse, death issues, socio-economic-status, depression, and subjective well-being.

The PIL has three parts: Part A includes 20 items, Part B includes a 13-item sentence completion section, and Part C allows for a paragraph response describing goals, ambitions, and progress made toward achieving these goals. Generally, Part A is used in most studies (Crumbaugh & Henrion, 1988), including the proposed study, and can be completed in 10 to 15 minutes. Parts B and C require a longer period of time to complete and are more complex to score. Of the 20 items in Part A, 11 of the questions are worded negatively and 9 are worded positively (Harlow, Newcomb, & Bentler, 1986). The test can be administered in either individual or group settings and is reported to have a 4th to 5th grade reading level (Crumbaugh & Maholick, 1981; Hutzell, 1987). Students respond on a 7-point Likert-type scale. Interpretation of the results for Part A does not require special training, as scores are calculated by adding the numerical values for each of the twenty responses. The range of possible scores is from a theoretical low of 20 to a high of 140 raw score points, though it is stated in the manual that the range is from 61 to 140 (Crumbaugh & Maholick, 1981).

The manual for the PIL contains the percentile equivalents of the raw scores and norms have been established using responses from 1,151 cases (Crumbaugh & Maholick, 1981). In that original study, the number of normal subjects (805) was much greater than the patient subjects (346), which resulted in the mean score being higher than if there was an equal number of normal and patient subjects. Crumbaugh and Maholick (1981) concluded, "It is therefore estimated that the best 'cutting score' between these two populations is 102 (half way between the two means), with an overall standard deviation of 19" (p. 3). Raw scores below 91 posit the lack of clear meaning and purpose in life, scores which fall in the range of 92-112 represent a somewhat uncertain purpose, and scores above 113 suggest a definite and clear meaning and purpose in life. It should be

noted, then, that distribution of PIL scores is negatively skewed (toward the lower end), and thus the upper scores do not contain the full percentile range due to the greater number of normal subjects involved in the study.

Construct and concurrent validity for Part A of the PIL is reported in the manual (Crumbaugh & Maholick, 1981) and was reviewed by Hutzell (1987) and Crumbaugh and Henrion (1988). A major difficulty encountered in determining the validity of the PIL has been the lack of a "direct criterion for quantitative experiences of life-meaning against which to validate" (Hutzell, 1987, p. 93) the instrument. Measuring purpose in life presents the same difficulty faced by those who attempt to measure intelligence: the obstacle of an adequate definition and criterion so it can be measured by external tests (Crumbaugh & Henrion, 1988). Crumbaugh (1968) attempted to establish construct validity by contending that, if the PIL measured life-meaning, groups who experience greater levels of meaning would have higher PIL scores (Hutzell, 1987). His results predicted correctly that successful business or professional personnel had higher PIL scores ($M = 118.9$) than active Protestant parishioners ($M = 114.2$), who in turn had higher scores than college undergraduates ($M = 108.45$), who were higher than indigent, nonpsychiatric hospital patients ($M = 106.4$). Crumbaugh and Maholick (1981) reported less accurate prediction of psychiatric populations, although there was the expected lower scores from neurotics ($M = 95.3$) to alcoholics ($M = 85.3$) to nonschizophrenic psychotics ($M = 80.5$). In addition, Yarnell (1971) cited a study by Doerries in which students belonging to a number of campus organizations scored higher on the PIL than those young people who belonged to no organizations or to only one.

The concurrent or criterion validity for the PIL has been assessed in two studies (Crumbaugh & Henrion, 1988; Crumbaugh & Maholick, 1981). In the first (Crumbaugh & Henrion, 1988), clients' PIL ratings and therapists' ratings of how they thought their clients should have completed the PIL were calculated, yielding a .38 correlation. In the

second study (Crumbaugh, 1968), the correlation between PILs completed by parishioners and ministers' perceptions of parishioners' degree of purpose and meaning was .47. Crumbaugh and Henrion (1988) stated that these results are "in line with the level of criterion validity usually obtained from a single measure of complex traits" (p. 79).

The split-half reliability of the PIL was first determined by Crumbaugh and Maholick (1981), with results of .90 utilizing the Spearman Brown formula (Crumbaugh & Henrion, 1988). Later testing produced a corrected correlation of .92 (Crumbaugh (1968). These data were collected mainly from students, psychiatric outpatients, hospitalized alcoholics, jail inmates, and active Protestant parishioners. Studies of test-retest reliability, though not mentioned in the manual, have produced the following findings: .83 one week interval with church members, .79 six week interval with college students, and .68 twelve week interval with jailed inmates (Hutzell, 1987). The internal reliability Alpha on the scale for this study was .92.

Two criticisms have been made regarding the PIL. This measure was founded on Frankl's logo philosophy, which has led to criticism of its generalizability to various cultural groups who are not of the middle class populations of samples primarily studied to this point in time (Hutzell, 1987). Although Crumbaugh and Henrion (1988) reported that the PIL has been translated into six languages and used worldwide, caution must be taken until norms are established for specific subculture groups and language translations. The concept of individual self actualization is not the core of all cultures and American subcultures. One published study was completed using a Mexican American population (Jenerson-Madden, Ebersole, & Romero, 1992); no significant difference between PIL scores of first-generation Mexicans in the U.S. and Anglo-Americans was reported. On another measure, difference in the types of life meaning was found, with the Mexican-

American subjects indicating the category of relationships as being most meaningful to them.

A second criticism regarding the PIL is that social desirability may contaminate the findings (Hutzell, 1987). Battista and Almond (1973) cited failure to control for social desirability or denial in answering the questions as a critique of this scale. However, results of another study (Ebersole & Quiring, 1989) indicated that these effects for social desirability were minor.

Despite these two criticisms, Chamberlain and Zika (1988) stated that "for researchers wishing to use a general measure of meaning in life, Crumbaugh's PIL test appears to be the most used of the available measures and appears to measure the construct in the most reliable and valid way" (p. 595). In addition, Philips (1980) stated that "the PIL has gained increasing validity and acceptance as a clinical measure of Viktor Frankl's concept of existential vacuum or meaninglessness of life purpose beyond or apart from neurotic limitations" (p. 661).

The Adolescent Egocentrism Scale

The Adolescent Egocentrism Scale (AES; Enright et al., 1979) (Appendix D) was designed to assess three indicators of adolescent egocentrism: imaginary audience, the personal fable, and a general self-focus aspect of adolescent egocentrism. False beliefs of adolescents lead to three consequences: a general focus on the self, the belief by teenagers that others are focusing on him/her constantly, and a sense of invulnerability. As a result of the imaginary audience, the adolescent develops a personal fable. Enright et al. (1979) maintained in their original study that as a result of feeling they are the center of everyone's attention, adolescents view themselves as unique and thus immune to the dangers that befall others.

Scale development. The scale was developed using a sample of 20 volunteer adolescents from college and sixth and eighth graders, both younger and older teens.

Students responded on a five point Likert-type scale indicating the importance of 15 statements. Responses ranged from one point given for a "no importance" response (1) to five points for "great importance" response (5). Total scores ranged from 15 to 75 points and five statements reflected each subscale of interest (imaginary audience, personal fable, and general self-focus).

Results of the first administration of the AES demonstrated that the three subscales "all tapped a common construct," that being egocentrism (Enright et al., 1979, p. 693). It was found that imaginary audience and personal fable decline with age. Early adolescence is characterized by a personal fable and the imaginary audience, which both diminish and are replaced by a state of general introspection in later adolescence. Finally, there were no gender differences on the three subscales.

In a revision of the AES, the authors (Enright et al., 1979) retained those items which showed a significant relationship with age, minimized gender differences, and maximized external consistency. The revision (Enright et al., 1980) also included a sociocentric or political section as well as a nonsocial subsection.

For the purposes of this study, only the first three egocentrism subscales (i.e., imaginary audience, personal fable, general self-focus) were administered. Enright (personal communication, October 27, 1993) stated that the imaginary audience subscale, when used independently, has not proven to be as accurate as earlier expected, and recommended caution when interpreting scores for the three subscales separately. He did state, however, that the personal fable and the general self-focus subscales were more reliable and valid than the imaginary audience. In this study, a summative score for these three subscales were used.

The egocentrism subscale is composed of 15 items equally distributed among the personal fable, imaginary audience, and general self-focus subscales (i.e., 5 statements each). The two other subscales (non-social and sociocentrism/political), not used in this

study, each contain 15 items. Students read the items and respond on a 5 point Likert-type scale to indicate their degree of agreement with the statements. The authors stated that the 45 statements can be responded to in approximately 20 minutes, so that the 15 items used in this study could be answered in 10 minutes. Scores are totaled for the five items of each subscale with a range in scores from 5-25 for each subscale and 15-75 for the summative score to be used in this study. Jahnke and Blanchard-Fields (1993) reported "reliabilities obtained on the AES were, with alphas of .76, .57, and .59 respectively for the personal fable, the imaginary audience, and the general self-focus subscales" (p. 317). The internal reliability alpha obtained with this sample for the three subscales of imaginary audience, personal fable, and general self-focus was .78.

Youth Risk Behavior Survey

The Center for Disease Control's (1989) Youth Risk Behavior Survey (YRBS) (Appendix E) was developed to identify the health behaviors of adolescents in the United States in the following areas: (a) prevalent health risk behaviors, (b) the age when the behaviors begin, (c) how the risky behaviors vary, and (d) how they change over time (i.e., decrease, increase, stay the same). The Center for Disease Control's original study (Kolbe, 1990) determined that 70% of the deaths of children ages one to twenty-four can be attributed to the following: (a) car accidents (33%), (b) other unintentional injuries (15%), (c) homicide (10%), and (d) suicide (10%). The Center next identified behaviors that most contribute to teenagers' adverse health practices and social problems. The six major concerns were accidental injuries, drug and alcohol use, unsafe sexual practices, tobacco use, dietary habits, and physical activity. For the purposes of this study, only behaviors which were considered risk taking (and approved by the school system) were measured: drug and alcohol use, and tobacco use.

Instrument development. The YRBS was developed by representatives from the Center for Disease Control's various agencies, including Chronic Disease Prevention,

Injury Epidemiology, Nutrition, Reproductive Health, Drug Abuse, and Smoking. Along with federal governmental experts, state and local Departments of Education provided assistance to the steering committee. Once the draft of the questionnaire was finalized, it was submitted to the Questionnaire Design Research Laboratory at the National Center for Health Statistics. The test underwent administration in four waves to establish a satisfactory level of reliability. The first wave was with high school students who reviewed the measure to ascertain if teens would be willing to answer the questions honestly. The next administration entailed 21 personal interviews critiquing for comprehension and ability to recall the behaviors measured. The third wave went to six pairs of peer educators, aged 13-17, who had experience with the risky behaviors. The final wave was administered to summer school students with lower level reading ability and academic achievement. The objectives were scrutinized after each administration and concepts were clarified and suggestions for refinement were addressed.

In 1990, the final 75-item questionnaire was distributed to 35 state departments of education and 8 selected cities and then administered to 9-12 grade students. The final instrument had a seventh grade reading level to ensure comprehension by high school students. The first national survey tested over 25,000 students and the second over 50,000 students. The Center encourages states and local school districts to use the instrument as a means of assessing the health risk behaviors of their students, so they can effectively instruct them on how to reduce their risky health practices. A total score from all the subscales were calculated.

The responses of on the YRBS were assigned a point value on a point system and an overall risky taking behavior score were calculated (Appendix G), with 287 possible points. The point conversion scale for each question was the following, with higher scores representing greater risky behavior: a = 0; b = 1; c = 2; d = 3; e = 4; f = 5; g = 6. The questions to be used in determining the overall risky behavior was: 2, 3, 6, 8,

9, 11, 13, 14, 15, 17, 18, 20, 21, 22, 23, 24, 25 on the Youth Risk Behavior Survey (CDC, 1989). In addition, questions 5, 7, 12, 16, 19 (items concerning the onset of risky behavior) were reverse scored (i.e., lower scores representing greater risky behavior). This reverse scoring was calculated only for responses "b-g"; choice "a" which indicates the behavior was never tried. Questions 4 and 10 (items concerning intention to stop engaging in risky behaviors) are reported in descriptive information.

Participants

The students in this study resided in a middle class, ethnically diverse urban setting located in the Southwestern United States. The total number of students who participated was 582, with 207 from high school one (36%), 172 from high school two (29%), and 203 from the ninth grade satellite school, high school three (35%) (see Table 1). A contributing factor for the selection of this particular school district for the study was its cultural diversity. The ethnic representation in the Spring health classes (see Table 1) was varied with 17 Asian-Americans, 121 African-Americans, 263 Hispanic-Americans, 163 Anglo-Americans, and 18 students in the "Other" category. Many of the students who selected the "other" ethnic category appeared to be from India, Pakistan, and Middle East countries. Students who were Asian and those who chose the "other" category remained in the study for descriptive purposes but, due to low numbers, were not included in the inferential statistical analysis. There were slightly more male students than female students in the classes, with 274 females (47%) and 308 males (53%).

Table 1
Gender and Ethnic Composition by School

School	Gender		Ethnicity				
	Female	Male	Asian-Am	Afric-Am	Hisp-Am	Anglo-Am	Other
HS 1	106	101	0	22	150	35	0
HS 2	74	98	7	47	53	60	5
HS 3	94	109	10	52	60	68	13
Total	274	308	17	121	263	163	18

All students in the Spring semester health classes in this school district were eligible to participate in the study. Students were drawn from the school's health education classes since this is a required class and is generally scheduled during the Fall or Spring semester in the freshman year, thus allowing for greater representation of ethnic groups and controlling somewhat for the age of participants. The majority of the students were ninth graders 330 (see Table 2) but there were 162 tenth graders, 42 eleventh graders, and 48 seniors represented in the classrooms. The selection of the ninth grade classes did control for age somewhat (see Table 2), as the majority of students were 14 or 15 years old (57.7%). There were, however, nearly 27% of the students who were 16 years old, 9% were age 17, and almost 6% who were 18 years of age or older. Because of the range of age and the possible effects age of student had on the results age was controlled for in one computer run, but these results showed no significant effects due to age [$F = 2.94 (1, 546), p < .087$].

There were four non-English speaking students in one class; they were allowed to work on the questionnaire but their scan-tron sheets were removed due to the lack of English comprehension. They asked the researcher to translate for them but this was not effective. In order to avoid embarrassing the students in front of their peers they were allowed to circle in their answers, but it was obvious they did not understand the intent or purpose of the survey. For example, one student darkened in every circle on the answer sheet.

Finally, the questionnaire was considered less obtrusive in health classes since the topics purpose in life, perceptions of invulnerability, and high risk behaviors are congruent with existing curriculum. The classroom teachers reassured the researcher they discuss the dangers of drinking and drugs in their classes as well as other risky behaviors in which students choose to engage.

Table 2
Age and Grade Classification by School

School	Age					Grade			
	14	15	16	17	18+	9th	10th	11th	12th
HS 1	31	82	64	16	14	113	74	3	17
HS 2	1	48	66	37	20	14	88	39	31
HS 3	71	104	27	1	0	203	0	0	0
Total	103	234	157	54	34	330	162	42	48
Per cent	17.7	40.1	26.9	9.3	5.8	56.6	27.8	7.2	8.2

Procedures

A master list of all high school and satellite school Spring semester health classes was obtained from the central office of the Parkwood Independent School District (pseudonym) and a unique number was assigned to each class and to each school. This procedure allowed for general follow-up if students respond in a positive way to question # 20 on the Purpose in Life Test which reads, "With regard to suicide, I have..." On the Likert-type scale (1-7), a response of 1 equated with "I have seriously considered it as a way out"; a response of 7 indicated "I have never given it a second thought." School counselors were notified of classrooms with students who indicated a response of 1, which suggested a potential risk of suicide, so that appropriate school district interventions could be instituted.

The eligible population of public high school students in the Spring semester health classes was approximately 610. In order to estimate student response rates, an average daily attendance figure was obtained from the central administration offices so attendance in class could be estimated. The school district reported average daily attendance to run between 90-95% (personal communication, January 13, 1994) and this attendance percentage held true for the classes in this study. The classes averaged 5% absenteeism

over the five-day period of the study. The desired response rate was set at 75%, and steps were taken to increase the response rate in the following ways: (a) one administrator supervised questionnaire disbursement (the researcher); (b) questionnaires were completed within the scheduled class time; (c) verbal support was provided by classroom teachers in the introduction of the researcher, and building principals and assistant principals over the loud-speaker morning announcements encouraged honest self-reporting by the students; (d) accurate record keeping by the researcher; and, (e) to safeguard anonymity and protect confidentiality, no names or identifying numbers were used on the answer sheets. Students who were of an ethnicity that was not being considered as part of this study (i.e., Asian, Native American Indian), were dropped from the study's inferential data analysis procedure, but descriptive information for them is reported.

Each student in the health classes received a release of information sheet, a parental consent form, and a brief letter explaining the purpose of the study (Appendix A) during the first week of the second semester (approximately January 4, 1994). A passive consent form was used, which required the form to be returned only if the student did not have parental permission to participate in the study. Nine students returned consent forms from their parents which denied their participation in the study. These students were given an opportunity to work on a future assignment and were not a disruption to the study process. There were also 7 students who entered the class after the letters of consent had been sent home, due to schedule changes. These students were given make-up assignments by the health teachers and were not a disruption to the data collection process.

The date for returning forms by students unable to participate in the study was Monday, January 10, 1994, the first day of data collection. Students able to participate in the study remained in the class for the assigned day of the testing, and students unable to

participate were assigned study hall for that day in another room in the building. Appropriate teacher coverage for these students was the responsibility of the assistant principals.

On the testing day, one day during the week of January 10, 1994, students received a test booklet from the researcher containing the various scales in the following order: (a) a demographic information form (Appendix B); (b) the Purpose in Life Test (PIL) (Appendix C); (c) the Adolescent Egocentrism Scale (AES) (Appendix D); and (d) the Center for Disease Control's Youth Risk Behavior Survey (YRBS) (Appendix E). An answer sheet with a precoded ID number by school and class was passed out to each student. After the directions were read (Appendix F), students were advised to open their test booklet to the front, reminded to read each statement carefully, and then allowed to begin by bubbling in their responses on the answer sheet. Once students had completed all of the instruments, the researcher collected the test booklets and the answer sheets and thanked the class for their participation.

The instrument was completed by the students during one class period; no student required more than 40 minutes and some finished quickly in 20 minutes. All but 9 of the 691 students in attendance (.1%) participated in the study. The students were read a standardized set of instructions and each teacher encouraged the students to report their answer honestly. There were no irregularities that occurred testing day (i.e. assemblies, fire drills, bomb scares) and so all classes finished on schedule. There were several periods when two health classes were scheduled, so the researcher returned the next day to administer the instrument to the dual period classes. Overall demographic information for all of the subjects is found in Appendix I. Students' data entries were entered into the computer by hand, and a reliability accuracy check (with 10% of the subjects' answers verified) resulted in 99.99% correct input. Internal reliability was calculated for the PIL, AES, YRBS, and resulted in 92.6, 78.6, and 59.2 internal alpha reliabilities respectively.

Data Analysis

Descriptive Statistics

Means, ranges, and standard deviations were calculated to determine Purpose in Life scores, Adolescent Egocentrism scores, and Youth Risk Behavior scores for all participants. Youth Risk Behavior Scores for males and females, for African-American, Anglo-American, and Mexican-American adolescents, and for students high in adolescent egocentrism and low in adolescent egocentrism also were calculated. In addition, descriptive information for all participants (frequencies and percentages) were calculated for each risky behavior item (Appendix K), adolescent egocentrism item (Appendix J), and purpose in life item (Appendix I). Similar descriptive statistics were calculated for selected items by groups (Appendix H) (i.e., gender, ethnicity).

Testing the Hypothesis

Regarding the testing of hypothesis one, a Pearson Product Moment Correlation Coefficient was calculated to determine the relationship between purpose in life and risky behaviors. It was expected that this relationship would be negative such that a student with low purpose in life scores would have corresponding high risky behavior scores.

The testing of hypotheses two, three and four were conducted by using analysis of variance. One way ANOVA assessed the direct effects of adolescent egocentrism (Hypothesis 2), and gender (Hypothesis 4) on risky behaviors. A three-way ANOVA tested, the direct effect of ethnicity on risky behaviors (Hypothesis 3).

Hierarchical multiple regression with interaction terms was used to determine the moderating effects of student gender, ethnicity, and adolescent egocentrism on the relationship between purpose in life and risky behaviors (Hypothesis 5). Five equations were calculated. All analyses included Youth Risk Behavior Survey (CDC, 1989) as the dependent variable. In Block 1, Purpose in Life (continuous variable) and student gender (dichotomous; 0 = female, 1 = male) were entered. The interaction term representing

Purpose in Life by gender was entered as next (Block 2). A significant change in the F -value from block 1 to block 2 in the regression analysis indicated a significant moderating effect (i.e., interaction effect). As recommended by Jaccard, Turrisi, and Wan (1990), the constituent variables were centered by subtracting the mean before creating the interaction terms. This technique does not change the parameter estimates but helps inhibit multicollinearity. This analytic strategy was replicated and repeated using AES (equation 2) and ethnicity (equations 3, 4, 5).

CHAPTER IV

RESULTS

Presented in Chapter IV are results of the statistical analyses used to test the research hypotheses delineated in Chapter III. Descriptive statistics, including means, ranges, and standard deviations were calculated to describe the students' responses on the various instruments in the questionnaire. To test the five hypotheses, inferential statistics included Pearson Product Moment Correlation, analysis of variance, and hierarchical multiple regression with interaction terms.

Descriptive Results

The demographic picture of the sample used in the study was detailed in Chapter III. Purpose in Life, Adolescent Egocentrism, and Youth Risk Behavior scores are presented in Table 3 for the entire sample and in Table 4 by gender and ethnicity. Overall, scores on Purpose in Life ranged from 29 to 140 points ($M = 97.27$, $SD = 22.26$). These scores are slightly lower than reported norms for a "normal" or nonpatient population ($M = 102$, $SD = 19$) (Crumbaugh & Maholick, 1981). The scores on the Adolescent Egocentrism Scale ranged from 16 to 75 ($M = 50.17$, $SD = 9.617$). These scores were slightly lower than norms reported by Enright et al. (1979) ($M = 53.6$, no SD reported). The scores on the Youth Risk Behavior Survey cannot be compared to a national norm, as the Center for Disease Control (1989) has yet to report data from their nationwide secondary school surveys. Also, only a portion of the survey was used for this study, risky behaviors not relevant were deleted, and those not acceptable to the school district were dropped. The

total risky behavior scores for these subjects ranged from 23 to 83 ($M = 43.24$; $SD = 10.10$).

Table 3

Means, Ranges, and Standard Deviations for PIL, AES, and YRBS

Variable	Range	Mean	Standard Deviation
PIL	29 - 140	97.27	22.26
AES	16 - 75	50.17	9.62
YRBS	23 - 83	43.24	10.10

Note: PIL = Purpose in Life; AES = Adolescent Egocentrism Scale; YRBS = Youth Risk Behavior Survey

Group Differences

Regarding gender, scores on each of the instruments were calculated for both boys and girls. The means and standard deviations by gender for these instruments are reported in Table 4. No significant differences were found on PIL by gender $F(1, 580) = 1.13$, $p = .288$, N.S.) (Female: $M = 97.97$, $SD = 21.53$; Male: $M = 96.64$, $SD = 22.92$). The AES scores are similar to those reported by Jahnke and Blanchard-Fields (1993) in that the girls ($M = 51.12$, $SD = 9.01$) reported higher adolescent egocentrism than boys ($M = 49.29$, $SD = 10.06$), though not significantly different $F(1, 580) = 1.25$, $p = .063$, N.S.). The differences between males and females on the Youth Risk Behavior Survey are consistent with research cited by the Center for Disease Control (1989), in that males reported greater involvement in risky behavior than females (Male: $M = 45.45$, $SD = 11.60$; Female: $M = 40.75$, $SD = 7.36$); this difference was significant $F(1, 580) = 2.49$, $p < .001$ (see also Hypothesis 4, Table 9).

Regarding ethnicity, scores on each of the instruments were calculated for each group (see Table 4), although no norms are reported in the instrument manuals for different ethnic groups. On the PIL, the African-American adolescents ($M = 102.48$, $SD = 21.46$) scored significantly higher than the Hispanic-American ($M = 96.13$, $SD = 22.53$) and Anglo-American ($M = 95.28$, $SD = 22.07$) adolescents $F(3, 561) = 3.09$, $p < .05$). The mean score for these African-American students on the Purpose in Life was most similar to the norm reported by Crumbaugh and Maholick (1989). There were no significant differences between the three ethnic groups on the AES ($F(1, 383) = 2.473$, $p < .117$). The AES scores for African-American students were $M = 50.14$, $SD = 8.61$; for Hispanic-American students were $M = 50.92$, $SD = 9.94$; and for Anglo-American students were $M = 48.88$, $SD = 9.63$). Adolescent egocentrism and the perception of invulnerability did not differ by ethnicity of student. All three of these group means had mean scores slightly lower than the norm (Enright et al., 1979). Results on the Youth Risk Behavior Survey indicated that Anglo-American adolescents reported significantly higher levels of participation in risky behaviors ($M = 45.64$, $SD = 11.61$) than did Hispanic-Americans ($M = 42.64$, $SD = 9.56$) and African-American teens ($M = 41.25$, $SD = 8.26$, $F(3, 561) = 4.739$, $p < .01$).

Regarding differences by gender and ethnicity (see Table 5), Black females reported the highest Purpose in Life Score ($M = 105$) along with the lowest risky behaviors scores ($M = 38.9$). White males reported the lowest Purpose in Life Scores ($M = 93.25$) and the highest risky behavior scores ($M = 48.37$). The Hispanic females had the second lowest Purpose in Life Scores ($M = 94.92$, while their male counterparts reported a Purpose in Life Score slightly higher than the overall score for males PIL ($M = 97.10$). The risky behavior scores for Hispanic males, Black males, and White females were very similar, $M = 44.93$, $M = 43.34$, and $M = 43.07$ respectively. The Adolescent Egocentrism scores varied little across gender or ethnicity.

Table 4

Descriptive Statistics by Gender for the PIL, AES, and YRBS

Group	<u>PIL</u>		<u>AES</u>		<u>YRBS</u>		p
	Mean	<u>SD</u>	Mean	<u>SD</u>	Mean	<u>SD</u>	
Females	97.74	21.52	51.17	9.01	40.75	2.36	.001
Males	96.64	22.92	49.29	10.06	45.45	11.60	
African-Am.	102.48	21.46	50.14	8.61	41.25	8.26	.001
Hispanic-Am.	96.13	22.53	50.92	9.94	42.84	9.56	.001
Anglo-Am.	95.28	22.07	48.88	9.63	45.64	11.61	.001

Note: PIL = Purpose in Life, AES = Adolescent Egocentrism Scale, YRBS = Youth Risk Behavior Survey

Table 5
Means by Gender and Ethnicity

	<u>PIL</u>	<u>AES</u>	<u>YRBS</u>
Black Females (n=57)	105.00	50.88	38.90
Black Males (n=64)	99.88	49.48	43.34
Hispanic Females (n=117)	94.92	52.41	40.23
Hispanic Males (n=146)	97.10	49.73	44.93
White Females (n=84)	97.18	49.31	43.07
White Males (n=79)	93.25	48.42	48.37
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Black Females (n=57)	105.00	50.88	38.90
Hispanic Females (n=117)	94.92	52.41	40.23
White Females (n=84)	97.18	49.31	43.07
<hr/>			
Black Males (n=64)	99.88	49.48	43.34
Hispanic Males (n=146)	97.10	49.73	44.93
White Males (n=79)	93.25	48.42	48.37
<hr/>			
<u>Note:</u> PIL = Purpose in Life; AES = Adolescent Egocentrism Scale; YRBS = Youth Risk Behavior Survey			
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Hypothesis 1

Purpose in life, as measured by Crumbaugh and Maholick's (1981) Purpose in Life Test, will have a negative relationship with adolescents' risk taking behaviors, as measured by the Youth Risk Behavior Survey (CDC, 1989).

A Pearson Product Moment Correlation Coefficient (see Table 6) was calculated to test this hypothesis. The result supported the hypothesis ($r = -.3490$, $p < .01$). Students with higher purpose in life tended to report fewer risky behaviors.

Table 6
Pearson Product Moment Correlation Matrix

	PIL	AES	YRBS
PIL	1.000	.2640**	-.3490**
AES		1.000	-.1124
YRBS			1.000

** - Significant LE $p < .01$, two-tailed

Note: PIL = Purpose in Life Test; AES = Adolescent Egocentrism Scale; YRBS = Youth Risk Behavior Survey

Hypothesis 2

Adolescent egocentrism, as measured by Enright et al.'s (1979) Adolescent Egocentrism Scale, will effect adolescents' risk-taking behaviors, as measured by the Youth Risk Behavior Survey (CDC, 1989), such that those with high levels of egocentrism will report greater involvement in risky behaviors.

A one-way analysis of variance was run (Table 7) to determine if level of adolescent egocentrism (low, high) had a direct effect on teenager's risky behaviors. The median score of 51 was selected as the cut-off score, with half the scores higher and half lower. A significant difference between low and high egocentrism groups on their reported involvement in risky behavior effect was found for this variable $F(1, 580) = 7.4202$, $p < .01$. Contrary to what was expected, students with higher egocentrism reported less risky behavior ($M = 41.2405$, $SD = 8.9486$) than students with lower egocentrism ($M = 44.2531$, $SD = 10.8453$). Thus, hypothesis two was retained and the conclusion drawn that adolescent egocentrism is related to risky behavior, albeit not in the expected way.

Table 7

Results of Analysis of Variance, YRBS by AES

Source	D.F.	Sum of Squares	Mean Ratio	F	p
Between Groups	1	749.32	749.32	7.42	.007**
Within Groups	580	58570.99	100.98		
Total	581	59320.32			

Note: ** $p < .01$ level of significance

Note: AES = Adolescent Egocentrism Scale; YRBS = Youth Risk Behavior Survey

Hypothesis 3

Ethnicity, as measured by self-identified ethnic group (i.e., African-American, Hispanic-American, Anglo-American), will have a direct effect on adolescents' risk-taking behaviors, as measured by the Youth Risk Behavior Survey (CDC, 1989), such that minority students will report the highest levels of risky behavior.

Analysis of variance was used to determine if ethnicity exerted a direct effect on the level of risky behavior. The results presented in Table 8 show a significant direct effect, $F(2, 544) = 7.334, p < .001$. Post hoc procedures (Tukey-B) were performed and differences in risky behavior scores were found. Anglo-Americans reported significantly more involvement in risky behaviors ($M = 45.669, SD = 11.619$) than did either African-American ($M = 41.25, SD = 8.26$) or Hispanic-Americans ($M = 42.84, SD = 9.56$). Thus, the hypothesis was retained, albeit not in the expected way since minority students reported lower levels of risky behaviors than did the Anglo-American students.

Table 8

Results of Analysis of Variance, YRBS by Ethnicity

Source	D.F. Squares	Sum of Squares	Mean Ratio	F	p
Main Effects	2	1454.91	727.46	7.334	.001**
Residual	544	53956.82	99.19		
Total	546	55411.73	101.49		

Note: ** indicates $p < .01$ level of significance; YRBS = Youth Risk Behavior Survey

Hypothesis 4

Adolescents' risk-taking behaviors, as measured by the Youth Risk Behavior Survey (CDC, 1989), will differ by student gender, such that boys' risky behaviors will be greater than girls'.

Results of the one-way analysis of variance (see Table 9) indicated that boys reported significantly more participation in risky behaviors ($M = 45.4545$, $SD = 11.603$) than did girls ($M = 40.7518$, $SD = 7.359$) $F(1, 580) = 33.1465$, $p < .001$. Thus, the hypothesis was supported.

Table 9

Results of the Analysis of Variance. YRBS by Gender

Source	DF	Sum of Squares	Mean Squares	F Ratio	p
Between Groups	1	3206.84	3206.84	33.1465	.001**
Within Groups	580	56113.49	96.78		
Total	581	359320.32			

Note: ** indicates $p < .001$ level of significance; YRBS = Youth Risk Behavior Survey

Hypothesis 5

The relationship between purpose in life, as measured by Crumbaugh and Maholick's (1981) Purpose in Life Test, and risky behavior, as measured by the Youth Risk Behavior Survey (CDC, 1989) will be moderated by student gender, ethnicity, and level of egocentrism, such that the relationship between purpose in life and risky behavior varies under these conditions.

The testing of this hypothesis required calculating five regression equations. The moderating effects of gender, ethnicity, and adolescent egocentrism were introduced into

the analysis via a cross-product term of these variables with purpose in life. The significance of the cross product term was the statistical index for testing the hypothesis. The first equation examined the moderating effect of gender on the relationship between purpose in life and risky behavior. The second equation examined the effects of low or high adolescent egocentrism on the relationship between purpose in life and risky behavior. The third, fourth, and fifth equations examined the relationship between purpose in life and risky behavior under the conditions of ethnicity (in equation 3: African-American and Hispanic-American were compared; in equation 4: Hispanic-American and Anglo-American were compared; and in equation 5: Anglo-American and African-American compared. The following are the multiple regression equations with the interaction terms:

$$\text{Equation 1: } Y' = a + B_1(\text{PIL}) + B_2(\text{gender}) + B_3(\text{PIL} \times \text{gender}) + e$$

$$Y' = 55.70 + (-.153) + (4.51) + (-.081) + e$$

$$\text{Equation 2: } Y' = a + B_1(\text{PIL}) + B_2(\text{AES}) + B_3(\text{PIL} \times \text{AES}) + e$$

$$Y' = 63.85 + (-.132) + (-.157) + (.001) + e$$

$$\text{Equation 3: } Y' = a + B_1(\text{PIL}) + B_2(\text{ethnic 1}) + B_3(\text{PIL} \times \text{ethnic 1}) + e$$

$$Y' = 57.02 + (-.147) + (-.884) + (-.039) + e$$

$$\text{Equation 4 } Y' = a + B_1(\text{PIL}) + B_2(\text{ethnic 1}) + B_3(\text{PIL} \times \text{ethnic 1}) + e$$

$$Y' = 50.33 + (-.053) + (-2.54) + (.066) + e$$

$$\text{Equation 5 } Y' = a + B_1(\text{PIL}) + B_2(\text{ethnic 1}) + B_3(\text{PIL} \times \text{ethnic 1}) + e$$

$$Y' = 43.62 + (.016) + (-3.42) + (.106) + e$$

The hypothesis that student gender would moderate the relationship between purpose in life and risky behavior was supported (see Table 10). These findings suggested that the negative relationship between PIL and YRBS was stronger for boys than for girls $F(3, 578) = 5.4977, p < .001$. However, the results also indicated that gender did not exert a pure moderating effect because the main effects for gender and PIL failed to

become nonsignificant once the interaction term was entered into the equation. In other words, gender exerted a direct and a moderating effect on purpose in life and risky behavior.

Table 10

Regression Analysis of Purpose in Life and Youth Risk Behavior Moderated by Gender

Independent Variable	Dependent variable	
	B	Beta
Purpose In Life	-.15	-.3367*
Gender	4.51	.2227*
Purpose in life by Gender(a)	-.08	-.0885*
Constant	55.69	
E (df)	5.49 (3, 578)	
Adjusted RSquare	.18	

Note: (a) gender was coded: Female = 0, Male = 1; * $p < .001$

It was hypothesized that adolescent egocentrism would moderate the relationship between purpose in life and risky behavior (equation 2). Findings (see Table 11) indicated that the relationship between purpose in life and risky behaviors was not affected by level of egocentrism. Adolescent egocentrism did exert a direct effect on students' risky behavior levels. In other words, knowing whether the teen was low or high in adolescent egocentrism did not affect the way purpose in life was translated into participation in risky behaviors.

Table 11

Regression Analysis of Purpose in Life and Youth Risk Behavior Moderated by Adolescent Egocentrism

Independent Variable	Dependent Variable	
	B	Beta
Purpose In Life	-.13	-.29 *
Adolescent Egocentrism (AES)	-.16	-.15 *
Purpose in life by AES (a)	.002	-.04
Constant	63.85	
F -Change (df)	.93 (3, 578)	
Adjusted RSquare	.14	

Note: (a) Adolescent egocentrism was coded: Low = 0, High = 1; * $p < .001$

The third, fourth, and fifth equations examined how student ethnicity affected the relationship between purpose in life and risky behavior. The student population represented three ethnic groups. Because the interaction term needed to be represented by a dummy code, comparisons were made between only two groups at a time in each regression (African-American by Hispanic-American, Hispanic-American by Anglo-American, and Anglo-American by African-American).

In equation three, the condition of students being African-American or Hispanic-American were examined to determine the effect on the relationship between purpose in life and risky behavior (see Table 12). These findings indicated no moderating effect. That is, being African-American rather than Hispanic-American did not affect the primary relationship.

The fourth equation compared students who were Hispanic-American or Anglo-American to examine the effects of ethnicity on the relationship between purpose in life and risky behaviors. Again there was no moderating effect, meaning that the negative relationship between purpose in life and risky behavior was not changed significantly under the condition of the student being Hispanic-American or Anglo-American.

The final equation investigated the moderating effects being Anglo-American or African-American on the relationship (see Table 12) between purpose in life and risky behavior. This relationship proved to exert a purely moderating influence. The negative relationship between purpose in life and risky behavior weakened when students were African-American compared to Anglo-American. Correlations were used to examine the relationship between Purpose in Life and Youth Risk Behavior Survey by ethnic group. Findings supported the moderating effect, such that the association for Anglo-American students was $-.401^{**}$ ($p < .001$), whereas it was $-.273^{**}$ for African-Americans.

Table 12

Regression Analysis of Purpose in Life and Youth Risk Behavior Moderated by Ethnicity

Independent Variable	Dependent variable	
	B	Beta
Purpose In Life	-.15	- .36*
Ethnicity (a)	-.88	- .04
Purpose in life by Ethnicity (a)	-.04	- .06
Constant	57.02	
<i>F</i> -Change (<i>df</i>)	.38 (3, 380)	
Adjusted RSquare	.10	
Purpose In Life	-.05	- .11
Ethnicity (b)	-2.54	- .12**
Purpose in life by Ethnicity (b)	.07	- .26
Constant	50.33	
<i>F</i> -Change (<i>df</i>)	2.34 (3, 422)	
Adjusted RSquare	.15	
Purpose In Life	.02	.03
Ethnicity (c)	- 3.42	-.16
Purpose in Life by Ethnicity (c)	.11	.39*
Constant	43.62	
<i>F</i> -Change (<i>df</i>)	3.94* (3, 280)	
Adjusted RSquare	.17	

Note: (a) Ethnicity was coded: African-American = 0, Hispanic-American = 1

(b) Ethnicity was coded: Hispanic-American = 0, Anglo-American = 1

(c) Ethnicity was coded: Anglo-American = 0, African-American = 1

* $p < .05$, ** $p < .01$

CHAPTER V

SUMMARY, LIMITATIONS, CONCLUSIONS, RECOMMENDATIONS, AND IMPLICATIONS

This chapter consists of five sections: summary of the research, limitations of the study, conclusions that may be drawn from the study, recommendations for further research, and implications of the results for school and community agency counselors. Several of the findings and some interesting trends are highlighted in terms of their implications for both future research and clinical practice.

Summary

This study was an examination of how purpose in life affects the decision of adolescents to engage in risky behaviors. It examined how the relationship between purpose in life and risky behaviors changes under conditions of gender, adolescent egocentrism, and ethnicity. According to previous literature, adults low in purpose in life are more inclined to be depressed and suicidal (Baum, & Stewart, 1990), be involved in drug use (Nurmi, 1991; Padelford, 1974; Ruffin, 1984), drink more alcohol (Harlow et al., 1986; Schlesinger et al., 1990), smoke more marijuana (Padelford, 1974; Shean & Fechtman, 1971), and engage in more risky behaviors (Walters & Klein, 1980). These previous studies utilized older adolescent (i.e., college age students) and adult populations, while this study attempted to examine the relationship with younger adolescents (i.e., 9th & 10th graders). It also expanded the literature, heretofore focused on White subjects, to include an ethnically diverse sample of African-American, Hispanic-American, and Anglo-American adolescents.

The initial hypothesis involving the negative relationship between adolescent purpose in life and their risky behavior levels was supported. Students high in purpose in life were less involved in risky behaviors, whereas students lower in purpose in life were more involved in risky behaviors. This held true for both genders and all three ethnic groups. Previous research has suggested that young adults without a clearly defined purpose in life are more apt to use drugs and engage in risky behaviors. The present study confirms those findings for younger adolescents ($M = 15.5$ years old). Adolescence is a time when separation and individuation is often manifested in the challenging of parental norms and acceptable behaviors, resulting in actions that are contradictory to the mainstream of permissive behaviors. The teenage years have been cited as a time of experimentation, risk-taking, and rebellion against parental norms (Arnett, 1991; Jessor & Jessor, 1977; Jessor, 1992). According to this qualification, the students in this study appear to be typical.

The second hypothesis maintained that students' level of adolescent egocentrism would affect level of risky behavior. The results from this study indicate that adolescent egocentrism is related to risky behavior ($F(1, 580) = 7.42, p < .01$) in a significant although unexpected way. For this sample of high school students, those low in egocentrism reported higher levels of risky behaviors (Mean = 44) compared to those with higher levels of egocentrism (Mean = 41). Findings in this study were contrary to those of Dolcini et al. (1989), who found that students high in egocentrism engaged in smoking cigarettes despite the fact that they acknowledged the dangers involved. They were aware of the dangers but chose to ignore them and smoked anyway. In contrast, in this study students high in egocentrism reported less involvement in risky behaviors than students low in egocentrism. One way to interpret these findings is that students who perceived themselves as invulnerable reported lower levels of risky behaviors. This finding is counter-intuitive to the perception that teens who see themselves as immune to

the consequences of their dangerous behaviors are more likely to participate in risks. One subscale of the Adolescent Egocentrism Scale measured a sense of general self-focus, the attitude of self-involvement. When these findings are scrutinized from the definition of this subscale, it appears those students high in general self-focus may have a stronger sense of uniqueness and/or a stronger sense of self. Thus, these students are able to resist the peer pressure to engage in risky behaviors and perhaps are more apt to make decisions based on their self needs rather than of the group. This ability to resist the pressure of the group and refuse to participate in the dangerous activities encouraged by this form of social coercion might explain the findings more accurately.

The third hypothesis attempted to determine if the ethnicity of the student effected risk-taking behaviors. This hypothesis was retained ($F(2, 544) = 7.33; p < .01$), and results were similar to those in the literature regarding ethnicity and drug use. White male students in this sample reported the highest levels of risky behaviors (see Table 5) (Mean = 48.37), followed by Hispanic males (Mean = 44.93) and then Black males (Mean = 43.34). Anglo-American youth, and males in particular, use more alcohol and drugs than minority adolescents or females. Newcomb and Bentler (1985) found that the highest frequency for all drug use was found among Anglo and Hispanic adolescents, with Blacks reporting moderate levels of drug use. According to Thompson and Simmons-Cooper (1988), Anglo-Americans reported greater use of drugs and alcohol than minorities. Similarly, Newcomb and Bentler (1985) reported higher hard drug use among Anglo-American and Hispanic-Americans than African-Americans. It may be that because the majority of the questions on the Youth Risk Behavior Survey concerned alcohol, tobacco, and drug use, the results of higher risky behaviors for Anglo-American adolescents in this study are congruent with the literature. If the survey had accessed other risky behaviors, such as sexual practice, assault, or other delinquent-type behavior the results may have been different.

The fourth hypothesis investigated the effects of student gender on risk taking behaviors, such that boys' risky behaviors would be greater than girls'. This hypothesis was supported. Boys were more likely than females to participate in and report risky behavior. This finding is consistent with previous literature. Although some studies find that girls are increasing their risky behaviors, males still report higher levels of participation (Farrow, 1987; Irwin & Millstein, 1986; Trotter, 1982).

After examining the direct effects of the four independent variables on risky behaviors, the second step involved examining the moderating effects of (a) gender, (b) levels of egocentrism, and (c) ethnicity on the relationship between purpose in life and risky behaviors. Essentially, the study attempted to determine the following: Does the relationship between purpose in life and risky behavior change if the student is male or female, low or high in egocentrism, or African-American, Hispanic-American, or Anglo-American. The results of the effect of gender on purpose and risky behaviors indicated that the negative relationship between PIL and YRBS was stronger for boys than girls. This means that when males and females were compared, lower levels of purpose in life associated with higher levels of engagement in risky behaviors was greater for the males.

When the effects of adolescent egocentrism on the relationship between purpose in life and risky behavior was examined, the findings indicated that knowing whether an adolescent was low or high in egocentrism offered no insight into the relationship between the primary variables. In other words, the strength of the relationship between PIL and YRBS remained basically the same whether the student reported low or high levels of egocentrism.

The paucity of literature regarding how the relationship between purpose in life and risky behavior is moderated by ethnicity was unique to the present study. There was no difference in the primary relationship when African-American and Hispanic-American teens were compared, nor when Hispanic-American and Anglo-American adolescents

were compared. However, there was a purely moderating effect of ethnicity on the relationship between purpose in life and risky behaviors when the Anglo-American and the African-American adolescents were examined. These results suggested that the relationship between purpose in life and risky behavior weakened when the adolescent was African-American. Therefore, when an African-American student was low in purpose in life there was not as great an increase in risky behaviors as there was when the student was Anglo-American and low in purpose in life. It seems that White students low in purpose in life are more likely to participate in risky behaviors than their Black peers (particularly White males).

In summary, purpose in life proved to be a construct that provided information regarding an adolescents' risky behavior level. Consistently, purpose in life was the strongest predictor of adolescent risk taking. In this sample of 582 students, it accounted for approximately 17% of the variance, a respectable percentage for social science research. Students who felt their life was without purpose or meaning were likely to report higher levels of drinking, smoking cigarettes, smoking marijuana, or using other drugs than were peers with a clear meaning in life. This relationship held true for males and females and for Blacks, Hispanics, and Whites. The interaction of ethnicity on the primary relationship indicated that White students with low purpose in life reported higher levels of risky behaviors than did Black students with low purpose. The sources of and quality of the meaning have yet to be explored, but the conclusion remains: purpose in life has a significant negative relationship with risky behaviors for this sample of students.

Limitations of the Study

Limitations of this study fall into four major categories. The first category applies to characteristics of the participants, particularly those from the Hispanic community. These students currently were attending high school. Because 50% of Hispanics drop out of

high school (Gilbert & Alcocer, 1988), the findings regarding Hispanics are not generalizable to all Hispanic adolescents. Along these same lines, this was a select sample of Hispanics, because those still in school may reflect Hispanics holding a higher level of academic aspirations. In addition, these Hispanics resided in an urban setting in the Southwest, questioning the generalizability of the findings to Hispanics in other urban settings or in rural areas (i.e., migrant farmers). In addition, all Hispanics were grouped together, failing to respect the differences between various Spanish-speaking cultures (Mexican, Puerto Rican, Cuban, and other Central and South Americans). However, it should be noted that approximately 85% the Hispanic participants were Mexican-American (personal communication with school administration, November, 20, 1993). Most students were middle-class, so that the results cannot be extended to those of other economic standing. The racial and gender representation of the participants in this study is similar to that of the secondary school population in the district (personal communication with school administration, March, 29, 1994). Finally, only adolescents in the Spring semester health classes were included, limiting the generalizability to all students in the schools.

The second major category of limitations stems from the reliability of self-report measures, particularly self-reported risky behaviors. In light of this limitation, measures to protect anonymity and confidentiality were taken (see Chapter 3). In addition, it should be noted that Levine and Singer (1988) reported estimates of drug use based on self-report are consistently similar to rates based on other sources. They also stated that young people generally report the use of drugs and delinquency accurately, although lower income Whites tend to under-report delinquent behavior. Social desirability may have some limited effect on these results (Ebersole & Quiring, 1989), especially on reports of purpose in life.

A third limitation involves the type of risky behaviors surveyed. Prior to approval and administration of the study, school district personnel required that all questions pertaining to sexual practices and sexual protection used by students be removed. Thus, students were not allowed to answer questions regarding their sexual practices, a risky behavior practiced by many adolescents. Urberg (1982) estimated that for American teenagers, one in five 16 year-olds were sexually active, and Metzler, Noell, and Biglan (1992) report adolescents have high rates of sexually transmitted disease's (STD's) and HIV. In addition, the rate of STD's in adolescents is as high 30% (Biglan et al., 1990). In the pilot study ($n = 26$) the negative correlation between purpose in life and risky behaviors with sexual practice questions included was greater than that found in the present study ($r = -.56$ compared to $r = -.34$). The inability to access this predominant activity of teens in the 1990s was a severe limitation to achieving a complete picture of the relationship between purpose in life and risky behavior.

The fourth category of limitation is related to the Adolescent Egocentrism Scale and the conclusions drawn from those findings. When the 15 items of the scale are examined individually, the face validity for the subscale of personal fable is questionable. Questions from the scale pertaining to personal fable subscale include: "Accepting that others don't know what it's like being me" and "Trying to get others to know what it's like being me." It would appear that the AES measures the general concept of self-focus and imaginary audience rather than personal fable. There are no questions that seem to tap into adolescents' perceptions of invulnerability or immunity to the consequences of risky behaviors. The conclusions drawn from this scale, then, need to be viewed from the perspective of general self-focus rather than personal fable.

Conclusions

The results of this study presented few surprises. The negative relationship between purpose in life and risky behaviors was in line with previous literature suggesting that an

individual with no purpose in life may feel that they have nothing to lose. The lower mean PIL score for the subjects in this study compared to the norms indicated these teenagers may sense a greater struggle for meaning than do adults who have a slightly higher purpose in life. The existential angst created by not being able to answer the adolescent developmental questions of "why am I here?" and "where am I going?" may lead some teens to participate in more risky activities. The negative correlation between PIL and YRBS illustrates the relationship between feeling life is purposeful and engaging in behaviors which pose a grave risk. The mental stability and adjustment reported by Ebersole and Kobayakawa (1989) for those with high purpose in life may lessen the feelings of noogenic neurosis identified by Frankl (1955) which can lead to despair. This despair in turn may lead to risk taking.

The results of differences in risky behavior levels by gender also were not surprising. Previous research findings indicated that adolescent males engage in more risky behaviors than do adolescent females. This difference was substantiated. The scope of this research was not to answer why these differences exist. Whatever the cause, males are participating in more risky behaviors.

The effects of adolescent sense of invulnerability proved to be less clear cut than evident in previous literature. It seems the teens in this study had a slightly lower level of egocentrism than the norms but not significantly lower. Findings indicated that teens high in the belief of invulnerability were less likely to test that belief with subsequent risky behaviors. Previous research by Dolcini et al. (1989) led one to expect those high in egocentrism to be aware of their risks and yet engage in them regardless. In this sample of students, those high in invulnerability (egocentrism) reported not engaging in as high risky behaviors as those who did not see themselves as invulnerable. Although the personal fable aspect of adolescent egocentrism includes the misperception of consequences for risky behavior, the general self-focus subscale may be the reason for

this unexpected finding. The concept of general self-focus may include this stronger sense of self and an accompanying greater resistance to the peer pressure associated with risk participation. When the 15 items on the AES are examined, the face validity of the instrument leans more to a measure of self-focus than invulnerability. If the AES measures general self-focus more accurately than personal fable, students high in self-focus may be able to resist peer pressure associated with these risky behaviors.

Another possible reason students aware of their risk may choose not to engage in risky behaviors, is the effects of health education classes and media advertising teaching students the consequences of alcohol, tobacco, and drug use. Students in the 1990's are inundated with commercials and advertising displaying the dangers of cocaine use, drinking and driving, and smoking. Regarding ethnic differences in reported levels of adolescent egocentrism, no significant differences were found. It appears adolescent egocentrism as measured by Enright et al.'s (1979) may be culture fair.

Recommendations for Further Research

Recommendations for future research are based on the results of the study and are designed, in part, to address the limitations outlined above. The need to access ethnically diverse population will continue to be vital to studies of American youth. The face of the American population is changing and to understand American adolescent behaviors, all cultures' of American students need to be included in research (Glick, 1989).

This study of adolescent risky behaviors involved smoking, drinking, and drug use but omitted sexual activity, a major risky behavior. Five students confronted the researcher during data collection and asked how sexual practices could be left out of such a survey. The omission of this risky behavior no doubt affected the results of the study. The literature on teenage sexual practices indicates they are having unprotected sex, getting pregnant, spreading sexually transmitted diseases, and contracting AIDS (Biglan et al., 1992; Donovan & Jessor, 1985; Urberg, 1982). Future research must include

sexual activity and would strengthen these conclusions and make them more current. The school district's decision to remove the inclusion of the sexuality questions was a loss to the research.

A qualitative component to determine the sources of meaning in the lives of adolescents would add richness to the information gained from this study. It may be the kinds, quality, degree, and permanency of meanings may shed important light on the relationship already established between purpose in life and risky behavior. The use of qualitative assessment instruments to gather information about types of meaning and the social acceptability of the meaning opens new avenues to the research. For example, if the source of meaning for the student is a socially unacceptable purpose (i.e., gang membership or selling drugs), implications of the relationship of this purpose in life to risky behaviors changes drastically. If a researcher is able to discriminate between types of meaning, risky behavior results may change as well.

The categories of meaning established by DeVogler and Ebersole (1980, 1983) for Anglo-American adolescent subjects needs to be applied to an ethnically diverse group as well. Interviews could be developed that allow for bilingual use, with the interview protocol available in two languages, necessary to access Spanish-speaking parents and students. Although in this study only four students spoke no English, future studies that include greater numbers of Hispanic-Americans might require bilingual abilities.

To counteract the limitation of accessing only self-reported risky behavior, future studies might include significant others in the teen's environment to verify reported risky behaviors. For example, a study might compare parental perception of risky behavior and teen purpose in life with adolescent perception of risky behavior and purpose in life. There may be a significant difference between perception of risk and reality of risk.

Implications for Counseling Practice

The negative relationship between purpose in life and risky behaviors for young adolescents extends present literature currently established for older adolescents (college age) and adults. It seems that teenagers are capable of ascertaining whether their life has meaning or purpose (DeVogler & Ebersole, 1983) and, thus, intervention strategies may be instituted to help teens develop this existential goal and prevent injury or death due to risky behaviors.

The differences by gender imply that boys and girls may deal with low purpose in life in different ways, and that their purpose in life may relate to risky behaviors in different ways, with males engaging in more risk. Counselors need to be aware of these differences, both to help males find healthy ways to deal with their low purpose in life and to determine how females deal with low purpose. One implication for counselors is that males act out their low purpose in life in ways that may be more observable (being drunk, smoking, being high). Female clients may internalize their existential quandary in less obvious behaviors resulting in counselors misinterpreting actions. Thus, boys are identified as having a problem because their risky behaviors result in more arrests and more public notice bringing them to the attention of the mental health care system. Girls, meanwhile, suffer in less obtrusive ways with the mental health care system assuming all is well when, in fact, their existential angst is just as troublesome. It is important to avoid stereotyping male behaviors or ignoring risky female behaviors, because teens as a whole have troublesome behavioral statistics.

Clearly the PIL instrument is a valuable tool for use by high school counselors to identify those students with low purpose in life. It could be used as an assessment technique to help teens develop life goals and long range plans. Teachers and school counselors might integrate the concept of goal setting and long-range planning into health curriculum to aid students in their ability to set goals. The PIL is short, requires little

work to administer, in this study had an internal alpha of .926, and appears to measure what it purports to measure. As a part of freshman orientation, counselors could administer the PIL, identify students at high risk (i.e., those with low PIL), and implement strategies across disciplines to help students learn the steps to finding a purpose in life. For teenagers, the identification of meaning and purpose in life could make the difference in their decision to participate in activities that, both short-term (drinking and driving, drug use) and long-term (smoking, drinking), pose great risks to their health.

Though the PIL explains 10-17% of the variance in the relationship between purpose in life and risky behavior, acceptable in social science research, there is a remaining 80% of the variance left unanswered. Other explanations for adolescent involvement in risky behaviors include family structure (divorce, single parent, dual wage earners), socio-economic status (Jessor, 1992), peer involvement (Kandel, 1985), and parental involvement in drug use (Levine & Singer, 1988). It will be vital that professionals working with adolescents to investigate all factors at work in their decision-making process that may influence them to engage in risky behaviors, with purpose in life providing just one piece of the puzzle. Global assessments of the teens' home-life, intrapersonal variables, interpersonal variables, and school life all are aspects of concern when attempting to determine how to help adolescents survive this part of their life cycle.

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Appendix A
Letter of Purpose and Parental Consent

Dear Parent or Guardian;

Adolescents today face decisions daily that affect their lives in sometimes serious ways. The decision whether to use drugs and alcohol, or to drink and drive are some of the serious decisions our teenagers must make. Your child's health class has been selected to participate in an important study of adolescents' participation in risky behaviors. This study will ask about their meaning or their purpose in life and their decision to participate in these health-related activities. Hopefully, the results will help counselors and teachers find ideas about how to decrease risky behaviors.

Your child will complete a brief questionnaire in class that poses no risk to your child. Your child's privacy and anonymity will be protected. No student, class, or school will be mentioned by name in any of the results. The project has been approved by your child's health teacher, the school principal, the central administration personnel, and a human subject's review by the university. If you have any questions regarding the survey, please contact Martha L. Sayles, University of North Carolina at Greensboro, Counselor Education Program, at (910) 334-5100.

Martha Sayles

Assistant Principal or Principal
(over please)

If you do **not** want your child to participate in the project, complete this form and have him or her return it to their health teacher.

Child's Name: _____ Grade: _____

Health Teacher and class period: _____

I have read and understand this form concerning the survey:

My child does NOT have my permission to participate.

Parent's signature: _____

Date: _____

Phone Number: _____

Appendix B

Demographic Information Sheet

Please darken the circles the on the bubble sheet corresponding to the responses that best describe you.

1. How old are you?
 - a. 14
 - b. 15
 - c. 16
 - d. 17
 - e. 18 or older

2. What is your gender?
 - a. female
 - b. male

3. What is your current grade level ?
 - a. 9th
 - b. 10th
 - c. 11th
 - d. 12th

4. How do you describe yourself ethnically ?
 - a. African-American
 - b. Anglo-American
 - c. Asian-American
 - d. Hispanic- American
 - e. Native-American
 - f. other

5. How many children do you have living in the same place as you?
 - a. 0
 - b. 1
 - c. 2
 - d. 3
 - e. 4
 - f. 5 or more

6. Are your parents divorced or separated?
 - a. no
 - b. yes

7. If your parents are divorced, how long have they been divorced?
 - a. my parents are not divorced
 - b. under 1 year
 - c. 1 - 3 years
 - d. 4 - 6 years
 - e. 7 - 10 years
 - f. more than 10 years

8. Which best describes the adult or adults with whom you live?
 - a. mother only
 - b. father only
 - c. both my biological mother and father
 - d. mother and stepfather
 - e. father and stepmother
 - f. grandparents or other family relatives (aunts, uncles)
 - g. foster parents
 - h. other

9. Do you receive free or reduced lunch or breakfast?
 - a. no
 - b. yes

Appendix C

The Purpose in Life Test -Crumbaugh and Maholick

For each of the following statements fill in the circle on **your bubble sheet** that would be most true for you. Note that the numbers always extend from one extreme feeling to its opposite kind of feeling. "Neutral" implies no judgment either way; try to use this choice as little as possible.

1. I am usually:

1	2	3	4	5	6	7
completely bored			neutral			enthusiastic exuberant

2. Life to me seems:

1	2	3	4	5	6	7
completely routine			neutral			always exciting

3. In life I have:

1	2	3	4	5	6	7
no goals or aims at all			neutral			very clear goals and aims

4. My personal existence is:

1	2	3	4	5	6	7
utterly meaningless and without purpose			neutral			very purposeful and meaningful

5. Every day is:

1	2	3	4	5	6	7
exactly the same			neutral			constantly new

6. If I could choose, I would:

- | | | | | | | |
|-----------------------------------|---|---|---------|---|--|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| prefer never to
have been born | | | neutral | | Like nine more
lives just like this one | |
7. After retiring, I would:
- | | | | | | | |
|--|---|---|---------|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| loaf completely
the rest of my life | | | neutral | | do some of the
exciting things I have
always wanted to do | |
8. In achieving life goals I have:
- | | | | | | | |
|------------------------------|---|---|---------|---|---------------------------------------|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| made no progress
whatever | | | neutral | | progressed to
complete fulfillment | |
9. My life is:
- | | | | | | | |
|-----------------------------------|---|---|---------|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| empty filled
only with despair | | | neutral | | running over with
exciting good things | |
10. If I should die today, I would feel that my life has been:
- | | | | | | | |
|----------------------|---|---|---------|---|-----------------|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| completely worthless | | | neutral | | very worthwhile | |
11. In thinking of my life, I:
- | | | | | | | |
|-----------------------------|---|---|---------|---|--|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| often wonder
why I exist | | | neutral | | always see a reason
for my being here | |

12. As I view the world in relation to my life, the world:

1	2	3	4	5	6	7
completely confuses me			neutral			fits meaningfully with my life

13. I am a :

1	2	3	4	5	6	7
very irresponsible person			neutral			very responsible person

14. Concerning man's/woman's freedom to make his/her own choices, I believe man/woman is:

1	2	3	4	5	6	7
completely bound by limitations of heredity and environment			neutral			absolutely free to make life choices

15. With regard to death, I am:

1	2	3	4	5	6	7
unprepared and frightened			neutral			prepared and unafraid

16. With regard to suicide, I have:

1	2	3	4	5	6	7
thought of it seriously as a way out			neutral			never given it a second thought

17. I regard my ability to find a meaning, purpose, or mission in life as:

1	2	3	4	5	6	7
practically none			neutral			very great

18. My life is:

1	2	3	4	5	6	7
out of my hands and controlled by external factors			neutral			in my hands and I am in control of it

19. Facing my daily tasks is:

1	2	3	4	5	6	7
a painful boring experience			neutral	a source of pleasure and satisfaction		

20. I have discovered:

1	2	3	4	5	6	7
no mission or purpose in life			neutral	clear-cut goals and a satisfying life purpose		

Appendix D

The Adolescent Egocentrism Scale

Please respond to the following statements with one of five responses: fill in the circle on your bubble sheet best describes your response to each statement.

1	2	3	4	5
no	little	some	much	great
importance	importance	importance	importance	importance

1. Becoming real good at being able to think through my own thoughts.
2. When walking in late to a group meeting, trying not to distract everyone's attention.
3. Accepting the fact that others don't know what it's like being me.
4. Having other people to better understand why I do the things the way I do.
5. Thinking about my own feelings.
6. Trying to figure out how other people will react to my accomplishments and failures.
7. Being able to daydream about great successes and thinking of other people's reactions.
8. Becoming real good at knowing what others are thinking of me.
9. Explaining my unique feelings and viewpoints to others so they can get some idea about what I am like.
10. Knowing my own thoughts and feelings.
11. Being able to think about having a lot of money someday and how people will admire that.
12. Trying to get other people to get to know what it is like being me.

13. Thinking about myself.
14. Trying and being able to figure out if two people are talking about me when they are looking my way.
15. Coming to accept that no one will ever really understand me.

Appendix E

Youth Risk Behavior Survey
The Center for Disease Control
(1989, selected questions taken from section B)

Instructions: Read each question carefully. Fill in the circle on your answer sheet that matches the letter of your answer. CHOOSE THE ONE BEST ANSWER FOR EACH QUESTION

1. Compared to other students in your class, what kind of student would you say you are?
 - a. One of the best
 - b. Far above the middle
 - c. A little above the middle
 - d. In the middle
 - e. A little below the middle
 - f. Far below the middle
 - g. Near the bottom

2. During the past 30 days, how many times did you drive a car or other vehicle when you had been drinking alcohol?
 - a. 0 times
 - b. 1 time
 - c. 2 or 3 times
 - d. 4 or 5 times
 - e. 6 or more times

3. Have you ever tried cigarette smoking, even one or two puffs?
 - a. No
 - b. Yes

4. Do you think you will try cigarette smoking during the next 12 months?
 - a. I have already tried cigarette smoking
 - b. Yes, I think I will try cigarette smoking during the next 12 months
 - c. No, I think I will not try cigarette smoking during the next 12 months

5. How old were you when you smoked a whole cigarette for the first time?
 - a. I have never smoked a whole cigarette
 - b. Less than 9 years old
 - c. 9 or 10 years old

- d. 11 or 12 years old
- e. 13 or 14 years old
- f. 15 or 16 years old
- g. 17 or more years old

6. Have you ever smoked cigarettes regularly, that is, at least one cigarette every day for 30 days?

- a. No
- b. Yes

7. How old were you when you first started smoking cigarettes regularly? (at least one cigarette every day for 30 days)

- a. I have never smoked cigarettes regularly
- b. Less than 9 years old
- c. 9 or 10 years old
- d. 11 or 12 years old
- e. 13 or 14 years old
- f. 15 or 16 years old
- g. 17 or more years old

8. During the past 30 days, how many days did you smoke cigarettes?

- a. 0 days
- a. 1 or 2 days
- c. 3 to 5 days
- d. 6 to 9 days
- e. 10 to 19 days
- f. 20 to 29 days
- g. All 30 days

9. During the past 30 days, on the days you smoked, how many cigarettes did you smoke per day?

- a. I did not smoke cigarettes during the past 30 days
- b. Less than 1 cigarette per day
- c. 1 cigarette per day
- d. 2 to 5 cigarettes per day
- e. 6 to 10 cigarettes per day
- f. 11 to 20 cigarettes per day
- g. More than 20 cigarettes per day

10. During the past 6 months, did you try to quit smoking cigarettes?

- a. I did not smoke cigarettes during the past 6 months
- b. No
- c. Yes

11. During the past 30 days, did you use **chewing tobacco**, such as Redman, Levi Garrett, or Beechnut, or **snuff**, such as Skoal, Skoal Bandits, or Copenhagen?

- a. No, I did not use chewing tobacco or snuff during the past 30 days
- b. Yes, **Chewing tobacco** only
- c. Yes, **snuff** only
- d. Yes, both **chewing tobacco** and **snuff**.

The next four questions ask about drinking alcohol. This includes drinking beer, wine, wine coolers, and liquor such as rum, gin, vodka, or whiskey. For these questions, drinking alcohol does not include drinking a few sips of wine for religious purposes.

12. How old were you when you had your first drink of alcohol other than a few sips?

- a. I have never had a drink of alcohol other than a few sips
- b. Less than 9 years old
- c. 9 or 10 years old
- d. 11 or 12 years old
- e. 13 or 14 years old
- f. 15 or 16 years old
- g. 17 or more years old

13. During your life, on how many days have you had at least one drink of alcohol?

- a. 0 days
- b. 1 or 2 days
- c. 3 to 9 days
- d. 10 to 19 days
- e. 20 to 39 days
- f. 40 to 99 days
- g. 100 or more days

14. During the past 30 days, on how many days did you have at least one drink of alcohol?

- a. 0 days
- b. 1 or 2 days
- c. 3 to 5 days
- d. 6 to 9 days
- e. 10 to 19 days
- f. 20 to 29 days
- g. All 30 days

15. During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a row, that is, within a couple of hours?

- a. 0 days

- b. 1 day
- c. 2 days
- d. 3 to 5 days
- e. 6 to 9 days
- f. 10 to 19 days
- g. 20 or more days

The next three questions ask about the use of marijuana, which is also called grass or pot.

16. How old were you when you tried marijuana for the first time?

- a. I have never tried marijuana
- b. less than 9 years old
- c. 9 or 10 years old
- d. 11 or 12 years old
- e. 13 or 14 years old
- f. 15 or 16 years old
- g. 17 or more years old

17. During your life, how many times have you used marijuana?

- a. 0 times
- b. 1 or 2 times
- c. 3 to 9 times
- d. 10 to 19 times
- e. 20 to 39 times
- f. 40 to 99 times
- g. 100 or more times

18. During the past 30 days, how many times did you use marijuana?

- a. 0 times
- b. 1 or 2 times
- c. 3 to 9 times
- d. 10 to 19 times
- e. 20 to 39 times
- f. 40 or more times

19. How old were you when you tried any form of cocaine, including powder, crack, or freebase, for the first time?

- a. I have never tried cocaine
- b. less than 9 years old
- c. 9 or 10 years old
- d. 11 or 12 years old
- e. 13 or 14 years old
- f. 15 or 16 years old
- g. 17 or more years old

20. During your life, how many times have you used **any** form of cocaine, including powder, crack, or freebase?

- a. 0 times
- b. 1 or 2 times
- c. 3 to 9 times
- d. 10 to 19 times
- e. 20 to 39 times
- f. 40 or more times

21. During the past 30 days, how many times did you use **any** form of cocaine, including powder, crack, or freebase?

- a. 0 times
- b. 1 or 2 times
- c. 3 to 9 times
- d. 10 to 19 times
- e. 20 to 39 times
- f. 40 or more times

22. During your life, how many times have you used the **crack** or **freebase** forms of cocaine?

- a. 0 times
- b. 1 or 2 times
- c. 3 to 9 times
- d. 10 to 19 times
- e. 20 to 39 times
- f. 40 or more times

23. During your life, how many times have you used any other type of illegal drug, such as LSD, PCP, ecstasy, mushrooms, speed, ice, heroin, or pills without a doctor's prescription?

- a. 0 times
- b. 1 or 2 times
- c. 3 to 9 times
- d. 10 to 19 times
- e. 20 to 39 times
- f. 40 or more times

24. During your life, how many times have you taken steroid pills or shots **without** a doctor's prescription?

- a. 0 times
- b. 1 or 2 times
- c. 3 to 9 times
- d. 10 to 19 times

- e. 20 to 39 times
- f. 40 or more times

25. During your life, have you ever injected (shot up) any illegal drug?

- a. No
- b. Yes

Appendix F

Directions to Students

Good (morning/afternoon). I am conducting this student survey so I can gather information about risky health behaviors that students engage in. It is very important to me to get the beliefs of all different students, boys and girls, African-American, Anglo-Americans, and Hispanic-Americans.

I would like to thank each of you for participating in this study. Your participation is voluntary and your grade in this class will not be affected by whether or not you answer the questions. However, only a limited number of students like yourselves are participating in this survey in your high school. As a result, the answers you give are very important. Please read each question carefully and answer it based on what you really know or do. Please make a response for each question. Your privacy and anonymity are assured. Please **do NOT** write your name on the questionnaire or the answer sheet. Results of this survey will never be reported by name, class, or school. Please **do not** mark on the questionnaire; instead, put all of your answers on the bubble sheet with which you have been provided. Also, please use the pencil provided; do not use a pen or some other type of pencil. For each question that you answer on the survey, choose the one answer which best fits what you know, feel, or do. If you must change an answer, erase your old answer completely, and be careful not to skip questions. Do you have any questions?

Distribute Questionnaires and Answer Sheets

Begin by following along with me as I read to you the directions on the first page. Once you get started, proceed at your own rate, reading each question carefully, selecting the answer which best describes you or what you do, and circle that choice on your answer sheet. We have allowed the entire class period to complete this survey, so please don't rush. It is important that you answer the survey based on what you really know, believe or do. Don't pick a response just because you think that is what someone wants you to say. When you are finished, please check over your answers and answer sheet carefully, raise your hand, and I will come around and pick up the questionnaire and the answer sheet. If you don't understand a question, please raise your hand and I will come around to your desk.

After Answer Sheets and Questionnaires are Collected

I would like to thank-you for participating in this survey. The information you have provided will be kept private and confidential. It also will be very important in helping me understand how to help teenagers and keep them from hurting themselves or others by their risky behaviors. If you have any questions regarding the information on this questionnaire, please see me at the end of class or stop by and talk with your school counselor or health teacher.

Appendix G

The Youth Risk Behavior Survey Scoring

The responses of on the YRBS will be calculated on a point system and an overall risky behavior score be calculated to identify the following patterns of students' risky behavior :

Follow up detail is possible for those students identified as engaging in risky behaviors as far as age of engagement.

Point conversions scale:

a = 0; b = 1; c = 2; d = 3; e = 4; f = 5; g = 6

The following questions will be used to determine the overall risky behavior score:

41. During the past 30 days, how many times did you drive a car or other vehicle when you had been drinking alcohol?

- a. 0 times
- b. 1 time
- c. 2 or 3 times
- d. 4 or 5 times
- e. 6 or more times

42. Have you ever tried cigarette smoking, even one or two puffs?

- a. No
- b. Yes

45. Have you ever smoked cigarettes regularly, that is, at least one cigarette every day for 30 days?

- a. No
- b. Yes

47. During the past 30 days, how many days did you smoke cigarettes?

- a. 0 days

- a. 1 or 2 days
- c. 3 to 5 days
- d. 6 to 9 days
- e. 10 to 19 days
- f. 20 to 29 days
- g. All 30 days

48. During the past 30 days, on the days you smoked, how many cigarettes did you smoke **per day** ?

- a. I did not smoke cigarettes during the past 30 days
- b. Less than 1 cigarette per day
- c. 1 cigarette per day
- d. 2 to 5 cigarettes per day
- e. 6 to 10 cigarettes per day
- f. 11 to 20 cigarettes per day
- g. More than 20 cigarettes per day

50. During the past 30 days, did you use **chewing tobacco**, such as Redman, Levi Garrett, or Beechnut, or **snuff**, such as Skoal, Skoal Bandits, or Copenhagen?

- a. No, I did not use chewing tobacco or snuff during the past 30 days
- b. Yes, **Chewing tobacco** only or Yes, **snuff** only
- c. Yes, both **chewing tobacco** and **snuff**

52. During your life, on how many days have you had at least one drink of alcohol?

- a. 0 days
- b. 1 or 2 days
- c. 3 to 9 days
- d. 10 to 19 days
- e. 20 to 39 days
- f. 40 to 99 days
- g. 100 or more days

53. During the past 30 days, on how many days did you have at least one drink of alcohol?

- a. 0 days
- b. 1 or 2 days
- c. 3 to 5 days
- d. 6 to 9 days
- e. 10 to 19 days
- f. 20 to 29 days
- g. All 30 days

54. During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a row, that is, within a couple of hours?

- a. 0 days
- b. 1 day

- c. 2 days
- d. 3 to 5 days
- e. 6 to 9 days
- f. 10 to 19 days
- g. 20 or more days

56. During your life, how many times have you used marijuana?

- a. 0 times
- b. 1 or 2 times
- c. 3 to 9 times
- d. 10 to 19 times
- e. 20 to 39 times
- f. 40 to 99 times
- g. 100 or more times

57. During the past 30 days, how many times did you use marijuana?

- a. 0 times
- b. 1 or 2 times
- c. 3 to 9 times
- d. 10 to 19 times
- e. 20 to 39 times
- f. 40 or more times

59. During your life, how many times have you used any form of cocaine, including powder, crack, or freebase?

- a. 0 times
- b. 1 or 2 times
- c. 3 to 9 times
- d. 10 to 19 times
- e. 20 to 39 times
- f. 40 or more times

60. During the past 30 days, how many times did you use any form of cocaine, including powder, crack, or freebase?

- a. 0 times
- b. 1 or 2 times
- c. 3 to 9 times
- d. 10 to 19 times
- e. 20 to 39 times
- f. 40 or more times

61. During your life, how many times have you used the crack or freebase forms of cocaine?

- a. 0 times
- b. 1 or 2 times
- c. 3 to 9 times

- d. 10 to 19 times |
- e. 20 to 39 times |
- f. 40 or more times |

62. During your life, how many times have you used any other type of illegal drug, such as LSD, PCP, ecstasy, mushrooms, speed, ice, heroin, or pills without a doctor's prescription?

- a. 0 times
- b. 1 or 2 times
- c. 3 to 9 times
- d. 10 to 19 times |
- e. 20 to 39 times |
- f. 40 or more times |

63. During your life, how many times have you taken steroid pills or shots **without** a doctor's prescription?

- a. 0 times
- b. 1 or 2 times
- c. 3 to 9 times
- d. 10 to 19 times |
- e. 20 to 39 times |
- f. 40 or more times |

64. During your life, have you ever injected (shot up) any illegal drug?

- a. No
- b. Yes

****The following questions will be reversed scored for the age of the start of risky behaviors (i.e. younger age start indicates greater risk):**

44. How old were you when you smoked a whole cigarette for the first time?

- a. I have never smoked a whole cigarette
- b. Less than 9 years old |
- c. 9 or 10 years old |
- d. 11 or 12 years old |
- e. 13 or 14 years old |
- f. 15 or 16 years old |
- g. 17 or more years old |

46. How old were you when you first started smoking cigarettes regularly? (at least one cigarette every day for 30 days)

- a. I have never smoked cigarettes regularly
- b. Less than 9 years old |

- c. 9 or 10 years old
- d. 11 or 12 years old
- e. 13 or 14 years old
- f. 15 or 16 years old
- g. 17 or more years old

51. How old were you when you had your first drink of alcohol other than a few sips?

- a. I have never had a drink of alcohol other than a few sips
- b. Less than 9 years old
- c. 9 or 10 years old
- d. 11 or 12 years old
- e. 13 or 14 years old
- f. 15 or 16 years old
- g. 17 or more years old

55. How old were you when you tried marijuana for the first time?

- a. I have never tried marijuana
- b. less than 9 years old
- c. 9 or 10 years old
- d. 11 or 12 years old
- e. 13 or 14 years old
- f. 15 or 16 years old
- g. 17 or more years old

58. How old were you when you tried any form of cocaine, including powder, crack, or freebase, for the first time?

- a. I have never tried cocaine
- b. less than 9 years old
- c. 9 or 10 years old
- d. 11 or 12 years old
- e. 13 or 14 years old
- f. 15 or 16 years old
- g. 17 or more years old

Appendix H

Descriptive Results

Overall Means and Standard Deviations: N= 582

	Mean	Standard Deviation
Purpose in Life	97.268	22.263
Adolescent Egocentrism	50.174	9.617
Youth Risk Behavior Scale	44.387	9.559

Means and Standard Deviations Differences by Gender: N = 582

	Female N=274		Male N=308	
	Mean	St Dev	Mean	St. Dev.
Purpose in Life	97.97	21.52	96.64	22.91
Adolescent Egocentrism	51.17	9.01	49.28	10.95
Youth Risk Behavior Survey	40.76	7.38	45.51	11.62

Means and Standard Deviations Differences by Ethnicity N = 582

	Asian = 17		Black = 121		Hispanic = 263		White = 163	
	<u>Mean</u>	<u>St. D</u>	<u>Mean</u>	<u>St. D</u>	<u>Mean</u>	<u>St. D</u>	<u>Mean</u>	<u>St. D</u>
PIL	102.5	21.5	96.1	22.5	95.3	22.1	93.1	23.9
AES	50.1	8.6	50.9	9.9	48.8	9.6	46.4	9.6
YRBS	42.7	7.8	44.2	9.1	46.3	11.3	46.6	10.8

Appendix I

Demographic Information Sheet

1. How old are you?	N = 582	Per Cent
a. 14	103	17.7
b. 15	234	40.1
c. 16	157	26.9
d. 17	54	9.3
e. 18 or older	34	5.8
2. What is your gender?	N = 582	
a. female	274	47
b. male	308	53
3. What is your current grade level ?	N = 582	
a. 9th	330	56.6
b. 10th	162	27.8
c. 11th	42	7.2
d. 12th	48	8.2
4. How do you describe yourself ethnically ?	N = 582	
a. Asian-American	17	2.9
b. African-American	121	20.8
c. Hispanic- American	263	45.1
d. Anglo-American	163	28.0
e. Other	18	3.1
5. How many children in the same house with you (besides yourself)?	N = 582	
a. 0	91	15.6
b. 1	162	27.8
c. 2	167	28.6

d. 3	80	13.7
e. 4	42	7.2
f. 5	39	6.7
g. 6	1	.2

6. Are your parents divorced or separated? N = 582

a. No	367	63.0
b. Yes	215	37.0

7. If your parents are divorced or separated, how long have they been divorced or separated? N = 582

a. Parents are not div/sep	360	61.7
b. Under 1 year	19	3.3
c. 1 - 3 years	25	4.3
d. 4 - 6 years	36	6.2
e. 7 - 10 years	45	7.7
f. more than 10 years	97	16.6

8. Which best describes the adults with whom you live? N = 582

a. Father only	19	3.3
b. Mother only	94	16.1
c. Both mother and father	307	52.7
d. Father and stepmother	21	3.6
e. Mother and stepfather	91	15.6
f. Other biological relatives	32	5.5
g. Foster parents	3	.5
h. Other	15	2.6

9. Do you receive free or reduced breakfast or lunch? N = 582

a. No	394	67.7
b. Yes	188	32.3

Number of students from each school:

a. High School # 1		207
b. High School # 2		172
c. 9th Grade Satellite		203

Appendix J

Descriptive Information for the Purpose in Life Test

				Mean	Standard Deviation			
1. I am usually:				4.691	1.400			
N =	18	25	50	154	167	115	53	
%	3.1	4.3	8.6	26.4	28.6	19.7	9.3	
	1	2	3	4	5	6	7	
	completely bored			neutral		enthusiastic exuberant		
2. Life to me seems:				4.581	1.552			
N =	38	19	54	158	141	113	59	
%	6.5	3.3	9.3	27.1	24.2	19.4	10.2	
	1	2	3	4	5	6	7	
	completely routine			neutral		always exciting		
3. In life I have:				5.431	1.644			
N=	25	13	33	81	99	125	206	
%	4.3	2.1	5.7	13.9	17.0	21.4	35.5	
	1	2	3	4	5	6	7	
	no goals or aims at all			neutral		very clear goals and aims		

4. My personal existence is:				5.218	1.611		
N=	21	20	34	109	113	122	163
%	3.6	3.4	5.8	18.7	19.4	20.9	28.2
	1	2	3	4	5	6	7
	utterly meaningless and without purpose			neutral		very purposeful and meaningful	
5. Every day is:				4.497	1.854		
N=	63	33	57	120	117	92	100
%	10.8	5.7	9.8	20.6	20.1	15.8	17.4
	1	2	3	4	5	6	7
	exactly the same			neutral		constantly new	
6. If I could choose, I would:				4.804	1.797		
N=	46	25	44	132	102	101	132
%	7.9	4.3	7.5	22.6	17.5	17.3	22.8
	1	2	3	4	5	6	7
	prefer never to have been born			neutral		Like nine more lives just like this one	
7. After retiring, I would:				5.924	1.566		
N=	18	10	22	57	63	83	329
%	3.1	1.7	3.8	9.8	10.8	14.2	56.4
	1	2	3	4	5	6	7
	loaf completely the rest of my life			neutral		do some of the exciting things I have always wanted to do	
8. In achieving life goals I have:				4.692	1.608		
N=	37	27	51	111	165	119	72
%	6.3	4.6	8.7	19.0	28.3	20.4	12.5
	1	2	3	4	5	6	7
	made no progress whatever			neutral		progressed to complete fulfillment	

9. My life is:				4.737	1.524		
N=	24	29	62	109	157	139	62
%	4.1	5.0	10.6	18.7	26.9	23.8	10.8
	1	2	3	4	5	6	7
	empty filled only with despair			neutral		running over with exciting good things	
10. If I should die today, I would feel that my life has been:				4.679	1.956		
N=	63	28	63	98	107	73	150
%	10.8	4.8	10.8	16.8	18.4	12.5	25.9
	1	2	3	4	5	6	7
	completely worthless			neutral		very worthwhile	
11. In thinking of my life, I:				4.682	1.961		
N=	65	36	47	99	92	110	133
%	11.1	6.2	8.1	17.0	15.8	18.9	22.8
	1	2	3	4	5	6	7
	often wonder why I exist			neutral		always see a reason for my being here	
12. As I view the world in relation to my life, the world:				4.053	1.727		
N=	72	42	77	152	118	73	48
%	12.3	7.2	13.2	26.1	20.2	12.5	8.2
	1	2	3	4	5	6	7
	completely confuses me			neutral		fits meaningfully with my life	

13. I am a :				5.065	1.578		
N=	26	10	44	131	103	145	123
%	4.5	1.7	7.5	22.5	17.7	24.9	25.3
	1	2	3	4	5	6	7
	very irresponsible person			neutral	very responsible person		

14. Concerning man's/woman's freedom to make his/her own choices, I believe man/woman is:				5.625	1.713		
N =	20	24	28	73	75	79	283
%	3.4	4.1	4.8	12.5	12.9	13.6	48.7
	1	2	3	4	5	6	7
	completely bound by limitations of heredity and environment			neutral	absolutely free to make life choices		

15. With regard to death, I am:				4.438	2.051		
N =	85	38	50	115	86	74	134
%	14.6	6.5	8.6	19.7	14.8	12.7	23.2
	1	2	3	4	5	6	7
	unprepared and frightened			neutral	prepared and unafraid		

16. With regard to suicide, I have:				4.577	2.253		
N=	96	44	50	81	54	63	194
%	16.5	7.5	8.6	13.9	9.3	10.8	33.5
	1	2	3	4	5	6	7
	thought of it seriously as a way out			neutral	never given it a second thought		

17. I regard my ability to find a meaning, purpose, or mission in life as:				4.985	1.547		
N =	19	26	35	137	125	128	112
%	3.3	4.5	6.0	23.5	21.4	22.0	19.4
	1	2	3	4	5	6	7
	practically none			neutral	very great		
18. My life is:				5.163	1.784		
N =	33	27	42	82	109	104	185
%	5.7	4.6	7.2	14.1	18.7	17.9	31.9
	1	2	3	4	5	6	7
	Out of my hands and controlled by external factors			neutral	in my hands and I am in control of it		
19. Facing my daily tasks is:				4.349	1.623		
N =	48	31	71	150	133	100	49
%	8.2	5.3	12.2	25.7	22.8	17.2	8.6
	1	2	3	4	5	6	7
	a painful boring experience			neutral	a source of pleasure and satisfaction		
20. I have discovered:				5.076	1.616		
N =	25	24	42	92	133	140	126
%	4.3	4.1	7.2	15.8	22.8	24.0	21.8
	1	2	3	4	5	6	7
	no mission or purpose in life			neutral	clear-cut goals and a satisfying life purpose		

Appendix K

The Adolescent Egocentrism Scale

	1 no importance	2 little importance	3 some importance	4 much importance	5 great importance		
						Mean	St.Dev.
1. Becoming real good at being able to think through my own thoughts.						3.952	1.037
N =	16	33	132	183	218		
% =	2.7	5.7	22.6	31.4	37.6		
	1	2	3	4	5		
2. When walking in late to a group meeting, trying not to distract everyone's attention.						3.450	1.361
N =	74	71	129	135	173		
% =	12.7	12.2	22.1	23.2	29.9		
	1	2	3	4	5		
3. Accepting the fact that others don't know what it's like being me.						3.211	1.328
N =	86	82	161	129	124		
% =	14.8	14.1	27.6	22.1	21.5		
	1	2	3	4	5		
4. Having other people to better understand why I do the things the way I do.						3.393	1.311
N =	62	93	132	144	151		
% =	10.6	16.0	22.6	24.7	31.1		
	1	2	3	4	5		

5. Thinking about my own feelings.				3.979	1.160
N =	25	50	97	150	260
% =	4.3	8.6	16.6	25.7	44.8
	1	2	3	4	5
	no	little	some	much	great
	importance	importance	importance	importance	importance
6. Trying to figure out how other people will react to my accomplishments and failures.				3.273	1.274
N =	67	90	165	137	123
% =	11.5	15.4	28.3	23.5	21.3
	1	2	3	4	5
7. Being able to daydream about great successes and thinking of other people's reactions.				3.182	1.322
N =	81	99	157	123	122
% =	13.9	17.0	26.9	21.1	31.1
	1	2	3	4	5
8. Becoming real good at knowing what others are thinking of me.				2.950	1.378
N =	117	115	131	118	101
% =	20.1	19.7	22.5	20.2	17.5
	1	2	3	4	5
9. Explaining my unique feelings and viewpoints to others so they can get some idea about what I am like.				3.306	1.266
N =	65	80	178	130	129
% =	11.1	13.7	30.5	22.3	22.3
	1	2	3	4	5

10. Knowing my own thoughts and feelings.				4.093	1.129
N =	21	42	94	130	295
% =	3.6	7.2	16.1	22.3	50.6
	1	2	3	4	5
11. Being able to think about having a lot of money someday and how people will admire that.				3.273	1.372
N =	78	99	147	102	156
% =	13.4	17.0	25.2	17.5	26.8
	1	2	3	4	5
12. Trying to get other people to get to know what it is like being me.				2.631	1.257
N =	145	116	185	81	55
% =	24.9	19.9	31.7	13.9	9.6
	1	2	3	4	5
13. Thinking about myself.				3.582	1.272
N =	54	59	141	150	178
% =	9.3	10.1	24.2	25.7	30.7
	1	2	3	4	5
14. Trying and being able to figure out if two people are talking about me when they are looking my way.				2.955	1.375
N =	117	107	148	105	105
% =	20.1	18.4	25.4	18.1	18.1
	1	2	3	4	5
15. Coming to accept that no one will ever really understand me.				2.942	1.334
N =	115	99	164	113	91
% =	19.7	17.0	28.1	19.4	15.8
	1	2	3	4	5

Appendix L

Youth Risk Behavior Survey
 The Center for Disease Control
 (1991, selected questions taken from section B)

	N	%	M	SD
1. Compared to other students in your class, what kind of student would you say you are?	582	100	2.108	1.482
a. One of the best	100	17.2		
b. Far above the middle	116	19.9		
c. A little above the middle	117	20.1		
d. In the middle	166	28.5		
e. A little below the middle	53	9.1		
f. Far below the middle	13	2.2		
g. Near the bottom	17	3.0		
2. During the past 30 days, how many times did you drive a car or other vehicle when you had been drinking alcohol?	582	100	.570	1.152
a. 0 times	435	74.6		
b. 1 time	50	8.6		
c. 2 or 3 times	46	7.9		
d. 4 or 5 times	18	3.1		
e. 6 or more times	33	5.9		
3. Have you ever tried cigarette smoking, even one or two puffs?	582	100	1.00	.468
a. No	160	27.4		
b. Yes	421	72.6		
4. Do you think you will try cigarette smoking during the next 12 months?	582	100	1.112	.937
a. I have already tried cigarette smoking	223	38.3		
b. Yes, I think I will try cigarette smoking during the next 12 months	73	12.5		
c. No, I think I will not try cigarette smoking during the next 12 months	286	50.2		

5. How old were you when you smoked a whole cigarette for the first time?	28	100	4.997	1.893
a. I have never smoked a whole cigarette	233	40.0		
b. Less than 9 years old	28	4.8		
c. 9 or 10 years old	62	10.5		
d. 11 or 12 years old	93	16.0		
e. 13 or 14 years old	100	17.2		
f. 15 or 16 years old	61	10.4		
g. 17 or more	5	1.1		
6. Have you ever smoked cigarettes regularly, that is, at least one cigarette every day for 30 days?	582	100	.251	.472
a. No	440	75.5		
b. Yes	142	24.5		
7. How old were you when you first started smoking cigarettes regularly? (at least one cigarette every day for 30 days)	582	100	6.027	1.726
a. I have never smoked cigarettes regularly	427	73.2		
b. Less than 9 years old	10	1.7		
c. 9 or 10 years old	15	2.6		
d. 11 or 12 years old	34	5.8		
e. 13 or 14 years old	61	10.5		
f. 15 or 16 years old	30	5.1		
g. 17 or more years old	5	1.1		
8. During the past 30 days, how many days did you smoke cigarettes?	582	100	1.029	1.869
a. 0 days	408	70.0		
b. 1 or 2 days	32	5.5		
c. 3 to 5 days	34	5.8		
d. 6 to 9 days	33	5.7		
e. 10 to 19 days	15	2.6		
f. 20 to 29 days	20	3.4		
g. All 30 days	40	7.0		
9. During the past 30 days, on the days you smoked, how many cigarettes did you smoke per day ?	582	100	.962	1.514
a. I didn't smoke cigarettes during the past 30 days	379	65.0		
b. Less than 1 cigarette per day	45	7.7		
c. 1 cigarette per day	30	5.1		
d. 2 to 5 cigarettes per day	80	13.7		
e. 6 to 10 cigarettes per day	30	5.1		
f. 11 to 20 cigarettes per day	13	2.2		
g. More than 20 cigarettes per day	5	1.1		

10. During the past 6 months, did you try to quit smoking cigarettes?	582	100	.558	.773
a. I didn't smoke cigarettes during past 6 months	359	61.6		
b. No	121	20.8		
c. Yes	102	17.6		
11. During the past 30 days, did you use chewing tobacco, such as Redman, Levi Garrett, or Beechnut, or snuff, such as Skoal, Skoal Bandits, or Copenhagen?	582	100	.172	.625
a. No, I did not use chewing tobacco or snuff during the past 30 days	534	91.6		
b. Yes, Chewing tobacco only	16	2.7		
c. Yes, snuff only	12	2.1		
d. Yes, both chewing tobacco and snuff.	20	3.6		
12. How old were you when you had your first drink of alcohol other than a few sips?	582	100	4.570	1.779
a. I have never had a drink of alcohol other than a few sips	133	22.9		
b. Less than 9 years old	78	13.4		
c. 9 or 10 years old	65	11.2		
d. 11 or 12 years old	93	16.0		
e. 13 or 14 years old	146	25.1		
f. 15 or 16 years old	59	10.1		
g. 17 or more years old	8	1.3		
13. During your life, on how many days have you had at least one drink of alcohol?	582	100	2.572	2.071
a. 0 days	133	22.9		
b. 1 or 2 days	87	14.9		
c. 3 to 9 days	83	14.3		
d. 10 to 19 days	80	13.7		
e. 20 to 39 days	65	11.2		
f. 40 to 99 days	60	10.3		
g. 100 or more days	74	12.7		
14. During the past 30 days, on how many days did you have at least one drink of alcohol?	582	100	1.387	1.577
a. 0 days	234	40.2		
b. 1 or 2 days	140	24.0		
c. 3 to 5 days	70	12.0		
d. 6 to 9 days	68	11.7		
e. 10 to 19 days	39	6.7		
f. 20 to 29 days	19	3.3		
g. All 30 days	12	2.1		

15. During the past 30 days, on how many days did you have 5 or more drinks of alcohol in a row, that is, within a couple of hours?	582	100	5.794	1.704
a. 0 days	330	56.7		
b. 1 day	65	11.2		
c. 2 days	55	9.5		
d. 3 to 5 days	59	10.1		
e. 6 to 9 days	29	5.0		
f. 10 to 19 days	30	5.2		
g. 20 or more days	14	2.3		
16. How old were you when you tried marijuana for the first time?	582	100	1.763	2.034
a. I have never tried marijuana	307	52.7		
b. less than 9 years old	18	3.1		
c. 9 or 10 years old	22	3.8		
d. 11 or 12 years old	56	9.6		
e. 13 or 14 years old	108	18.6		
f. 15 or 16 years old	62	10.7		
g. 17 or more years old	9	1.5		
17. During your life, how many times have you used marijuana?	582	100	1.400	1.910
a. 0 times	310	53.2		
b. 1 or 2 times	64	11.0		
c. 3 to 9 times	76	13.1		
d. 10 to 19 times	34	5.8		
e. 20 to 39 times	30	5.2		
f. 40 to 99 times	31	5.3		
g. 100 or more times	37	6.4		
18. During the past 30 days, how many times did you use marijuana?	582	100	.643	1.194
a. 0 times	405	69.6		
b. 1 or 2 times	79	13.6		
c. 3 to 9 times	41	7.0		
d. 10 to 19 times	24	4.1		
e. 20 to 39 times	24	4.1		
f. 40 or more times	9	1.6		

19. How old were you when you tried any form of cocaine, including powder, crack, or freebase, for the first time?	582	100	6.55	1.324
a. I have never tried cocaine	515	88.3		
b. less than 9 years old	7	1.2		
c. 9 or 10 years old	7	1.2		
d. 11 or 12 years old	4	.7		
e. 13 or 14 years old	23	4.0		
f. 15 or 16 years old	22	3.9		
g. 17 or more years old	4	.7		
20. During your life, how many times have you used any form of cocaine, including powder, crack, or freebase?	582	100	.191	.607
a. 0 times	518	89.0		
b. 1 or 2 times	30	5.2		
c. 3 to 9 times	23	4.0		
d. 10 to 19 times	9	1.5		
e. 20 to 39 times	2	.3		
f. 40 or more times	0			
21. During the past 30 days, how many times did you use any form of cocaine, including powder, crack, or freebase?	582	100	.103	.544
a. 0 times	552	94.8		
b. 1 or 2 times	15	2.7		
c. 3 to 9 times	9	1.5		
d. 10 to 19 times	1	.2		
e. 20 to 39 times	2	.3		
f. 40 or more times	3	.5		
22. During your life, how many times have you used the crack or freebase forms of cocaine?	582	100	.119	.513
a. 0 times	539	92.6		
b. 1 or 2 times	29	5.0		
c. 3 to 9 times	8	1.5		
d. 10 to 19 times	2	.3		
e. 20 to 39 times	2	.3		
f. 40 or more times	2	.3		

23. During your life, how many times have you used any other type of illegal drug, such as LSD, PCP, ecstasy, mushrooms, speed, ice, heroin, or pills without a doctor's prescription?	582	100	.588	1.212
a. 0 times	424	72.9		
b. 1 or 2 times	72	12.4		
c. 3 to 9 times	38	6.5		
d. 10 to 19 times	20	3.4		
e. 20 to 39 times	8	1.4		
f. 40 or more times	20	3.4		
24. During your life, how many times have you taken steroid pills or shots without a doctor's prescription?	582	100	.119	.520
a. 0 times	544	93.5		
b. 1 or 2 times	18	3.1		
c. 3 to 9 times	13	2.1		
d. 10 to 19 times	5	.9		
e. 20 to 39 times	2	.4		
f. 40 or more times	0			
25. During your life, have you ever injected (shot up) any illegal drug?	582	100	.062	.241
a. No	546	93.7		
b. Yes	36	6.3		
Levels of Adolescent Egocentrism				
a. Level 1 (Low)	324	56		
b. Level 2 (High)	258	44		