Predicting Substance Abuse of High School through Purpose in Life and Religiosity

Racquel J. Ezell, Ph.D.
Assistant professor
Southern University at New Orleans
Department of Early Childhood
College of Education and Human Development.

Brenda Burrell, Ph.D.
Associate professor
University of New Orleans
Department of Special Education and Habilitative Services.

Abstract

Substance abuse is a tremendous problem that should greatly concern educators because of its impact on students and its implications for schooling. Purpose in life and religiosity are two variables that have been demonstrated to evidence an inverse relationship with substance abuse. An investigation of the impact of that relationship can yield meaningful data to influence professional practice in schools and other community institutions. Consequently, the purpose of the present study was to determine if perspectives about purpose in life and religiosity are predictive of the substance abuse status of adolescents who are high school students. Results indicated that perspectives about purpose in life and religiosity were excellent predictors of substance abuse status for individuals with no drug abuse involvement, poor predictors of substance abuse status for those with high and low drug abuse involvement and moderate predictors of substance abuse status for those with moderate drug abuse involvement.

INTRODUCTION

Almost half of America's youth are in danger of damaging their future because of hazardous and irresponsible decision-making (Carnegie Council on Adolescent Development [CCAD], 1995). That alert issued more than a decade ago warned of hazards and decisions associated with sexual intercourse, substance abuse, criminal activity, depressive disorders and suicide ideation; and is still reason for concern today. In a study of adolescents conducted in 2007, researchers found that 47.8% had sexual intercourse, 38.1% had smoked marijuana, 7.2% had tried cocaine, 50% had smoked cigarettes, and 14.5% had seriously considered attempting suicide within 12 months of participating in the survey (Centers for Disease Control and Prevention [CDC], 2008). Additionally, according to the Office of Juvenile Justice and Delinquency Prevention (2008); in 2006, approximately 2.2 million juveniles under the age of 18 were arrested; 196,700 were arrested for drug abuse violations and 100,700 for violent crimes including murder and non-negligent manslaughter (1,310), forcible rape (3,610), robbery (35,040), and aggravated assault (60,770). The damages associated with these delinquent behaviors may be immediate and overt, or they may be delayed and manifest in later years. Therefore, the lifestyle choices that adolescents make during this stage of life are crucial and should be taken very seriously.

While statistics indicate we need to be concerned about a large portion of adolescents, they also indicate that many adolescents manage to navigate through their teen years with relative success. Furthermore, while some become successful with the support of family, effective schools, and active and proficient community institutions; others are able to attain a high quality of life without support of family and competent others and even though they experience less favorable and more discouraging circumstances (e.g., poverty, growing up in drug infested communities, living in neighborhoods where guns and violence are commonplace; CCAD, 1995). There are many different explanations or theories for why some adolescents become delinquent or experience psychological disorders and others succeed in spite of their circumstances. The one selected as the focus for this study is Viktor Frankl's theory of Purpose in Life (Frankl, 1959).

According to Frankl's theory, human behavior is self-determined; individuals become who they are as a result of personal decisions. Frankl believed that unlike the lower animal species, man has the freedom to choose his own behavior. When describing his theory, Frankl explained that in man's *freedom to choose* his personal behavior there exist four endowments: s*elf-awareness*, insight into the reasons for one's own behavior (Chaplin, 1985);

imagination, the ability to create in one's own mind beyond present existence/reality (Covey, 1989); *conscience*, a discerning knowledge of right and wrong (Covey, 1989); and *independent will*, the ability to conduct one's behavior based on self-awareness, uninhibited by all other influences (Covey, 1989). After years of observation and research, Frankl concluded that man is motivated by his *will to meaning* (determination to find Purpose in Life) and as purpose in life becomes satisfied, fulfillment is obtained. But, if man's will to meaning becomes frustrated because of an inability to find purpose, an existential vacuum is created (most often manifested as a state of boredom). In an attempt to fill this void (existential vacuum), many individuals substitute the fulfillment of purpose in life by engaging in destructive/delinquent behavior (e.g., sexual intercourse, substance use/abuse, and criminal activity). Frankl (1959) proposed that the solution to avoiding delinquency (e.g., sexual intercourse, substance use/abuse, and criminal activity) and depressive disorders/suicide ideation is finding purpose in life. Furthermore, Frankl (1969) often wrote of religion as a means of discovering purpose in life. Based on religious doctrines and Biblical accounts and principles, an individual's personal faith may be used as a reference guide for providing purpose and meaning to human experiences.

Although numerous researchers have shown that there is an inverse relationship between religiosity and delinquency (e.g., Burkett & White, 1974; Cochran, 1989; Cochran & Akers, 1989; Higgins & Albrecht, 1977; Stark, 1996), the focus of the present study is to investigate how purpose in life and religiosity impacts a single form of delinquency, substance abuse. Substance abuse may be considered one of the most harmful among delinquent behaviors both for academic and social reasons. Substance abuse places students at greater risk for student dropout, lowered school performance, memory impairments, and problem-solving deficits (CDC, 2000; Emergency Nurses Care, 2002). Furthermore, substance abuse leads to lowered inhibitions and clouds judgment, creating an increased risk for becoming involved in other dangerous behaviors such as sexual risk taking and criminal activity (George & Norris, 1991). Additionally, the current study will build on the work of researcher such as Benda and Corwyn (2000), who found that religiosity was directly and inversely related to drug abuse and further clarify the relationship between religiosity and substance abuse.

Kinnier, Metha, Keim, et al., 1994) found that not only did the inverse relationship between purpose in life and substance abuse exist among adolescents, but also that each variable was a strong predictor of the other. Among their sample of 274 adolescent participants, they also found that there was a direct relationship between psychological distress and substance abuse and that purpose in life acted as a mediator variable between these two factors (Kinnier, Metha, Keim, et al., 1994). As a part of an 8-year longitudinal study, Newcomb and his colleagues (Newcomb & Harlow, 1986; Newcomb, Bentler, & Fahy, 1987) explored the relationship between purpose in life and substance abuse beginning when the subjects were in the seventh, eighth, and ninth grades. These investigators found that there was a negative relationship between purpose in life and cocaine use and that decreased purpose in life significantly predicted cocaine use among these participants. In another study, Showalter and Wagener (2000) compared religious adolescents to non-religious adolescents and found that religious adolescents identified their religious beliefs as providing the strongest meaning in their personal lives. However, no studies were found that simultaneously examined the linear relationships between purpose in life and religiosity in relation to substance abuse status. The present study will examine these relationships. Using Frankl's (1959) purpose in life framework, the present study was designed to examine how perspectives about purpose in life and religiosity predict the drug involvement levels of high school students.

METHODOLOGY

PARTICIPANTS

Participants in the study were seniors, juniors, and one (1) sophomore who attended one of four predominately African-American high schools in the local public school system. All participants volunteered their participation and received either a gift certification for a 1-2 dollar fast food item (e.g., hamburger, fries, shake) for completion of the surveys or a fast food certificate for returning letters of consent/assent and entry into a raffle for a $30 gift certificate for a shopping mall as a token of appreciation for completion of the surveys. Both incentives were offered to students at the last school used for the study in an effort to maximize the number of students who volunteered and exceed the study's target number (65) determined by a power analysis. In total, 97 African-American participants were recruited for this study. Each participant received an envelope, which included a total of 6 surveys: an investigator-developed demographic questionnaire, the Purpose in Life Test (PLT) (Crumbaugh & Maholick, 1976), the Religiosity Measure (Rohrbaugh & Jessor, 1975), the *American Drug and Alcohol Survey* (ADAS) (Oetting, Beauvais, & Edwards, 1999), the investigator-developed purpose in life and religiosity supplement, and the investigator-developed substance abuse supplement.

Each page of every survey was number coded in an effort to maintain survey identification by participant. No names were used and all six surveys were placed in random sequence in the event survey sequence impacted the way in which participants answered questions. All participants were allowed to take as much time as needed to complete the instruments, were told they could take short breaks if necessary, and had at least one person available to answer their questions. All of the participants completed the surveys during one block period and without the use of short breaks. There were less than 10 participants who asked questions regarding the items in the surveys. Students asked for clarification of terms and phrases. An example of the type of question asked by participants was, "What does feeling of *reverence* for God mean?"

INSTRUMENTATION

Three published instruments, a demographic questionnaire, and two supplemental instruments were used for the present study. The published surveys included (a) the Purpose in Life Test (PIL; Crumbaugh & Maholick, 1976), (b) the Religiosity Measure, (Rohrbaugh & Jessor, 1975), and (c) the American Drug and Alcohol Survey (ADAS; Oetting, Beauvais, & Edwards, 1999). The demographic questionnaire and supplemental surveys were developed for the present study and were based on relevant literature (Crumbaugh, & Maholick, 1976; Foshee & Hollinger, 1996; Jackson, 2002; Jessor & Jessor, 1977; Rohrbaugh & Jessor, 1975; Stark, Kent, & Doyle, 1982). The Purpose in Life Test (Crumbaugh, & Maholick, 1976) was used to determine the existence of purpose in life among participants, the Religiosity Measure (Rohrbaugh, & Jessor, 1975) was used to establish the significance of religion in the participants' lives, and the ADAS (Oetting, Beauvais, & Edwards, 1999) was used to determine substance abuse habits of participants.

The demographic questionnaire was developed for the present study to obtain information from participants concerning variables found to be related to the religiosity-delinquency relationship (Foshee & Hollinger, 1996; Jessor & Jessor, 1977; Stark et al., 1982). Items on this questionnaire included elements regarding (a) religious affiliation; (b) personal, familial, and peer church attendance; (c) personal and parental employment and income status; and (d) school grade point average. The demographic questionnaire consisted of 14 questions and took approximately 5 to 10 minutes to complete. Neither reliability nor validity estimates for demographic variable scores were computed.

The Purpose in Life Test was developed to measure the degree to which a person possesses meaning and purpose in life (Crumbaugh & Maholick, 1976). The test is considered the primary self-administered assessment tool to measure this variable (McIntosh, 1999). It is composed of three parts, labeled A, B, and C. Parts B and C require the interpretation and analysis of a clinically trained professional (e.g., psychologist, psychiatrist, or clinically trained counselor); therefore, only Part A was used for the present study. Participants were asked to indicate how much they have experienced the subject matter described by each item, according to a 7 point Likert-type scale. Split-half reliability analysis indicated scores between .81 and .92, and test-retest correlations have been between .68 and .79. Though the Purpose in Life Test appears to have face validity, the test was constructed using predominately White subjects possessing a *western philosophical view* (McIntosh, 1999) and some researchers have questioned the validity of scores when used with other populations.

The Religiosity Measure, developed by Rohrbaugh and Jessor (1975) was selected to measure religiosity for the present study. The scale contains eight items and each is scored from 0 to 4. Coefficient alphas (Cronbach, 1951) were over .90 indicating high internal reliability. Rohrbaugh and Jessor (1975) found that females were consistently more religious than males when using the Religiosity Measure. These findings supported the construct validity because scores were consistent with other findings in the field. Strong internal validity of scores across four student subgroups was found with an overall average at a correlation of .69. Finally, a discriminant validity analysis indicated that personal religious orientation was not due to an association with a particular religious group or social structure (Rohrbaugh & Jessor, 1975). Of the five studies that actually used the Religiosity Measure to measure religiosity, only one study reported reliability scores based on the specific study sample (DeHaan & Schulenberg, 1997).

The present study employed all eight items from the Religiosity Measure and was used in combination with two other scales to assess religious beliefs. The internal consistency reliability of scores reported were 0.91, 0.57 and 0.75. The remainder of the studies either documented the original scores from Rohrbaugh and Jessor's (1975) study, or did not report reliability scores at all. The Purpose in Life and Religiosity Supplement (PLRS) was developed for the present study and based on a question asked on the Religiosity Measure (Crumbaugh & Maholick, 1976; Rohrbaugh & Jessor, 1975).

This question was a part of the *Consequential Religiosity* sub-group and asked "How much influence would you say that religion has on the way that you choose to act and the way that you choose to spend your time each day?" The questions on the PLRS distinguished differences between how *religion* influenced the participant's actions and behaviors, and how *a personal relationship with God* influenced actions and behaviors. The purpose of developing and employing this supplement was to assess the difference(s) between *religiosity* and a *personal relationship with God* and to add a greater understanding of how these two variables may interact with purpose in life. The PLRS consisted of five questions and took approximately 7 minutes to complete. Neither reliability nor validity measures were computed for this instrument prior to its use.

The American Drug and Alcohol Survey (ADAS) (Oetting, Beauvais, & Edwards, 1999) was determined to be the most appropriate scale for assessing substance abuse behavior for the present study. The instrument was developed to assess the nature and extent of substance use among adolescents. The ADAS also asks questions related to demographics. The instrument measures students' experiences with a variety of drug types, attitudes about drug use, intentions to use drugs, drug accessibility, and peer influence on drug behavior. The ADAS consists of 55 items and takes approximately 20 to 30 minutes to complete. Scoring procedures were conducted by the publishing company and were returned to the researcher as an SPSS (2002) data file.

Since 1987, the ADAS (1998a) has been administered to 1.5 million students in 47 states in the United States. The psychometric properties of this instrument reveal internal consistency score reliabilities ranging from .72 to .97 across five major ethnic groups (majority in the high .8 and .9 range). ADAS scores demonstrate both concurrent and construct validity (1998b). The ADAS (1998c) Web site provides 46 studies that have used data from the ADAS (Oetting, Beauvais, & Edward, 1999). Eight studies have reported internal consistency reliability of scores based on specific study samples ranging from .74 to .97. Four studies reported the internal consistency reliability of scores based on samples used in the original studies during the construction of the scale or in the construction manual ranging from .73 to .96, respectively. The remaining studies did not report any psychometric estimates for the ADAS.

The Substance Abuse Supplement was designed for the present study to enhance the questions asked in the ADAS (Oetting, Beauvais, & Edwards, 1999). One of the major concerns in researching substance abuse practices among adolescents is the ability of participants to recognize and identify the drugs referred to in the ADAS survey. The Substance Abuse Supplement was designed and employed in an effort to include alternative names of drugs that were not used in the ADAS (Oetting, Beauvais, & Edwards, 1999). These alternative drug names were based on current research that identifies the most common slang/street terms associated with drugs used among adolescents (Jackson, 2002). The Substance Abuse Supplement consists of six questions and takes approximately 5 minutes to complete. Neither reliability nor validity measures were computed for this instrument prior to its use.

STATISTICAL PROCEDURES

The data obtained for the present study were analyzed using descriptive, correlational, and inferential tests. For demographic variables, frequencies, ranges, means, and standard deviations were calculated appropriate to the level of scale for the variable. Pearson Product-Moment correlation coefficiencts was used to examine bivariate relationships among major study variables. Predictive discriminant analysis (Huberty & Barton, 1989) was used to address the major research question. The predictive discriminative analysis (PDA) procedure involves two sets of variables: the predictor variables (i.e., purpose in life and religiosity) and the criterion variables (grouping level of drug involvement). The purpose of using this procedure is to predict group classification, to predict drug involvement levels based on Purpose in Life scores and religiosity scores. The linear prediction rule was used based on external prior probability scores. Prior probability scores are an estimation of the probability of belonging to a certain group and were derived from samples that were consistent with the criterion groups. The results of a PDA are generally reported in a classification table. This table allows assessment of the *hit* rates of the predictions. A *hit* is produced when a case is assigned to the same group (based on the prediction rule) from which it originated.

The results of a PDA can be based on internal or external classification rules (Huberty & Barton, 1989). The internal classification rule indicates that the cases were classified according to the cases used to construct the classification table. External classification, however, is more highly recommended. In addition to the classification table, group mean scores, structure coefficients, discriminant function coefficients, and the statistical level of significance are presented and reported.

To evaluate how each case impacted the overall classification hit rate, a leave-one-out cross validation analysis was conducted. In this procedure, each case in the analysis is classified by the functions derived from all cases other than that case. This method is also known as the U-method (Huberty & Wisenbaker, 1992). Classifying participants whose own data are used to derive the classification model tends to produce biased hit rate estimates.

LIMITATIONS OF THE STUDY

Limitations of this study include the following:

1. The methodology of the study includes the use of self-report instruments. Because of the nature of the study, which asks questions about sensitive topics regarding substance abuse and religiosity, participants may be skeptical about disclosing such information in a self-report format.
2. The sample was a purposive sample. Researchers suggest that the results of a study incorporating this type of sampling procedure may be misleading because it is based on the researcher's personal judgment of what a *typical sample* is, and findings may not generalize to the target population (Ary, Jacobs, & Razavieh, 2002).
3. The schools that were used in this study enroll students who are from predominately Black populations. Therefore, the results of this study may not apply to populations that are not predominately Black adolescent high school students who are predominately Black and reside in urban area in the south central region of the United States.

RESULTS

DESCRIPTIVE STATISTICS FOR THE STUDY SAMPLE

Subjects. Ninety-seven high school students participated in the study, all of whom were enrolled in three public high schools located in a large, urban school district in the south central region of the United States. Table 1 shows the distribution of students across schools and grades. The majority of the participants (41.2%) were enrolled in School C and 33 of those participants shared the same teacher. Of the total study sample, 81 (83.5%) students were seniors, 15 (15.5%) were juniors, and one (1.0%) participant was a sophomore.

Table 1. *Distribution of Students* – about here

Sixty (61.9%) of the participants were female and 37 (38.1%) were male (see Table2). Ninety-three (95.8%) of the participants were Black, 2 (2.1%) were Spanish-American, and 2 (2.1%) self-identified their race as "Other" than the races listed on the survey (see Table 2). Five participants (5.2%) reported having grade point averages (GPA) of 1.9 or below, 26 (26.8%) reported GPAs ranging from 2.5 to 2.0, 31 (32%) maintained that their GPAs ranged from 2.9 to 2.5, 21 (21.6%) reported having GPAs ranging from 3.0 to 3.4, and 7 (7.2%) reported GPAs ranging between 4.0 and 3.5 (see Table 2). Thirty-two (33.0%) of the participants reported having a job, with 13 (13.4%) of them reporting a monthly income of $600 or more. Sixty-nine (71.1%) participants reported that their parents held jobs (see Table 2).

Table 2. *Demographic Characteristics of Study Sample* – about here

RELIGION AND SOCIAL SUPPORT. Table 3 shows the religious affiliations reported by 94 participants on the demographic questionnaire. Three (3.1%) participants chose not to report this information. Sixty-four (59.7%) of the 97 participants belonged to a Protestant group, and 53 (54.6%) of the 64 Protestants were affiliated with the Baptist faith. Ninety-five (99.9%) participants responded to the question about church attendance, 2 (2.1%) participants did not report this information. Twenty-nine (29.9%) reported attending church one or more times per week, 17 (17.5%) reported attending 1 to 3 times per month, 12 (12.4%) reported attending between 3 to 5 times per month, 11 (11.3%) reported attending 1 to 6 times per year, three (3.1%) reported attending less than once per year, 15 (15.5%) reported rarely attending, and eight (8.2%) reported never attending.

Table 3. *Religious Affiliation* – about here

According to the demographic questionnaire, the parents of 42 (43.3%) participants attended church one or more times per week and the parents of 21 (21.6%) participants attended church 1 to 3 times per month (see Table 4).

Table 4. *Parental Church Attendance* – about here

Twenty-six (26.8%) participants reported that all of the other members of their household frequently attended church, 20 (20.6%) reported that most of the members in their household frequently attended church, and another 21 (21.6%) reported that some of the members of their household either rarely or never attended church (see Table 5).

Ninety-five (97.9%) participants responded to the question regarding peer/friend church attendance and two (2.1%) participants did not. Thirty-three (34.0%) participants reported that some of their friends attended church frequently and some rarely or never attended church; and 31 (32.0%) participants indicated that most of their friends attended church frequently (see Table 6). Of the 95 (97.9%) participants who responded to questions indicating their friends' reaction to their (participants) church attendance, 74 (76.3%) indicated that their friends knew they attended church (see Table 7) and 63 (64.9%) reported that they believed their friends had a positive opinion regarding their church attendance (see Table 8). Two (2.1%) participants did not respond to these questions.

Table 5. ***Church Attendance of Others Living in Home*** – **about here**

Table 6. ***Friends' Church Attendance*** **– about here**

Fifty-seven (58.8%) participants indicated they did not make the decision to date someone based on a person's religious beliefs, 25 (25.8%) stated that they did consider a person's religious beliefs when selecting a date, 4 (4.1%) indicated other factors influenced their selection of dates (these participants did not answer "yes" or "no" to this question but they wrote an explanation regarding how they selected their dates), and 11 (11.3%) participants did not respond to this question (see Table 9).

Table 7. ***Friends Know about Church Attendance*** **– about here**

Table 8. ***Opinion of Friends about My Church Attendance*** – **about here**

Table 9. ***Selecting a Date Based on Religion*** **– about here**

RELIABILITY ANALYSIS

Estimates of the internal consistency reliability for items on the PIL Test, the Religiosity Measure, and the PLRS were derived using Cronbach's alpha (Cronbach, 1951). This was done to ensure that the *present* data are reliable scores derived from the study sample (Thompson, 1991). An acceptable measure of reliability was obtained for each instrument (PIL - .88, Religiosity Measure - .78, and PLRS - .66).

DESCRIPTIVE AND INFERENTIAL DATA RELATED TO STUDY HYPOTHESIS

ADAS RESULTS. The ADAS surveys were scored by the publishing company and the results were delivered to the researcher on a disk. The data file was formatted in SPSS (2000). Results from participants' responses to survey items were classified in three different categories: Style, Group, and Drug Involvement Level (i.e., "risk" variable). The *Style* of user consists of 34 subcategories and most often provides a description of the types of drugs used and how they were used (see Table 10). The *Group* consists of nine subcategories and provides a more general description of drug use than the *Style* category (e.g., *Multi-Drug, Stimulant Use,* and *Heavy Alcohol*). The third major category, the *Drug Involvement Level*, provides a broader description of drug use than the two categories previously described and it provides an indication of drug abuse status or "risk." This category consists of four subcategories (i.e., *high drug involvement, moderate drug involvement, low drug involvement, and no drug involvement*). As shown in Table 19 both the Style and Group classifications are aligned with the Drug Involvement Level category. The Drug Involvement Level category was used as the criterion or grouping variable in the predictive discriminant analysis (PDA) for the present study. Based on the findings of the present study, there were 8 (8%) participants assigned to the *high drug involvement level*, 17 (18%) participants assigned to the *moderate drug involvement level* group, 30 (32%) assigned to the *low drug involvement level* group, and 40 (42%) assigned to the *no drug involvement level* group (see Table 14). In addition, 2 (2%) respondents were not assigned to any *Drug Involvement Level* group, due to being classified as *Exaggerators* (participants who showed patterns that indicated they were exaggerating the answers they reported).

BIVARIATE CORRELATIONS AMONG MAJOR STUDY MEASURES. Pearson product-moment correlation coefficients were calculated using data obtained from the study sample for the PIL Test, the Religiosity Measure, and the PLRS.

Table 10. ***Categories of Reported Results on the ADAS*** **– about here**

Correlational analyses revealed moderate positive correlations between the PIL Test and the Religiosity Measure ($r = .50$), the PIL Test and the PLRS ($r = .41$), and the Religiosity Measure and the PLRS ($r = .60$). Based on a minimum of 89 cases and a maximum of 93 cases, the percentages of variance shared between two measures were 25% for the PIL Test and the Religiosity Measure, approximately 17% for the PIL Test and the PLRS, and 36% for the Religiosity Measure and the PLRS.

The variance-accounted-for values suggest, that for the present study sample, moderate relationships existed between purpose in life and religiosity.

PREDICTIVE DESCRIMINANT ANALYSIS

Predictive discriminant analysis (PDA) was used to address the major research question of interest: Can drug risk status be predicted based on perspectives about purpose in life and religiosity? PDA is concerned with prediction of group membership and the classification of observations into predetermined groups (Huberty & Barton, 1989). In PDA, there is a set of predictor variables (in this study scores on the Purpose in Life Test and the Religiosity Measure) and a set of criterion variables with two or more levels (in this study assignment to one of four Drug Involvement groups). SPSS, Version 11.5 (SPPS Inc., 2002) was used for the PDA analysis reported below.

In total there were 87 (89.7%) cases used in the PDA analysis procedure out of the entire study sample (N = 97). Eight (8.2%) cases were removed due to incomplete surveys (missing data) and the other 2 (2.1%) cases were removed because participants were deemed as *Exaggerators*. Table 11 shows the number of cases that were assigned to each criterion group based on ADAS results. ADAS results predicted that 8 (8.2%) cases would be assigned to the *high drug involvement level*, 17 (19.6%) cases were predicted to the *moderate drug involvement level*, 25 (25.8%) cases were predicted to the *low drug involvement level*, and 37 (38.1%) cases were predicted to the *no drug involvement level*. Mean scores and standard deviations on the PIL and the Religiosity Measure are provided in Table 12 according to the Drug Involvement Levels.

PRIOR PROBABILITIES FOR GROUPS. Prior probabilities were used to determine the classification rule. These "estimates of probabilities" were derived from external data, but are based on populations consistent with the criterion groups. Rather than use prior probabilities from the present sample (internal priors), prior probabilities from a national sample (external priors) of 11th graders from the 2001-2002 school year were obtained from the ADAS test publisher (see comparison of national sample to present sample in Table 13).

Table 11. ***Predicted Drug Involvement Levels Based on ADAS Responses*** **– about here**

These external prior probabilities were 15.3% (*high drug involvement*), 22.2% (*moderate drug involvement*), 26.3% (*low drug involvement*), and 36.2% (*no drug involvement*) compared to the actual group classification found in the current study of 8% (*high drug involvement*), 18% (*moderate drug involvement*), 32% (*low drug involvement*), and 42% (*no drug involvement*).

Table 12. ***Means and Standard Deviations for Predictor Variables*** **– about here**

Table 13. ***Comparison of Drug Involvement Levels for National Sample versus Present Study Sample*** **– about here**

CLASSIFICATION RESULTS

The results of the PDA in terms of predicted group membership are reported in Table 14, the classification table. Determined classifications and predicted membership are shown for High Drug Involvement (HDI), Moderate Drug Involvement (MDI), Low Drug Involvement (LDI), and No Drug Involvement (NDI). Based on self-reports and predictors used in this study: (a) of the 8 participants classified in the HDI group, 4 were predicted to be in the MDI group and 4 were predicted to be in the NDI group; (b) of the 17 participants classified in the MDI group, 5 were predicted to be in the MDI group and 12 were predicted to be in the NDI group; (c) of the 25 participants classified in the LDI group, 2 were predicted to be in the MDI group and 23 were predicted to be in the NDI group; and (d) of the 37 participants classified in the NDI group, 5 were predicted to be in the MDI group and 32 were predicted to be in the NDI group.

Table 14. ***Classification Results*** **– about here**

Based on linear classification function scores that indicated the difference between what was reported and what was predicted, a *hit* rate was produced. A *hit* is produced when a case is assigned to the same group (based on the prediction rule) from which it originated. For the present study, a *hit* rate of 0% (*high drug involvement*), 29.4% (*moderate drug involvement*), 0% (*low drug involvement*), and 86.5% (*no drug involvement*) was produced. This analysis produced an overall hit rate of 42.5%, with No Drug Involvement being highly predictable and Moderate Drug Involvement being moderately predictable.

CONCLUSION

Substance abuse remains a major challenge for even the most fervent prevention and intervention strategists who invest tremendous time and effort in the interest of America's youth. Marijuana use continues to increase, alcohol consumption remains the leading cause of accidents and fatalities among teenagers, and the plethora of drugs and their young users have escalated exponentially (American Substance Abuse Prevention Program [ASAP], 2001). Furthermore, the high accessibility and enticement capacity of drugs contribute greatly to youth being at risk for substance abuse. The risk factor is particularly high for students with special needs, like students with specific learning disabilities whose characteristic behavioral issues (e.g., poor peer relation, low self-esteem, impulsiveness) were associated with research findings that students with disabilities are at greater risk for substance abuse than their peers without disabilities (Cosden, 2001; Maag, Irvin, Reid, & Vasa, 1994). Additionally, the risk for substance abuse is closely aligned with being at risk for other dangerous or undesirable behaviors for youth (e.g., sexual risk-taking) generally attributed to a loss of inhibitions caused by substance abuse.

The purpose of the present study was to probe promising avenues for prevention and intervention efforts regarding substance abuse and its subsequent problematic or delinquent behaviors by investigating the following research question: Can drug risk status be predicted based on perspectives about purpose in life and religiosity? High school students were asked to complete multiple surveys to indicate their drug use status and their perspectives of their own purpose in life and religiosity. The measurement integrity of the data obtained in the present study was established and data analyses provided statistically and educationally significant results.

Indeed, drug risk status can be predicted based on perspectives about purpose in life and religiosity. Results from the current study affirm the contention that adolescents who possess purpose in life and religiosity are less likely to engage in substance abuse than those who do not have purpose in life and religiosity. Purpose in life and religiosity were strong predictors of *no drug involvement*. This is consistent with previous findings related to the religiosity-delinquency relationship, which reported that individuals who possess purpose in life and religiosity are not likely to be involved in delinquency, such as substance abuse (Burkett & White, 1974). The conceptual framework constructed for the present study illustrates the prediction of non-substance abuse for those who evidence high levels of purpose in life and religiosity based on Frankl's (1959) beliefs that purpose in life decreases the likelihood of deviance (e.g., substance abuse) and that purpose in life can be obtained through religion. A moderate correlation ($r = .50$) between purpose in life and religiosity determined in the present study provides support for Frankl's assertion that certain elements of purpose in life also exist in religiosity. Other researchers have provided similar evidence. Nam, Heritage, & Kim (1994) used college students for his sample, a group generally regarded as having purpose in life. Nam et al. found that religious college students possessed a significantly higher purpose in life than college students who indicated they had no religion. Similarly, Francis and Evans (1996) discovered that among adolescents, religion had positive effects on purpose in life through two aspects of religiosity: personal prayer and church attendance. In another study, Showalter and Wagener (2000) compared religious adolescents to non-religious adolescents and found that religious adolescents identified their religious beliefs as providing the strongest meaning in their personal lives. Adolescents in the Showalter and Wagener (2000) study reported a strong direct link between purpose in life and religiosity.

While *no drug involvement* was highly predictable, and *moderate drug use* was moderately predictable, purpose in life and religiosity were poor predictors of *high drug involvement* and *low drug involvement*. This could be due to the greater influences of several different demographic factors, including: gender, age, grade level, and school. There is evidence to support gender as an influence on *high drug involvement*. The present study showed that of all the students assigned to the *high drug involvement level*, 88% were males. This is consistent with current literature that shows that females are less likely to use drugs than their male counterparts (Zickler, 2000). One explanation for this finding is that males have more opportunities to use drugs than females (Zickler, 2000). Another factor that may have influenced this finding is age. Of the 30 cases that were assigned to the *low drug involvement level*, 53% were 17 years old. Grade level seemed to also influence substance abuse for both *high* and *low drug involvement*. In the present study, 88% of the students assigned to the *high drug involvement level* were 12^{th} graders, and likewise 87% of the students assigned to the *low drug involvement level* were in the12^{th} grade. It is possible that the school students attended influenced the assignments to the *high* and *low drug involvement levels*. Of the 30 individuals assigned to the *low drug involvement level*, 47% came from school 3.

The church attendance of the students themselves, their parents, others in their homes, and their friends seemed to be a significant factor in the assignment of students to the no drug involvement category. Students who were assigned to the no and low drug involvement levels were more likely to attend church frequently, than students assigned to the moderate or high drug involvement levels. This is consistent with prior research that shows that church attendance provides adolescents with social ties to institutions and individuals who create and impact their decision to commit acts of deviance and ultimately decreases delinquent behavior (Linden & Currie, 1977).

Of the 40 students assigned to the *no drug involvement group*, 40 (65%) reported that their parents attended church frequently, 23 (58%) of the 40 reported that most of the people living in their household attended frequently, and 21 (53%) reported that most of their friends attended church on a regular basis. In contrast, of the eight students assigned to the *high drug involvement* group, 88% reported that few or none of their friends attended church. These findings are consistent with several prior studies, which found that in general, adolescents whose parents attended church frequently were less likely to use alcohol or drugs, or to begin using alcohol, than adolescents whose parents attended church less frequently or not at all (Foshee & Hollinger, 1996; Hadaway, Elifson, & Petersen, 1984; Preston, 1969). One explanation for this relationship suggests that adolescent substance abuse is indirectly affected by parental religiosity through peer selection (Burkett, 1993; Hardesty & Kirby, 1995). In essence, Hawkins, Catalano, & Miller (1992) explained that teen substance abuse *is* directly influenced by peer substance abuse; however peer selection is impacted by parental religiosity (Burkett, 1993; Hardesty & Kirby, 1995). Hence, adolescents raised in religious families are more likely to choose friends who are not substance abusers, therefore decreasing their own likelihood of substance abuse.

Since prior research suggested that peer pressure may influence adolescent behavior either negatively or positively (Lingren, 1995), the present to investigated peer perception of church attendance. When participants were asked if their friends knew that they attended church, over all drug involvement categories 76% said yes. Additionally, 64% of all students reported that their friends had a positive opinion about their attendance. Likewise, 83% of the students assigned to the *no drug involvement* group reported that their friends had knowledge of their church attendance and 68% of these students reported that their friends saw their attendance as something good. These findings are significant when considering that adolescent's peers usually replace the family as the focus of leisure and social activities during this stage of life (Lingren, 1995). Therefore, peer pressure may be used as a positive reinforcement in this instance to encourage family values regarding the church attendance of adolescents.

Many of the participants in the current study are not drug users (40%) compared to 36.3% of non-users in the national sample. In addition to factors discussed previously, ethnicity may be a significant factor accounting for the low rate of substance abuse. In general, researchers have determined that substance abuse is typically lower among Black adolescents when compared to adolescents of other ethnicities (Park, Bauer, & Oescher, 2001; Wallace & Bachman, 1991). There are several explanations for this finding. Wallace and Bachman (1991) found that Black adolescents typically perceived a greater risk in using drugs, were more likely to disapprove of most forms of drugs, had fewer friends who used drugs, and began using drugs at a later age than their White counterparts.

Although previous studies have suggested that personal prayer, church attendance, and religious beliefs are aspects of religiosity that provide purpose in life, the present study sought to distinguish between *religion* alone (Religiosity Measure) and *a personal relationship with God*, as providing purpose in life. For this reason the PLRS was developed. When participants were asked if *religion* or *a personal relationship with God* influenced their behavior more, 32% stated that *religion* and *a personal relationship with God* equally influenced their behavior, 32% stated that they believed their *personal relationship with God* influenced their behavior more, and 14% said that they did not see a difference between *religion* and *a personal relationship with God*.

Similarly, when participants were asked if religion or *a personal relationship with God* provided more purpose in life, 34% said that both *religion* and *a personal relationship with God* equally provided purpose in life, another 34% stated that they believed that a *relationship with God provided more purpose in life*, and 13% stated that they did not see a difference between *religion* and a *personal relationship with God*. Therefore, it can be concluded that generally adolescents do not distinguish between *religion* and *a personal relationship with God.* However, when adolescents do identify a difference between the two, they most often believe that *a personal relationship with God* has a greater impact on their lives than *religion* alone.

How does this influence drug involvement? Of the participants who reported that *a personal relationship with God* influenced their behavior more than religion, 76% were students assigned to either the *no* or *low drug involvement* groups. Additionally, of the participants who reported that *a personal relationship with God* and *religion* equally influenced their behavior, 81% were among the *no* and *low drug involvement* categories. Similarly, of the participants who reported that *a personal relationship with God* provided greater purpose in life than *religion*, 81% were assigned to the *no* or *low drug involvement* groups. Likewise, of the participants who reported that *a personal relationship with God* and *religion* provided an equal amount of purpose in life, 75% belonged to the *no* or *low drug involvement* groups. Consequently, the distinction between *religion* and *a personal relationship with God* seemed to lack relevance for the adolescents who participated in the study. They apparently viewed it as a minor difference in semantic. The significance of their responses is that they identified *religion/relationship with God* as a factor that impacts their drug use status. The majority (n = 47) of participants who reported that their *religion/relationship with God* influenced their behavior were members of the *no drug use* or *low drug use* groups.

For future research related to the present study there are several suggestions. (1) Instead of using nationally obtained prior probabilities, it would better to use locally obtained probabilities based on a sample with similar demographic characteristics. Using a sample with regional and ethnic differences in particular may significantly impact the predicting power of the study due to differences in substance abuse behavior among groups based on these characteristics. (2) When selecting a sample for a similar study, include participants with a variety of different ethnic identities (unless the purpose of the study is to investigate a specific ethnic group). Choosing a sample that is primarily dominated by one ethnic group decreases the ability to generalize to other populations. (3) Additionally, further research is needed to investigate the impact of purpose in life on adolescent behavior. Considering that purpose in life has the capacity to deter delinquency, more research is needed in identifying specific attributes gained by individuals discovering purpose in life. This factor will enable educators to design purpose in life curriculum that is geared toward the specific needs of their students.

Purpose in life and religiosity can be used to prevent substance abuse among adolescents in various ways, including three ways supported by the associated literature and results of this study:

1. Establish school-church partnerships. Over half (59.9%) of the high school students in this study reported that they attended church on a frequent basis and churches may possess the ability and time to attend to the emotional needs of adolescents in ways that the educational system does not. Attend to those needs.
2. Include purpose in life in transition planning. Researchers have clearly shown that students with disabilities are at greater risk for substance abuse than students without disabilities (McCombs & Moore, 2002).
3. Respect family religiosity and include it in consideration for being culturally responsive. One of the outcomes teachers work to achieve in a culturally responsive environment conducive to learning is student empowerment. Identifying and working toward purpose in life can facilitate that empowerment.

SUMMARY

According to several researchers, purpose in life and religiosity are two significant deterrents of delinquency (e.g., drug abuse) among adolescents. Given that adolescents place themselves at significant risk when they participate in substance abuse, it is crucial for those stakeholders legally, morally, and/or ethically responsible for caring for our youth to use potentially effective prevention and intervention strategies to deter substance abuse. Encouraging and guiding students in finding purpose in life empowers them to abstain from using drugs and helps them to obtain personal fulfillment in life.

REFERENCES

American Drug and Alcohol Survey. (1998a). *Who uses the ADAS?* Retrieved July 10, 2002, from http://www.rmbsi.com/ADAS_page.html

American Drug and Alcohol Survey. (1998b). *Reliability and validity*. Retrieved July 10, 2002, from http://www.rmbsi.com/ADAS_page.html

American Drug and Alcohol Survey. (1998c). Reference list of publications and professional presentations using data from the American Drug and Alcohol Survey. Retrieved July 10, 2002, from http://www.rmbsi.com/ADAS_page.html

American Substance Abuse and Prevention Program (2001). Retrieved May 7, 2003, from http://asap.bsd.uchicago.edu/asapprogram.html

Ary, D., Jacobs, L. C., & Razavieh, A. (2002). *Introduction to Research in Education*. (6th ed.). Bellmont, CA: Wadsworth/Thomson Learning.

Benda, B. B., & Corwyn, R. F. (2000). A theoretical model of religiosity and drug use with reciprocal relationships: A test using structural equation modeling. *Journal of Social Service, 26*(4), 43-67.

Burkett, S. R. (1993). Perceived parents' religiosity, friends' drinking, and hellfire: A panel study of adolescent drinking. *Review of Religious Research, 35*(2), 134-154.

Burkett, S. R., & White, M. (1974). Hellfire and delinquency: Another look. *Journal for the Scientific Study of Religion,13*(4), 455-462.

Carnegie Council on Adolescent Development. (1995). Great transitions: Preparing adolescents for a new century (Report No. PS 023 953). (ERIC Document Reproduction Service No. ED 388 458)

Center for Disease Control and Prevention (2008, June). Youth risk behavior surveillance – United States, 2007. *Morbidity & Mortality Weekly Report* 2008;57(SS-4):1–131.Centers for Disease Control (2000, June). *Youth risk behavior surveillance system.* Retrieved July 26, 2001, from http://www.cdc.gov/mmwrhtml/ss4905al.htm

Chaplin, J. P. (1985). *Dictionary of psychology* (2nd Rev. ed.). New York,

N. Y.: Dell Publishing.

Cochran, J. K. (1989). Another look at delinquency and religiosity. *Sociological Spectrum, 9,* 147-162.

Cochran, J. K., & Akers, R. L. (1989). Beyond hellfire: An exploration of the variable effects of religiosity on adolescent marijuana and alcohol abuse. *Journal of Research on Crime and Delinquency, 26*(3), 198-225.

Cosden, M. (2001). Risk and resilience for substance abuse among adolescents and adults with LD. *Journal of Learning Disabilities, 34(4)*, 535-358.

Covey, S. R. (1989). *The seven habits of highly effective people: Powerful lessons in personal change.* New York, NY: Fireside.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika, 16,* 297-334.

Crumbaugh, J.C., & Maholick, L.T. (1969). *Manual of instruction for the Purpose in Life Test*. Munster: Psychometric Affiliates.

Crumbaugh, J. C., & Maholick, L. T. (1976). *The Purpose in Life Test.* Murfreesboro, TN: Psychometric Affiliates.

DeHaan, L. G., & Schulenberg, J. (1997). The covariation of religion and politics during the transition to young adulthood: Challenging global identity assumptions. *Journal of Adolescence, 20,* 537-552.

Emergency Nurses Care. (2002, April). *Fact sheet: Alcohol awareness.* Retrieved July 11, 2002, from http://www.ena.org/encare/FactSheets/Alcohol.PDF

Foshee, V., & Hollinger, B. R. (1996). Maternal religiosity, adolescent social bonding, and adolescent alcohol use. *Journal of Early Adolescence, 16*(4), 451-468.

Francis, L. J., & Evans, T. E. (1996). The relationship between personal prayer and purpose in life among churchgoing and non-churchgoing twelve-to-fifteen year-olds in the UK. *Religious Education, 91*(1), 9-21.

Frankl, V. E. (1959). *Man's search for meaning*. New York: Washington Square.

Frankl, V. E. (1969). *The will to meaning: Foundations and applications of logotherapy*. New York: World Publishing.

George, W. H., & Norris, J. (1991). Alcohol, disinhibition, sexual arousal,

and deviant sexual behavior. *Alcohol Health and Research World, 15,* 133-138.

Hadaway, C. K., Elifson, K. W., & Petersen, D. M. (1984). Religious involvement and drug use among urban adolescents. *Journal for the Scientific Study of Religion, 23*(2), 109-128.

Hardesty, P. H., & Kirby, K. M. (1995). Relation between family religiousness and drug use within adolescent peer groups. *Journal of Social Behavior and Personality, 10*(1), 421-430.

Hawkins, D. J., Catalano, R. F., & Miller, J. (1992). Risk and protective factors

for alcohol and other drug problems in adolescence and early adulthood: Implications for substance abuse prevention. *American Psychological Association: Psychological Bulletin, 112,* 64-105.

Higgins, P. C., & Albrecht, G. L. (1977). Hellfire and delinquency revisited. *Social Forces, 55*(4), 952-958.

Huberty, C. J., & Barton, R. M. (1989). Methods, plainly speaking: An introduction to discriminant analysis. *Measurement and Evaluation in Counseling and Development, 22*, 158-168.

Huberty, C.J, & Wisenbaker, J.M. (1992). *Discriminant analysis: Potential improvements in typical practice.* In B. Thompson (Ed.), Advances in social science methodology (Vol. 2, pp. 169-208). Greenwich, CT: JAI Press.

Jackson, G. (2002). The new street drugs. *Healing Magazine, 7*(2), 11-14.

Jessor, R., & Jessor, S. (1977). *Problem behavior and psychosocial development: A longitudinal study of youth.* New York: Academic Press.

Kinnier, R. T., Metha, A. T., Keim, J. S., Okey, J. L., Adler-Tabia, R. L., Berry, M. A., & Mulvenon, S. W. (1994). Depression, meaningless, and substance abuse in "normal" and hospitalized adolescents. *Journal of Alcohol and Drug Education, 39*(2), 101-111.

Linden, R., & Currie, R. (1977). Religiosity and drug use: A test of Social Control Theory. *Canadian Journal of Criminology and Corrections: Revue Canadienne De Criminologie, 19,* 346-355.

Lingren, H. B. (1995). Adolescence and peer pressure. (University of Nebraska Lincoln Report No. NF 211). Abstract retrieved May 7, 2003, from http://www.ianr.unl.edu/pubs/family/nf211.htm

Maag, J. W., Irvin, D. M., Reid, R., & Vasa, S. T. (1994). Prevalence and predictors of substance use: A comparison between adolescents with and without learning disabilities. *Journal of Learning Disabilities, 27*(4), 223-234.

McCombs, K., & Moore, D. (2002). *Substance abuse prevention and intervention for students with disabilities: A call to educators.* Arlington, VA: ERIC Clearinghouse on Disabilities and Gifted Education (ERIC Document Reproduction Service No. EC Digest E624).

McIntosh, D. N. (1999). Purpose in life test (review). In P. C. Hill, & R. W. Hood (Eds.), *Measures of religiosity* (pp. 503-506). Birmingham, AL: Religious Education Press.

Nam, J. S., Heritage, J. G., & Kim, J. K. (1994). *Predictors of drug/alcohol abuse and sexual promiscuity of college students.* (Report No. CG-026-160). East Lansing, MI: National Center for Research on Teacher Learning (ERIC Document Reproduction Service No. ED380746).

Newcomb, M. D., Bentler, P. M., & Fahy, B. (1987). Cocaine use and psychopathology: Associations among young adults. *The International Journal of the Addictions, 22*(12), 1167-1188.

Newcomb, M. D., & Harlow, L. L. (1986). Life events and substance use among adolescents: Mediating effects of perceived loss of control and meaninglessness in life. *Journal of Personality and Social Psychology, 51*(3), 564-577.

Oetting, E. R., Beauvais, F., & Edwards, R. (1999). *The American drug and alcohol survey*. Fort Collins, CO: Rocky Mountain Behavioral Science Institute, Inc.

Park, H., Bauer, S., & Oescher, J. (2001). Religiousness as a predictor of alcohol use in high school students. *Journal of Drug Education, 31*(3), 289-303.

Preston, J. D. (1969). Religiosity and adolescent drinking behavior. *The Sociological Quarterly, 10*(3), 372-383.

Rohrbaugh, J., & Jessor, J. (1975). Religiosity in youth: A personal control against deviant behavior. *Journal of Personality, 43,* 136-155.

Showalter, S. M., & Wagener, L. M. (2000). Adolescents' meaning in life: A replication of Devogler and Ebersole. *Psychological Reports, 87,* 115-126.

Stark, R. (1996). Religion as context: Hellfire and delinquency one more time. *Sociology of Religion, 57*(2), 163-173.

Stark, R., Kent, L., & Doyle, D. P. (1982). Religion and delinquency: The ecology of a "lost" relationship. *Journal of Research in Crime and Delinquency, 19,* 4-24.

Thompson, B. (1991). Review of Generalizability theory: A primer by R. J. Shavelson and N. W. Webb. *Educational and Psychological Measurement, 51,*1069-1075.

Wallace, J. M., Jr., & Bachman, J. G. (1991). Explaining racial/ethnic differences in adolescent drug use: The impact of background and lifestyle. *Social Problems, 38*(3), 333-357.

Zickler, P. (2000). Gender differences in prevalence of drug abuse traced to opportunities to use. *NIDA Notes, 15* (4). Retrieved May 7, 2003, from http://www.drugabuse.gov/NIDA_Notes/NNVol15N4/Prevalence.html

TABLES

Table 1. *Distribution of Students*

Grade Level	School A	School B	School C	School D	*Total*
10th Graders	0	1	0	0	1
11th Graders	1	6	8	0	15
12th Graders	14	15	32	20	81
Totals	15	22	40	20	97

Table 2. *Demographic Characteristics of Study Sample*

Ethnic Identity	**Frequency (%)**	***Mean (M)***	**(SD)**
Black/African American	**93 (96%)**		
Spanish American	**2 (2%)**		
Other	**2 (2%)**		
Gender			
Male	**37 (38.1%)**		
Female	**60 (61.9%)**		
GPA		**1.99**	
4.0-3.5	**7 (7.2%)**		
3.4-3.0	**21 (21.6%)**		
2.9-2.5	**31 (32%)**		
2.5-2.0	**26 (26.8%)**		
1.9-below	**5 (5.2%)**		
Information not reported	**7 (7.2%)**		
Student Employment Status			
Employed	**32 (33.0%)**		
Not employed	**59 (60.8%)**		
Information not reported	**6 (6.2%)**		
Student Income Level per Month [a]		**637.22**	**404.766**
$100 -500	**10 (10.3%)**		
$501-1,000	**10 (10.3%)**		
$1,001-1,500	**2 (2.1%)**		
$1,501-above	**1 (1.0%)**		
Not Employed	**59 (60.8%)**		
Information not reported	**15 (15.5%)**		
Parental Employment Status			
Employed	**69 (71.1%)**		
Not Employed	**19 (19.6%)**		
Information not reported	**9 (9.3%)**		

[a]Range of student monthly income is $120 – $1,600

Table 3. *Religious Affiliation*

Religious Affiliation	**Frequency (%)**
Non-Protestant Groups	
Buddhist	**1 (1%)**
Catholic	**17 (17.5%)**
Jehovah's Witness	**1 (1.0%)**
Mormon	**1 (1.0%)**
Muslim	**2 (2.1%)**
Non-Denominational	**6 (6.2%)**
Protestant Groups	
Baptist	**53 (54.6%)**
Full Gospel Baptist	**1 (1.0%)**
Methodist	**2 (2.1%)**
Pentecostal	**2 (2.1%)**
No Affiliation	**5 (5.2%)**
Both Catholic and Baptist	**3 (3.1%)**
Information not reported	**3 (3.1%)**

Table 4. *Parental Church Attendance*

Church Attendance	**Frequency (%)**
Never	**7 (7.2%)**
Rarely Ever	**10 (10.3%)**
1 - 6 Times per Year	**4 (4.1%)**
3 - 5 Times per 6 Months	**11 (11.3%)**
1 - 3 Times per Month	**21 (21.6%)**
1 or More per Week	**42 (43.3%)**
Total	**95 (97.9%)**
Information not reported	**2 (2.1%)**
Total Valid	**97 (100.0%)**

Table 5. *Church Attendance of Others Living in Home*

Church Attendance	Frequency (%)
All Rarely or Never Attend	15 (15.5%)
Most Rarely or Never Attend	13 (13.4%)
Some Frequently Attend, Some Rarely or Never Attend	21 (21.6%)
Most Frequently Attend	20 (20.6%)
All Frequently Attend	26 (26.8%)
Total	95 (97.9%)
Information not reported	2 (2.1%)
Total Valid	97 (100.0%)

Table 6. *Friends' Church Attendance*

Church Attendance	Frequency (%)
All Friends Rarely or Never Attend	11 (11.3%)
Most Friends Rarely or Never Attend	10 (10.3%)
Some Friends Frequently Attend	33 (34.0%)
Most Friends Frequently Attend	31 (32.0%)
All Friends Frequently Attend	10 (10.3%)
Total	95 (97.9%)
Information not reported	2 (2.1%)
Total Valid	97 (100.0%)

Table 7. *Friends Know about Church Attendance*

Friends Knowledge of Church Attendance	Frequency (%)
N/A - I Do Not Attend	10 (10.3%)
No	11 (11.3%)
Yes	74 (76.3%)
Total	95 (97.9%)
Information not reported	2 (2.1%)
Total Valid	97 (100.0%)

Table 8. *Opinion of Friends about My Church Attendance*

Friends' Opinions	Frequency (%)
I Do Not Know their Opinions	16 (16.5%)
My Friends have Neither a Positive or Negative Opinion	12 (12.4%)
My Friends have a Negative Opinion	2 (2.1%)
My Friends have a Positive Opinion	63 (64.9%)
Total	93 (95.9%)
Information not reported	4 (4.1%)
Total Valid	97 (100.0%)

Table 9. *Selecting a Date Based on Religion*

	Frequency (%)
Other	4 (4.1%)
No	57 (58.8%)
Yes	25 (25.8%)
Total	86 (88.7%)
Information not reported	11 (11.3%)
Total Valid	97(100.0%)

Table 10. *Categories of Reported Results on the ADAS*

Style	*Group*	*Drug Involvement Level ("risk" variable)*
1. Drug Dependent	1. Multi-Drug (Styles 1-6)	1. High Drug Involvement *n* = 8 (8%) (Groups 1-4, Styles 1-17)
2. Polydrug		
3. Heavy Downers		
4. Uppers and Downers		
5. Marijuana and Downers		
6. Young Polydrug		
7. Heavy Uppers	2. Stimulant Use (Styles 7-10)	
8. Uppers and Hallucinogens		
9. Marijuana and Cocaine		
10. Marijuana and Uppers		
11. Heavy Marijuana and Other Drugs	3. Heavy Marijuana (Styles 11-13)	
12. Heavy Marijuana and Heavy Alcohol		
13. Heavy Marijuana Only		
14. Alcohol Dependant or Pre-Dependant	4. Heavy Alcohol (Styles 14-17)	
15. Heavy Alcohol, Occasional Drug		
16. Heavy Alcohol and Marijuana		
17. Heavy Alcohol Only		
18. Marijuana and Occasional Drug	5. Occasional Drug (Styles 18-24)	2. Moderate Drug Involvement *n* = 17 (18%) (Groups 5-6, Styles 18-26)
19. Light Marijuana and Occasional Drug		
20. Occasional Drug Only		
21. Occasional Inhalant		
22. Occasional Downers		
23. Occasional Uppers		
24. Occasional Other Drug		
25. Light Marijuana and Alcohol	6. Light Marijuana (Styles 25-26)	
26. Light Marijuana		
27. Tried More than One Drug	7. Drug Experimenters (Styles 27-29)	3. Low Drug Involvement *n* = 30 (32%) (Groups 7-8, Styles27-31)
28. Tried One Drug		
29. Tried Marijuana		
30. Light Alcohol	8. Light Alcohol (Styles 30-31)	
31. Very Light Alcohol		
32. Used Alcohol	9. Negligible or No Use (Styles 32-34)	4. No Drug Involvement *n*= 40 (42%) (Group 9, Styles 32-34)
33. Tried Alcohol		
34. Never Tried Drugs or Alcohol		
35. Exaggerator →	→	*n*= 2 (2%)

Table 11. *Predicted Drug Involvement Levels Based on ADAS Responses*

	Predicted Group Membership							
	High Drug Involvement	**Moderate Drug Involvement**	**Low Drug Involvement**	**No Drug Involvement**	***Total***	**Missig Data**	**Exaggeratos**	**Total**
Frequency (%)	**8 (8.2%)**	**17 (19.6%)**	**25 (25.8%)**	**37 (38.1%)**	**87 (89.7%)**	**8 (8.2%)**	**2 (2.1%)**	**97 (100.0%)**

Table 12. *Means and Standard Deviations for Predictor Variables*

	Predictor Variables	***Mean Score***	***Standard Deviation***
High Drug Involvement	**Purpose in Life[a b]**	**105.25**	**17.77**
	Religiosity Measure[c d]	**19.5**	**5.29**
Moderate Drug Involvement	**Purpose in Life[ab]**	**103.76**	**20.26**
	Religiosity Measure[c d]	**19.29**	**5.68**
Low Drug Involvement	**Purpose in Life[a b]**	**113.84**	**16.07**
	Religiosity Measure[c d]	**23.12**	**6.1**
No Drug Involvement	**Purpose in Life[a b]**	**112.73**	**15.03**
	Religiosity Measure[c d]	**22.97**	**5.59**

[a]Range of possible scores is 20-140. [b]Range of scores for study sample is 65-140.
[c]Range of possible scores is 4 –32. [d]Range of scores for study sample is 4-32.

Table 13. *Comparison of Drug Involvement Levels for National Sample versus Present Study Sample*

	Frequency (%)					
	National Sample *According to Grade Levels* (*N* = 60,000)			**Present Study Sample *According to Grade Levels* (*N* = 97)**		
	10th	**11th**	**12th**	**10th**	**11th**	**12th**
High Drug Involvement	**11.3%**	**15.3%**	**18.2%**	**0**	**1 (1.0%)**	**7 (7.2%)**
Moderate Drug Involvement	**19.9%**	**22.2%**	**22.3%**	**0**	**5 (5.2%)**	**12 (12.4%)**
Low Drug Involvement	**26.4%**	**26.3%**	**29.3%**	**0**	**4 (4.1%)**	**26 (26.9%)**
No Drug Involvement	**42.4%**	**36.2%**	**30.3%**	**1 (1.0%)**	**5 (5.2%)**	**34 (35.3%)**
Information not reported		**2 (2.1%)**				

Table 14. *Classification Results*

	Predicted Group Membership				
	High Drug Involvement	**Moderate Drug Involvement**	**Low Drug Involvement**	**No Drug Involvement**	**Total**
HighDrug Involvement	**0**	**4**	**0**	**4**	**8**
Moderate Drug Involvement	**0**	**5**	**0**	**12**	**17**
Low Drug Involvement	**0**	**2**	**0**	**23**	**25**
No Drug Involvement	**0**	**5**	**0**	**32**	**37**
Ungrouped	**0**	**0**	**0**	**2**	**2**

Table 14. *Classification Results*

	Predicted Group Membership				
	High Drug Involvement	**Moderate Drug Involvement**	**Low Drug Involvement**	**No Drug Involvement**	**Total**
HighDrug Involvement	**0**	**4**	**0**	**4**	**8**
Moderate Drug Involvement	**0**	**5**	**0**	**12**	**17**
Low Drug Involvement	**0**	**2**	**0**	**23**	**25**
No Drug Involvement	**0**	**5**	**0**	**32**	**37**
Ungrouped	**0**	**0**	**0**	**2**	**2**