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An Analysis of Monitoring the Future: A Look at the Relationship
Between Juvenile Delinquency and Involvement in School

A thesis

presented to

the faculty of the Department of Criminal Justice and Criminology
East Tennessee State University

In partial fulfillment

of the requirements for the degree

Masters of Arts in Criminal Justice and Criminology

by

Thomas Theodore Zawisza

December 2010

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Keywords: Juvenile, Delinquency, Sport, School

ABSTRACT

An Analysis of Monitoring the Future: A Look at the Relationship
Between Juvenile Delinquency and Involvement in School.

by

Thomas Theodore Zawisza

The purpose of this study was to examine the relationship between juvenile delinquency and involvement with various school activities. In order to do so data from the Monitoring the Future survey of high school seniors in 2008 were used. Univariate measures included descriptive statistics of the variables, while bivariate analysis determined if a relationship exists between the dependent and independent variables. Results of the analysis suggested mixed support for the relationship between adolescent delinquency and involvement in school activities.

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Someone once said “destinations are where we begin again.” It seems not that long ago when I first arrived at East Tennessee State University a scared graduate not knowing what lay ahead. The days grew shorter and time moved faster. It seemed impossible to finish everything that needed to be completed. But somehow I managed to navigate my way through the rigorous coursework and obligations of graduate school. My time here at East Tennessee State University would not have been successful without the help of the criminal justice and criminology faculty and their wonderful secretary Kristine Ketelaar.

While my success here has been partly hard work and dumb luck, there are many people I must thank for helping me along the way. I would first like to give my thanks and gratitude to my mom, dad, and brother for support throughout my college career. Without their support both emotionally and financially I don't think I would have survived. I would also like to thank my wonderful fiancée, whom I love dearly, for sacrificing evenings in order for me to complete all my work. Next I would like to extend my sincere gratitude to Dr. Wayne Gillespie, Dr. John Whitehead, and Dr. Lenore Simon. Together they are the one of reasons that I am able to continue my college career after ETSU. Finally, there are two individuals I owe more to than anyone could ever repay; Dr. Dan Neal, assistant professor at Kent State University, and Dr. Rebecca Stevens, former professor at Kent State University.

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CONTENTS

	Page
ABSTRACT.....	2
ACKNOWLEDGEMENTS.....	3
Chapter	
1. INTRODCUTION	7
Current Study	8
Definition of Terminology.....	8
Theoretical Overview.....	9
General Hypothesis.....	12
Circumstantial Hypothesis	13
Limitations	15
2. LITERATURE REVIEW.....	16
Demographics	16
Race.....	16
Gender.....	18
Age.....	21
Socioeconomic Status	22
Theoretical Components	23
Attachment.....	23
Commitment	27
Belief.....	29
Delinquent Peers	29

Delinquent Values.....	31
Delinquency	32
Summary.....	32
3. METHODOLOGY	34
Data.....	34
Sample.....	34
Sampling Method.....	34
Administration Method.....	35
Response Rates	36
Variables	37
Dependent Variables.....	38
Independent Variables	38
Analysis.....	39
Summary.....	40
4. RESULTS	41
Univariate Descriptives.....	41
Demographics	41
Dependent Variables.....	42
Independent Variables	42
Bivariate Analysis.....	43
Drug Use.....	43
Behavioral Delinquency.....	46
Theoretical Model.....	47

Delinquent Peers	48
Delinquent Values.....	59
Belief.....	65
Commitment	67
Attachment to School.....	68
Principle Component Analysis	70
Analysis of Variance.....	71
Summary.....	73
5. DISCUSSION.....	74
Methodology.....	75
Findings.....	76
Adolescent Delinquency and Interscholastic Participation.....	76
Adolescent Delinquency by Theoretical Model	78
Principle Component Analysis	79
Limitations	80
Implications.....	81
Future Directions	83
REFERENCES	85
APPENDIX: Tables:.....	90
VITA.....	178

CHAPTER 1

INTRODUCTION

In the United States high school sports are looked upon as being many things. For some, they are rites of passage where a father can mentor his son as his father once mentored him. For others they are social events where friendships are formed solidifying the individuals place in the social rankings of the school (Cohen, 1955). Psychologists and sociologists view interscholastic sports as a means for males to exhibit and demonstrate their masculinity (Eitle, Turner, & Eitle, 2003; Sobo et al., 1998). Interscholastic sports also produce a protective effect that helps prevent delinquency and promotes conformity to social norms (Dawkins, Williams, & Guilbault, 2006). However, several studies have demonstrated that interscholastic sports may not be the protective factor that everyone believes them to be (Agnew, 1989; Hartmann & Massoglia, 2007; Schafer, 1969).

In recent years studies have indicated that interscholastic sports do not serve as a protective factor but rather they create a risk for adolescents. There has been some evidence that the effect of high school sports is different for adolescents based on race, gender, and socioeconomic status. For instance Sabo et al. (1999) found that females who participated in sports were less likely to engage in sexual behavior compared to males and females who were not athletes. Dawkins et al. (2006) found that sports participation acted as a protective factor against cigarette and marijuana use for all subcategories, while it served as a risk factor for alcohol use among black males and white males and females; it was a protective factor for black females. Schafer (1969) found that white collar athletes with a low GPA were more likely to be delinquent than white-collar athletes with a high GPA and blue-collar athletes with high and low

GPA's. White-collar individuals traditionally are considered upper class members of society while blue-collar individuals are considered to be in the middle to lower class of society.

Current Study

The purpose of the current study is to further examine the relationship between participation in interscholastic sports and delinquent behavior. This thesis builds upon the plethora of research that has already investigated aspects of this relationship. This study adds to the literature because it includes variables such as race and several types of drug use that have been omitted from past studies. In addition previous studies have extensively reported correlations between alcohol use, marijuana, and delinquent behavior with sports participation in school. This study examines other delinquent behaviors such as hard drug use (inhalants, amphetamines, barbiturates, and narcotics) and behavioral delinquency such as trespassing, fighting, and theft.. Very few if any current studies have investigated the variables previously mentioned. The current body of research also focuses heavily on the male athlete rather than the female athlete. The current study extensively examines the differences of delinquent behavior between male and female athletes in America. It is important to examine this relationship for a better insight into delinquency-prevention tactics. However, it is important to first define the terms "delinquency" and "sport" as well as a review of theory.

Definitions of Terminology

In order to ensure clarity there is a need to define terms that are used in this thesis: sports and delinquency. In the general sense a sport can be considered a competition between two or more people in order to achieve a goal. Many people recognize football, basketball, hockey, soccer, badminton, volleyball, and fishing as sports (Laker, 2002). However, many people do not recognize ballroom dancing, blackjack, and skydiving as sports. The word "sport" can oftentimes

be ambiguous. To a soccer player soccer is a job not a sport; to a fan it is. It is because of the ambiguity of the definition of sport that there is a need to adequately define sport for this thesis. Laker (2006) defines sport, specifically school sport, as "organized competitive contests between groups of pupils, either within a school, as in house or tutor group matches, or between schools in the form of representative teams" (p. 6). In an educational sense school sports are used to teach young children about physical exercise as well as allow them to build relations with their peers. Laker (2006) notes that sports teach adolescents about conformity and rules of play. When adolescents conform to social norms, they are considered to be nondelinquent.

Conforming to the norms of society is the basis for nondelinquency. To answer the question of delinquency, one must first establish acts that are to be deemed as unacceptable. Loseke (2006) attests that it is the people who hold political and social power who define delinquency or criminal acts. Loseke says that in order for something to be delinquent or a social problem, it must be widespread, harmful, can be changed, and should be changed (2006). Therefore, delinquency in this thesis is defined as "behavior by non-adults which violate specific legal norms of a particular societal institution with sufficient frequency and/or seriousness so as to provide a firm basis for legal action against the behaving individual or group" (Hirschi, p.50, 1969). This definition of delinquency allows for the exploration of legal violations within different domains such as the school, home, society, and within peer groups.

Theoretical Overview

Traditionally the examination of interscholastic sport has been conducted from social bond theories and social learning theories. Many studies have employed Hirschi's original bonding theory to analyze the effects of interscholastic sports while others have used different

social learning theories. This study uses an integrated theory that consists of different elements of the two theories previously mentioned.

In Thornberry's "Toward an Interactional Theory of Delinquency" he explains that the traditional control theories and learning theories cannot account for the unidirectionality of the theory, are nondevelopmental, and assume uniform causal effects throughout the social structure (p. 864). First, unidirectionality refers to the inability of the theory to incorporate reciprocal effects of delinquency. In other words many theories fail to account for the effect delinquency has on the offender as well as the social structure the offender lives in. Second, Thornberry argues that many control and strain theories are unable to adapt to older adults. For instance Hirschi and Cohen focus solely on bonds and strain that hold and break habits of adolescents. To them the stronger the bond the more likely one is to not be involved in delinquency. These theories fail to account for behavior that is beyond the range of adolescents thus rendering them as nondevelopmental. Last, traditional theories have failed to account for mitigating factors, variations of delinquency, and the genesis of the delinquent behavior (Thornberry, 1987). With that said, interactional theory allows for variations in how the adolescent interacts with society. In this theory delinquency can be measured by the attachment to parents, belief in conventional values, commitment to school, association with delinquency peers, delinquent behavior, and delinquent values.

Thornberry (1987) agrees with Hirschi in that attachment to family "is the most salient arena for social interaction and involvement and, because of this, attachment to parents has a stronger influence on other aspects of the youth's life at this stage than it does at later stages of development" (p. 873). This attachment to a parent can be thought of as the ability to parent even though the parent is not around. For instance a child with a strong attachment to his or her parent

will act as though his or her parent is around; internalizing the parents values. Thornberry (1987) suggests that "parents who have a strong affective bond with their children, who communicate with them, who exercise appropriate parenting skills, and so forth, are likely to lead their children toward conventional actions and beliefs and away from delinquent friends and actions" (p. 874). However, this bond is not fully immune to all effects of society. Failure to perform well at school, engaging in activities with delinquent peers, and failure to perform well in the house can all greatly affect the bond between parent and child.

The belief in conventional values is when the adolescent has learned what is right and wrong. This belief in conventional values comes from the teachings of values, society's norms, from the adolescent's parent(s). If the parent or parents fail to supervise, monitor, and punish through discipline of "bad" behavior and the rewarding of "good" behaviors, the child will be more susceptible to delinquency.

Commitment to school is the idea that the adolescent has some stake in education (Thornberry, 1985). For instance the adolescent wants to achieve high marks in order to obtain a degree in a subject of higher learning. Therefore, the child will be more likely to participate in activities that are only beneficial to his or her success. The commitment to school may also involve the adolescent's needs to succeed in general. This can be accomplished by engaging in athletics, extracurricular activities, or some other type of school function.

The last two functions of this model of interaction leading to the outcome of delinquent behavior, delinquent values and association with delinquent peers, are formed when bonds commitment to school, belief in conventional values, and attachment to parents erode. Delinquent values occur when the adolescent has accepted delinquent activities and general rule breaking as an acceptable mode of behavior as well as the general acceptance to violate some

law or rule (Thornberry, 1987). The association with delinquent peers occurs when there is an attachment or bond that forms between the peer and the adolescent. This is not to say that there is no bond between the parent and child, but rather a new bond forms despite the attachment to parent.

In order to analyze the different hypotheses several analytical techniques are used. Chi square allows for examinations of relationships between variables. The analysis of variance, ANOVA, examines whether explanatory variables determine if the means of these variables are equal or if they differ at the population level. Scales were constructed based on Crombach's reliability statistic for use in ANOVA comparisons. This allows for the comparison of drug use, behavioral delinquency, and the two scales combined for a full scale of delinquency. Principle component analysis was implemented to investigate the number of factor components of the full delinquency scale.

Generalized Hypothesis

The current research is directed toward investigating what effect interscholastic sports has on delinquent behavior. This allows for an array of hypotheses to further explore this subject. Null Hypothesis: Participation in interscholastic sports is not related to delinquency among adolescents.

Hypothesis 1: An interscholastic sport in general is related to delinquency among adolescents.

Hypothesis 2: Males will report more aggressive behaviors than females.

Hypothesis 3: There is a significant relationship between delinquency and race.

Hypothesis 4: The relationship between delinquency and predictor variables will be significant

Hypothesis 5: Participation in other interscholastic activities will share a significant relationship with the delinquency variables

Hypothesis 6: Attachment, commitment, belief, delinquent peers, and delinquent values are not independent of adolescent delinquency.

Hypothesis 7: The participant's use of a drug is not independent of having a friend who uses the same drug.

Circumstantial Hypotheses

The chi-square and ANOVA allowed for several specific hypotheses pertaining to the relationships of the delinquency variables to the predictor variables. Because an extensive number of comparisons were made, it would be impossible to list every null hypothesis. However, it is important to understand what these null hypotheses are. The following null hypotheses demonstrate a few of the many that are able to be made.

Chi Square of Drug use and Interscholastic Involvement of Race and Gender.

H0₁: There is no relationship between the participant's reported tobacco use and sports participation for black males.

H0₂: There is no relationship between the participant's reported narcotic use and club participation for white females.

Chi-Square of Behavioral Delinquency and Interscholastic Involvement of Race and Gender

H0₁: There is no relationship between the participant's reported fighting and sports participation for white females.

H0₂: There is no relationship between the participant's reported trespassing and participation in music or arts for black females.

Chi-Square of Delinquent Peers and Delinquency of Race and Gender.

H0₁: There is no relationship between the participant's reported use of tobacco and peer use of alcohol for Hispanic females.

H0₂: There is no relationship between the participant's reported use of alcohol and peer use of alcohol for white males.

Chi-Square of Delinquency and Delinquent Values of Race and Gender

H0₁: There is no relationship between the participants' reported use of alcohol and their perceived risk of five drinks on a weekend day for Hispanic females.

H0: There is no relationship between the participant's reported inhalant use and perceived risk of using marijuana regularly for white females.

Chi-Square of Delinquency and Belief of Race and Gender.

H0₁: There is no relationship between the participant's reported fighting and attending a 4-year college for white males.

H0₂: There is no relationship between the participant's reported stealing of items greater than \$50 and attending a 4-year college for white females.

Chi-Square of Delinquency and Commitment of Race and Gender.

H0₁: There is no relationship between the participant's reported use of barbiturates and how many hours a week is spent on homework for white females.

H0₂: There is no relationship between the participant's reported damaging of school property and number of hours spent on homework for white females.

Chi-square of Delinquency and Attachment by Race and Gender.

H0₁: There is no relationship between the participants' reported use of tobacco and how much they enjoy school for Hispanic males.

H0₁: There is no relationship between the participants' reported fighting and how much they enjoy school for Hispanic females.

Analysis of Variance of Scales by School Participation

H0₁: There is no relationship between the means of sports participation and delinquency.

H0₂: There is no relationship between the means of club participation and delinquency.

Analysis of Variance of Scales by Race and Gender.

H0₁: There is no relationship between the means of gender and the means of the delinquency variables.

H0₂: There is no relationship between the means of race and the means of the delinquency variables.

Limitations

This thesis is not without its limitations. First, and most pertinent, the data for this thesis were collected through first hand methods. They were taken from the ongoing study, Monitoring the Future, which is a yearly cross sectional survey of 8th, 10th, and 12th grade adolescents across America (Monitoring the Future, 2010). Because the data had been collected using adolescents in specific grades, they may not be generalizable to the entire population of adolescents in the United States nor to adolescents in other countries. In addition behaviors that occurred previous to the survey and after the survey cannot be accounted for. Thus, it is impossible to determine if there were any preexisting or mitigating factors that could account for the adolescent's delinquent behavior. Finally, self-report questionnaires were used to collect the data which may allow for internal inconsistency due to failing to accurately portray the adolescent. Because I had no involvement with creating measures and operationalizing constructs, I am left with variables conceived by the original researchers. The levels of measurement for these variables are mostly categorical and do not lend themselves to advanced statistical analysis.

CHAPTER 2

LITERATURE REVIEW

Interscholastic sports participation by adolescents has always been thought of as a shield to protect children from delinquency. However, recent research has questioned the ability of interscholastic sports to be a protective factor. Various studies have demonstrated the correlation between interscholastic sports and delinquency. Although there has been an extensive amount of research on this subject, it is unclear what effect interscholastic sports have on delinquency. Many have demonstrated that interscholastic sports are a protective factor, while others argue that being involved in sports enhances one's delinquency. In order to have a better understanding of the effect of interscholastic sports on delinquency, this review analyses literature that has been published related to the topic within the past 50 years.

This literature review consists of two separate sections. The first section examines the demographics of the existing literature. These variables include ethnicity, age, gender, and socioeconomic status. The second section examines the theory employed in this thesis. In order to achieve this, attachment, involvement, belief, delinquent peers, delinquent values, and delinquent behavior are examined.

Demographics

Race

One of the most perceived stereotypes is that African American adolescents engage in a disproportional amount of delinquency compared to adolescents of different races. There is a general consensus in the literature that interscholastic sports may serve as a protective factor for African Americans and as a risk factor for Caucasians (Dawkins et al., 2006; Hartmann & Massoglia, 2007). In addition Agnew and Peterson (1989) found for Caucasians that leisure

causes delinquency and not delinquency causes leisure. These leisure activities include organized sports, leisure sports, and after school leisure activities (Agnew & Peterson, 1989). Dawkins, Williams, and Guilbalt (2006) found that compared to white males and females, African Americans were less likely to use tobacco, alcohol, and marijuana. Their article agrees with Shaffer's (1969) original thesis of interscholastic sports as a protective factor rather than a risk factor. Eitle et al. (2003) also reported that substance abuse was lower for African Americans than Caucasians. They reported that white males and females are more likely to indulge in delinquent behavior such as drinking, smoking, and recreational drug use. There were fewer reports of alcohol, tobacco, and marijuana use for African American athletes. It was also found that preteen alcohol use among African Americans, as well as whites and Spanish speaking adolescents, is a significant predictor of alcohol use and abuse during school. This is especially true for those individuals who participated in a organized athletics. The possibility of interscholastic sports serving as a protective factor for African Americans gives us insight to how to prevent future delinquency. For instance Dawkins suggests that increasing funding for organized activity in urban areas will reduce delinquency and potentially allow the adolescents in these areas to flourish as prominent members of society.

The literature suggests that interscholastic sports act as a risk factor for Hispanic adolescents in the United States. Many studies have failed to capture the true essence of high school sports participation and delinquency (Eitle et al., 2003). The US Census Bureau estimated that there are approximately 35 million Hispanic citizens in the United States as of April 1, 2000 (US Census Bureau). The 35 million Hispanics in the United States makes up about 12% of our population. Yet, studies analyzing the relationship of interscholastic sports and delinquency fail to incorporate this population into their study in any meaningful way. Bartko and Eccles (2003)

reported that there are no differences between African American adolescents and Caucasian adolescents and how their leisure time is spent and how frequent one engages in delinquency (2003). Because the study was conducted using a cross-sectional technique, it fails to describe what effect leisure time has on the Hispanic individuals over a long period of time. Furthermore, Agnew and Petersen's leisure and delinquency study failed to describe the effects of leisure on delinquency for African Americans and Hispanics (1989). Using the Leisure Time Activity Scale (ATLAS) members of the Hispanic Research Center in Texas analyzed the effects of leisure activities of Hispanic adolescents (Yin, Katims, & Zapata, 1999). This scale included 24 variables that were taken from Agnew and Petersen's scale along with items from Yu and Yin's scales. Using the modified scale Yin et al. (1999) contradicted Agnew and Petersen's (1989) study; finding that both male and female Hispanic adolescents had lower self-reporting of delinquency than their Caucasian and African American counterparts and that organized sports act as a significant protective factor for marijuana use, alcohol use, and running away from home at night .

Gender

Gender is commonly found to be a statistically significant variable when one considers the effect of organized school sports and delinquency (Messner, 1992; Miller et al., 1998). It is often found that both genders engage in behaviors such as binge drinking, cigarette smoking, and use of marijuana. Some studies have shown that girls are more likely to engage in more serious delinquent activities than boys (Melnick, 1988), while others (Miller et al., 2007) demonstrated that boys engage in more delinquent behavior than girls. The current body of literature is inconsistent in its findings. Some have argued that interscholastic sports are crucial for the

development of adolescents, while others argue that interscholastic sports enhance the delinquency of the adolescent.

The participation in interscholastic athletics often result in gender specific delinquency. The participation in organized school sports program for males is thought to have a socialization effect of showing ones masculinity to others as a rite of passage (Messner, 1992). Feminist scholars agree that sport is a way for males who possess hyper masculinity to use athletics as an acceptable means of showing and expressing this hyper masculinity (Hartmann, 2007; Sabo, 1999). For instance Kreager (2007) notes when males participate in interscholastic sports, they are rewarded for their aggressive behaviors on the field. It is not uncommon for the crowd to cheer when a “big hit” is made or a “good tackle” is performed. Rewarding males for this type of behavior reinforces their masculinity. Furthermore, males may participate in school sport because they are addicted to the feelings of the game; specifically the adrenaline rush (Donnelly, 1981; Segrave, 1983). This is not uncommon for males who desire activities with risk involved. Gonzalez et al. (1994) showed that interscholastic sports were related to danger seeking and drug use among males. These danger-seeking sports (football, wrestling, basketball) are more attractive to adolescents who possess aggressive behavior rather than those who are more timid (Kreager, 2007). It is clear that for males participation in interscholastic sports shapes violent behavior.

Female participation in interscholastic sports is not as prevalent as male participation (Jenkins, 1997; Marsh & Jackson, 1986; Miller et al., 2007). In fact females participate less frequently, with less intensity, and for a shorter timeframe than males (Marsh & Jackson, 1986).

Interscholastic sport is often linked with masculinity. Male and female athletes are more likely to be associated with certain stereotypes such as jocks or dykes (Marsh & Jackson, 1986).

For example Marsh and Jackson (1986) report that females who weight lift are seen as being masculine compared to their cohorts. However, Burton (2005) posits that gender roles may be changing. In his analysis of delinquent behavior as a result of participation in school sports, he discovered that females were no more likely to engage in delinquent behavior than males. Participation in interscholastic sports for both males and females resulted in more aggressive behavior.

With regards to interscholastic sport being a protective factor, some studies report no difference in behavior by gender (Gardner, 2009), while others demonstrate how the behavior of boys and girls differ (Eitle et al., 2003; Sabo et al., 1999; Tracy & Erkut, 2002). As previously stated, males are more inclined to participate in interscholastic sports because they give males a means to express their masculinity; Female athletes are less likely to participate. Aggressive behavior in males is a common trait that forms from the participation in sports. Females on the other hand achieve self-esteem from participation in school sports (Tracy & Erkut, 2002). Tracy and Erkut (2002) posit that Caucasians have the greatest reporting of low self-esteem. In addition to self-esteem, females view interscholastic sports as a means of physical activity and exercise (Antshel & Anderman, 2000). Physical activity according to Eisenmann and Wickel (2009) is “any bodily movement produced by skeletal muscles that results in a substantial increase in energy expenditure above resting metabolic rate and includes leisure time, physical activity, exercise, sport, occupational work, and household and other chores” (p. 257). However, one must carefully examine female participation to boost self-esteem. Throughout recent history females have used exercise as a way to lose weight at an unhealthy rate resulting in higher self-esteem.

Female athletes are likely to delay their participation in sexual intercourse as compared to males and nonathletic females (Miller et al., 1998). The "gender identity formation for girls who participate in high school athletics may therefore result in a less traditional feminine orientation to dating and sexual relations" (Miller et al., 1998, p. 111). Sabo et al's. (1999) finding was consistent with that of previous research. Females were less likely to engage in coital relations as well as report less sexual activity and less pregnancy than nonfemale athletes. In addition to the traditional feminine role, the participation in high school athletics may result in growth of social networking leading to the exchange of habits of the females in the population.

Age

When considering interscholastic sports and delinquency, one must take into account the age of the athlete. It is common knowledge that as one ages, he or she is less susceptible to delinquency. This process is known as the aging out of crime. Unfortunately, the current body of literature does not extensively look at the age of the adolescent. The few studies that extensively incorporated the effect of age and interscholastic sports (both as an interaction and noninteraction terms) found that as a child moves through adolescents, the more delinquent he or she becomes. For instance Duncan et al's. (2002) study revealed that the oldest age group in their sample, 14 years, recorded the highest levels of substances abuse. This was compared to two other age groups of 10 and 12 years. Furthermore, Duncan et al. (2002) discovered that as the adolescent increased with age so did the severity of delinquency. Eccles and Barber (1999) found similar results in which 12th grade adolescents reported more delinquency overall than adolescents in lower grades.

Socioeconomic Status

Conventional wisdom suggests that a person's socioeconomic status is a determining factor for delinquency. Several studies have demonstrated that adolescents who are considered to be lower class are more susceptible to dropping out of high school and engaging in delinquent activities (Cohen, 1959; Drapela, 2004; Jarjoura, 1993; Thornberry et al., 1985). Schafer's (1969) original thesis of regarding participation in athletics and delinquency argued that sports have great influence towards conformity to norms. Cross tabulations provided insight to the differences in delinquency trends for white and blue collar individuals. For instance white collar adolescents reported more involvement in athletics (33%) than blue collar adolescents (22%). Moreover, white collar adolescents reported less delinquency than blue collar adolescents despite greater representation in interscholastic athletics. To further contrast delinquency between social classes, Schafer (1969) provided cross tabulations displaying descriptive results between grade point average and socioeconomic status to delinquency. As expected, except for one anomaly athletes in general report less delinquency. Only low grade point average, white collar athletes, reported more delinquency than nonathletes of the same category. McNeal (1995) demonstrated that athletic involvement and socioeconomic status are indirectly related.

It appears that socioeconomic status is a significant variable in whether one participates in interscholastic sport or not. Fejgin (1994) posits the higher one's perceived socioeconomic status is the more likely one is to engage in interscholastic sports. Adolescents in private schools have a greater propensity to engage in interscholastic activities than those in public schools. One explanation that Spreitzer and Pugh (1973) provide is that public school, and some private schools, value athletics more than scholarly achievements. Educational systems that take on this view also tend to reward the higher socioeconomic adolescents more, especially if they

participate in athletics. This treatment of certain royalty is not uncommon. Cohen (1959) argues that the educational system is founded based on the principles of those of the higher socioeconomic classes. Their principles reward those who participate in interscholastic sports and punish those adolescents who do not.

It is feasible that the entire picture is not being captured. There is a possibility that adolescents who reside in lower socioeconomic status areas are more inclined to participate in recreational, nonorganized, athletics. Perhaps these children are more comfortable in participation with their peers outside of the educational environment than with their peers who do participate in interscholastic activities. Simpson (1996) scribed that minorities are discriminated against by affluent white coaches. Furthermore, it is probable that the necessary equipment and fees burden these individuals and they are unable to participate in interscholastic sports.

Theoretical Components

Attachment

Family is an important stronghold for the development of adolescents and children. Many theorists have argued that attachment to family members is crucial for the deterrent of crime (Gottfredson, 1990; Hirschi, 1969; Miller et al., 2007; Thornberry, 2006; Wong, 2005). The attachment bond as described by Hirschi (1969) is the ability of the parent, school, and society to assert control over an adolescent when the parent (school; society) is present and not present. In essence it is the bond that allows relationships to form between adolescent and other entities. Thornberry (1987) agrees with Hirschi (1969) that social control, especially attachment, is critical for future behavior of the adolescent.

Wong (2005) found that attachment to parents is negatively correlated to delinquency. As more time is spent engaging in family leisure activities, the less likely the adolescent is to engage in delinquent behavior. Participating in activities with the family such as playing games and working on homework create an attachment between family members. Wong (2005) also discovered that in attachment to parents is more likely to increase and strengthen the child's respect for the law and law enforcement agents.

Farrington (2010) identifies the family unit as being a strong predictor of child delinquency. Family predictors that are significant include antisocial parents and siblings, large family size, child-rearing methods, abuse and neglect, and parental conflict and disrupted families. The strongest of these factors is poor parenting styles that consists of poor supervision, inconsistent discipline, parental coldness and rejection, and low parental involvement with the child (Farrington, 2010). Unfortunately, there are no measures that can accurately assess parental supervision and discipline. Farrington (2010) posits alternative scales to measure supervision and discipline can be developed in order to accurately assess these two variables. However, there is concern with responses due to the high probability of bias from either the respondent (parent or child) or from the interpretations.

Attachment to the family unit may be jeopardized by the size of the family (Jenkins, 1997). In an ideal setting, the ratio of parent to child would be 1:1 or 2:1. In larger families the parents have less time to attend their children's activities such as baseball games, recitals, and parent-teacher conferences. Moreover, each child receives less supervision which may lead to more delinquent behavior (Jenkins, 1997). Family size may not be the only contributing factor to delinquency. Jenkins (1997) notes that children who live with at least one parent may feel neglected when the parent does not attend activities of the stepchild. When this occurs,

attachment to the parent and step-parent may be weakened. Robertson's (1999) qualitative analysis of the dynamic that family and delinquency reveals that biology is not a factor when considering attachment between parent and child. Rather, it is how the family interacts with each member to formulate attachment amongst them.

Unfortunately, attachment to different entities is not always positive. Thornberry (1987) argues that Hirschi's (1969) original thesis did not permit reciprocal interactions of variables; this causes unidirectionality. Barber et al. (2001) note attachment to family members who display problematic characteristics (drinking, smoking, domestic violence, etc.) may increase the adolescents delinquent behavior such as underage drinking and use of marijuana. Additionally, Dornbusch et al. (2001) posit that attachment to school, family, and society will be rendered null if the adolescent has had previous behavior problems. Dornbusch et al. (2001) also point out that "ties to the school often [operate] to deter adolescents from engaging at all in a specific form of deviation, but, once deviance [has] occur[s], the relative strength of school connectedness as an influence on deviant behaviors tend to be weaker." (p. 418). It is apparent that attachment is able to grow or dissipate over time. Because attachment to parent and school can be mediated by other factors such as delinquent peers, it is important to examine the best practices for attachment to be successful.

The attachment bond grows as the parent becomes more involved in the adolescent's day-to-day business. Falbo (2001) discusses that talking with the adolescent about events at school when the adolescent comes home has a positive outcome. The author also found that parental support of homework completion and correct child monitoring is important for the likelihood of increased socially desirable behavior. Gottfredson and Hirschi (1990) agree that consistent parental control over an adolescent will likely decrease delinquent behavior. Effective parenting

may decrease the overall frequency, intensity, and prevalence of delinquency (Dornbusch et al., 2001). Burton (2005) indicates that the parent may also influence the child to participate in interscholastic sports which may increase the desire to do well and reduce delinquency. In Falbo's (2001) analysis of parental attachment and involvement, two accounts were made; one from a parent with poor style of parenting and another from a successful style of parenting. In her results Fran was a troubled child who had ineffective parents. Fran recalled one account in which her father was too lenient;

“Like one day I did skip for lunch and instead of going to class, I went to all four lunches. And after that, I felt totally guilty, and I told my dad. And my friends were like, “What? What kid in their right mind would tell their dad?” But I had to. I felt so guilty that I had to tell somebody, and my dad was just there. He just told me that “Well, you have to do what you do. Even though you can't turn back the clock, you're gonna have to go to class now.” He told me that he doesn't want to hear that I'm skipping nay classes because he says that that's a bad way to start high school. He says, “Just go for it! There's no problem big enough that you have to run away. If you don't understand something, don't run away, go to class and talk to you teacher and tell her what's going on.”” (Falbo et al., 2001, p. 523).

Contrast to Fran's parents, Adam's mother recalls one event in which Adam failed to complete a homework assignment.

“I was sitting in his theater arts class, and his teacher was talking about this wonderful assignment that they had just turned in, this mask that everyone had turned in. And I was sitting there going “I don't remember Adam doing a mask!” And I came home and said, “Adam, did you make a mask?” “No, I forgot to do

it.” So, then we went out that night, and we went to get a planner, and that’s much better because he writes, he doesn’t try to commit everything to memory. Adam used the planner every day, telling us how much he liked checking off assignments when he had finished them.” (Fablo et al., 2001, p. 349).

It is obvious that one parent approached the situation in a proactive or reactive manner, while the other approached the situation from a Laissez-Faire standpoint. These examples clearly illustrate how effective parenting can positively affect the behavior of the adolescent.

In addition to being involved academically with the adolescent’s scholarly achievements, it is important that the parent engage in activities with the adolescent. Agnew and Peterson (1989) argue that organized, structured activities are more beneficial than unstructured activities. Activities such as playing board games, card games, and outdoor sports are more likely to produce structure than other leisure activities such as watching television or watching a movie.

Commitment

Conventional wisdom suggests that as an adolescent become more involved with different activities, the less likely the adolescent will engage in maladaptive behavior. Hirschi (1969) and Thornberry (1987) agree that the more an adolescent is involved with social activities, the less time he or she has to engage in delinquent behavior. However, the mere involvement in activities is not a proven factor of protection against delinquency.

There is a clear delineation between involvement in organized activities and unstructured activities. Agnew and Peterson (1989) argue that leisure activities such as watching movies, involvement in intramural sports, and video games are activities that may promote delinquency. These types of activities lack any structure or rules of engagement. Moreover, they find that the more the adolescent enjoys an activity the more time he or she is willing to spend in that

particular activity. Leisure activities oftentimes lead to behavior that is not prosocial (Duncan 2002). Miller et al. (1998) and Gardener (2009) discovered the more time involved in leisure activities, the more opportunities there are to engage in delinquent behavior.

Participation in organized activities tends to have a greater effect on reduction of delinquent behavior than participation in leisure activities (Bartko & Eccles, 1999; Burton, 2005; Gardener, 2009; Sabo et al., (1999). Organized participation offers structure and rules that the individual must abide by. Basketball requires teamwork to advance the basketball forward in order to gain points. A sport such as tennis requires precision timing and hitting in order to win sets and matches. These types of organized interscholastic sports may attract more nondelinquent than delinquent adolescents (Landers & Landers, 1978). Langbein (2002) found that schools that have more adolescents who are involved with interscholastic sports report less delinquency among their students. Many students are driven by involvement in different activities (McNeal, 1995). Delinquency is often reduced in these individuals. Aside from participating in interscholastic sport, they are engaging in other structured extracurricular activities that reward prosocial behavior. Boy scouts, girl scouts, volunteer work, and afterschool clubs are just a few examples of other organized activities.

Though interscholastic sports do provide structure and organization, it is still unclear to what extent interscholastic sports contribute to delinquency. Engaging in football often times results in elevated levels of aggression due to the violent nature of the sport (Kreager, 2007; Messner, 1992). It is also not uncommon to witness elevated alcohol use for those engaging in violent sports. However, Eitle and Eitle (2003) observed less drug abuse in adolescents who participated in organized interscholastic sports than those who did not.

Belief

Thornberry (1987), like Hirschi (1969), suggests that the more time one spends in activities that have socially accepted values, the more likely the adolescent will begin to accept those rules. Kreager (2007) attests that adolescents who participate in interscholastic activities inherently have morals and values. Without these morals and values, there is no possibility of conformity to social norms. Wigfield et al. (1997) discovered that younger children are more optimistic about outcomes in life, while older children become more realistic of their opportunities. Interscholastic sports may increase one's belief in personal skill and achievement. Newton and Duda (1993) reported those adolescents who were exceptional tennis players had an elevated belief in ability. This belief in ability often results in classroom accomplishments. Adolescents who are proven to have more talent than others are rewarded with scholarships and more educational opportunities (Newton & Duda, 1993).

Delinquent Peers

A high school sport is a social activity by nature. It is inevitable that while participating in sports people will interact with each other. The interaction between peers is significantly related to the probability of engaging in delinquent activity. Gardner, Roth, and Brooks-Gunn (2009) found in their study the odds of delinquency are higher for those adolescents who participate in organized sports compared to those who participate in nonathletic activities. In their study they used data from the Project on Human Development in Chicago Neighborhoods. Their sample size consisted of 6,000 youths from the Chicago area spanning 3 years. The analysis of self-report measurements showed that involvement in organized athletics did not reduce delinquency among peers. The more involved an adolescent is with his or her peers, the more likely he or she is to conform to that identity (Thames & Vaisman-Tzachor, 2009). In

addition to conformity an adolescent may become more vulnerable to behavior influenced by their peers if that adolescent has a family who is dysfunctional. Consequently adolescents inadvertently adopt (learn) similar behaviors to feel as though they belong to that group.

Patrick et al. (1999) suggest that peer groups have strong influences over adolescent behavior and to their commitment to various activities. Self-report measures indicate that adolescents turn to peer groups for ongoing support throughout their years of adolescents. In addition adolescents feel that they are able to be themselves while they are around their peers. Adolescent peer groups allow for the adolescent to develop individuality creating an identity for the adolescent (Patrick et al., 1999). In their research Patrick et al. (1999) focused on three main objectives: what role does peer groups have on adolescent's motivation and commitment to talent activities (mainly sports), experiences based on talent activity, and gender differences among adolescents. The results of the semistructured interview resulted in the following findings. First, adolescents who were involved in talent activities were likely to continue that activity because the peer relationships proved to be a motivational factor for talent activities. Specifically, "the enjoyment reaped from the social aspects of that engagement did appear to enhance the enjoyment of participating and to support their continued involvement in those activities" (p. 759). However, this effect is not one way. If the interaction of peers was not satisfactory, the involvement in talent activities would lesson, decreasing the amount time spent in that particular activity. The second objective was to examine what effect peers had on interscholastic talent activities (band, organized sports, cheerleading) versus those talent activities that were offered outside of school (piano lessons, ballet, dance). Results indicated that adolescents who participated in out-of-school talent activities felt that they were choosing between that activity and a persistent social life. Many adolescents who were participating in talent activities outside

of school were more likely to stop participating in these activities in order to "fit" in with their cohorts if they had a strong influence from their peers

Landers and Landers (1978) discuss that high school athletics are important to males because they offer males a sense of prestige among their peers. When asked "if the adolescent could be remembered as one thing, what would be?" the common answer was an athlete (p. 300). The results of their study indicated there was a need for adolescents to be recognized as athletes by their peers. In addition they found that the juvenile's involvement in interscholastic sports served as neither a protective nor a risk factor for delinquency regardless of his or her status amongst peers.

Delinquent Values

The final theoretical component, delinquent values, suggests that behavior is often modeled or learned inside peer groups (Thornberry, 1987). Differential association, as made famous by Edward Sutherland (1940), suggests that delinquent behavior is learned through intimate peer groups where definitions are favorable toward delinquency. Other theorists such as Ivan Pavlov (1927) and Skinner (1974) suggest that learning of behaviors is either due to behavior shaping or the behavior is conditioned. Thornberry (1987) has found support for the acquisition of delinquent values among peer-to-peer interactions. Peer interactions may form new attachments that are maladaptive to socially accepted behaviors. Unlike Hirschi's theory (1969), interactional theory of delinquency allows for behaviors to change over time. Thus, attachment to the parent or school may be weakened if the adolescent forms a stronger bond with peers who are delinquent.

However, this association with peers is not always troubling. Falbo and Reese (2001) reported that individuals learned prosocial behaviors from peers who were older. One adolescent

on a school swim team reported higher behavior of conformity. This was because the older members of the swim team regarded education very highly. These values were then passed down to the younger members.

Delinquency

The current body of literature reveals that drinking, fighting, and tobacco use are the most common forms of delinquency among adolescents who participate in interscholastic sports. Marijuana use for athletes is not as extensively documented in the literature as the previous forms of delinquency like drinking and fighting. For instance Barber and Eccles (2001) demonstrate that females are more likely than males to engage in the use of marijuana when participating in extracurricular activities. This participation in extracurricular activities does not necessarily include participation in school sports. Furthermore, the literature fails to investigate what effects sports participation has on higher tier delinquent acts. This thesis is examining other delinquent acts such as more addictive drug use, other alcoholic behaviors, and violent crimes including gang participation, hurting someone bad, and theft.

Summary

Previous studies were reviewed in order to guide the current research. The studies that were previously discussed were important to the selection of variables to use in this study. The literature does not agree about what effect interscholastic participation has on delinquency. Early studies indicate that sports participation is a protective factor for delinquency (Schafer, 1969). Recent studies have discussed that not only does interscholastic athletics contribute to delinquency but it has a different effect based on gender and race (Dawkins et al., 2006; Marsh & Jackson, 1986). There has also been some acknowledgement that participation in unstructured

activities is more of a risk factor than interscholastic sports because it provides no guidance or direction for the adolescent (Agnew & Petersen, 1989; Simpson, 1986).

There is also question as to how to explain one's behavior through a theoretical model. It is uncommon to consider adolescent delinquency without mentioning social control or social learning as primary theories. However, Thornberry's theory is aimed at explaining adolescent delinquency as an ongoing process through Thornberry's (1987) interaction model. This allows for changes in one's behavior that the previous theories do not permit. The core of this theory is built upon three components of social control theory (attachment, commitment, and belief) and two components to social learning theory (delinquent peers and delinquent values). This study is an attempt to fill the void created by inconsistent findings across studies.

CHAPTER 3

METHODOLOGY

The purpose of this study is to further examine the relationship using Thornberry's (1987) interaction theory using the Monitoring the Future survey. The secondary data contain responses for several variables pertaining to adolescent drug use, alcohol habits, and parent and friend relationships.

Data

Sample

The sample used for this study was derived from the ongoing cross-sectional study Monitoring the Future (2008), collected by University of Michigan researchers Johnson, Bachman, O'Malley, and Schulenberg. In order to get a clearer understanding of adolescent behaviors in the United States, the sample was selected from both public and private school in four sections of the United States. The total sample of participants was $n = 14,577$ and the subsample used for this thesis was $n = 2,423$. These four sections, or regions, were Northeast, North central, West, and South. This survey was made possible from full funding by the National Institute on Drug Abuse. In order to guarantee confidentiality of participants, the names of the schools that were targeted for participation are not available to the general public and are kept in a database that only the researchers of the study have access to.

Sampling Method

The sampling method used in the study Monitoring the Future (2008) consisted of three stages. Each stage was carefully designed using stratified clustered sampling

The first stage of the sampling procedure was to determine the geographic locations of the study. This was achieved by using primary sampling unit (PSU) which was developed by

the Sampling Section of the Survey Research Center (Johnson et al., 2008). This method allows for general administration of data collection in all schools.

The second stage of sampling consisted of the school selection. Because metropolitan areas often have more than one school in the district, one or more schools have been selected from these areas. All other areas have only one school selected for participation. In addition, selections were made in such a way that the probability of school selection is proportionate to the size of the senior class. Furthermore, if a school did not wish to participate in the study, another school was selected with similar attributes; size, location, etc.

The final sampling stage consisted of student selection. Approximately 350 high school seniors were selected from each school. If the school population was small and there were fewer than 350 students, efforts were made to ensure that all high school seniors of these particular schools were selected. Because schools differ in size and population, weights have been given to each participant to account for the differences from school to school.

Though these measures have been taken to ensure validity and consistency, this is not without limitations. This method of sampling does not account for students who have dropped out of school before their senior year. Therefore, there is no way to investigate the habits of these individuals through this data set.

Administration Method

Approximately one and a half weeks before the surveys are administered, the teachers made an announcement to the students and provided a brochure for their parents or guardians to read. In addition consent forms are sent home so their parents or guardians can give consent. If the school has a specific procedure for consent, it was adhered to. There were ample opportunities to withdraw or deny consent of participation of the adolescent.

Administration of the survey is conducted by a representative from the local Survey Research Center. Prior to administration of the questionnaire, a SRC administrator for the area meets with the teacher to give instructions and guidelines to follow. During questionnaire administrations, the teacher is instructed only to briefly introduce the SRC member and is forbidden to walk around the classroom when the students have started the survey. This reduces the students' fear of being observed and allows for the students to freely write their answers.

In order to obtain the information on the entire set of variables, the data set was split up into seven different forms. Some variables such as race, gender, and age appear on all forms while specific questions such as spending time with friends and family appear only on certain forms. Each form was given out in ordered fashion by classroom. For example classroom A received form 1; classroom B received form 2; etc. This allows for six comparable subgroups of participants.

Response Rates

The response rate is a crucial factor when administering surveys to individuals. According to Monitoring the Future (2008) the response rate among all seniors was approximately three fourths (75%) to four fifths (80%) of all seniors targeted. The other 20% to 25% of individuals did not participate in the study due to absentee or refusal of participation. It has been identified that those students who have reported with a high rate of absences also have elevated reported drug use. Other absentees have been identified as missing school for other reasons such as school field trips. It was found that approximately 2% of the sample did not participate because their parents refused to sign the consent form.

Variables

The variables used for analysis were derived from form (2) of Monitoring the Future (2008). The response variables consisted of use of drugs, aggressive behavior, and theft. Independent variables for this study consisted of demographics, sport participation, club participation, music or arts participation, newspaper and yearbook participation, and elements from Thornberry's (1987) thesis.

Dependent Variables

The variables used to measure delinquency among 12th grade adolescents consist of 15 variables. The following questions were used to measure delinquency among adolescents; 1) Have you ever smoked cigarettes?, 2) On how many occasions (if any) have you taken narcotics other than heroin on your own—that is, without a doctor telling you to take them in your lifetime?, 3) On how many occasions (if any) have you sniffed glue, or breathed the contents of aerosol spray cans, or inhaled any other gases or sprays in order to get high in your lifetime?, 4) On how many occasions (if any) have you used marijuana in the past twelve months?, 5) On how many occasions (if any) have you used barbiturates in the past twelve months? 6) On how many occasions (if any) have you used amphetamines in the past twelve months?) 7) On how many occasions (if any) have you had alcoholic beverages to drink –more than just a few sips during the last 12 months?, 8) During the last 12 months, how often have you gotten into a serious fight in school or at work?, 9) During the last 12 months, how often you have taken part in a fight where a group of your friends were against another group?, 10) During the last 12 months, how often have you taken something not belonging to you worth under \$50?, 11) During the last 12 months, how often have you taken something that doesn't belong to you worth over \$50?, 13) During the last 12 months, how often have you taken something from a store without paying for

it?, 13) During the last 12 months, how often have you hurt someone badly enough to need bandages or a doctor? 14) During the last 12 months, how often have you damaged school property on purpose?, 15) During the last 12 months, how often have you gone into some house or building when you weren't supposed to be there?

Independent Variables

There were 19 independent variables used in this study. Four of these variables consisted of basic demographic information. These are; 1) Region of the country based on Census categories in which respondent's school is located., 2) What is your sex?, 3) In what year were you born?, 4) How would you describe yourself (race)?

Four variables were used to measure involvement in extracurricular activities. The responses to the variables are as follows; 1) To what extent have you participated in the following school activities during this school year? Athletic Teams?, 2) To what extent have you participated in the following school activities during this school year? Other school clubs or activities?, 3) To what extent have you participated in the following school activities during this school year? Music or other performing arts?, 4) To what extent have you participated in the following school activities during this school year? A school newspaper or year book?

Eleven variables were used to analyze data using Thornberry's (1987) interaction theory. Commitment to school was measured by the question "About how many hours do you spend in an average week on all of your homework including both in school and out of school? Attachment to school was measured by the question "How do you feel about going to school?" Belief was measured using the question "How likely is that you will do each of the following things after high school...Graduate from college (4-year program)?" The delinquent peers component was measured using five different questions: 1) How many of your friends would you

estimate smoke cigarettes?, 2) How many of your friends would you estimate smoke marijuana?, 3) How many of your friends would you estimate take amphetamines?, 4) How many of your friends would you estimate take other narcotics, 5) How many of your friends would you estimate use inhalants?

Finally, the delinquent values component was measured using three questions: 1) How much do you think people risk harming themselves (physically or in other ways) if they smoke marijuana regularly?, 2) How much do you think people risk harming themselves (physically or in other ways) if they take one or two drinks nearly every day?, How much do you think people risk harming themselves (physically or in other ways) if they have five or more drinks once or twice each weekend?

Analysis

The primary goal of this study is to investigate the relationship between adolescent delinquency and participation in high school activities including sports, clubs, music, and yearbook. In order to complete this several statistical analyses were made.

First, univariate measures were used for a general description of data frequencies. These frequencies include information about the participation, age, race, gender, and what region of the country they are from. In addition, frequencies of school participation were examined.

Furthermore, frequencies were obtained for depend variables including drug use and behavior problems.

The second stage of analysis included bivariate measures to examine the relationships between interscholastic participation and delinquency and the relationship of Thornberry's (1987) theory and delinquency. This was completed using two statistical analysis methods; chi-square and analysis of variance.

The chi square statistic was used to determine if there was an independent relationship between two variables. This was the preferred method to fully examine the 15 delinquency measures due to the level of measurement used by the research to collect data. The chi square test is based on the probability of two variables being related at the population level. The null hypothesis of the chi square test assumes that no covariation exists between the two variables.

The analysis of variance (ANOVA) statistic was used to determine if there was a difference in means between the three delinquency scales and the theoretical model proposed earlier. The rationale behind ANOVA is that the means of the two groups are equal. The null hypothesis of the ANOVA statistics is that there is no significant difference between the means of the two groups.

Summary

The present study was conducted in an attempt to explain what effect interscholastic participation has on delinquency. This research was guided using Monitoring the Future survey and Thornberry's (1987) theory of integration. Fifteen delinquency variables were selected based on the findings of previous research. Analysis of the variables was able to be performed using univariate and bivariate measure. The univariate measures included descriptive frequencies of the variables while bivariate measures included the chi-square test and analysis of variance. The use of these statistical analyses was based the level of measurement of each of the variables.

CHAPTER 4

RESULTS

The purpose of this study was to further investigate the relationship between interscholastic athletics and delinquency. Using the data from Monitoring the Future (Johnson et al., 2008), several analytical strategies were employed to investigate this relationship. This study consisted of two analytical techniques; univariate and bivariate analysis.

Univariate Descriptives

Demographics

To begin, frequencies were conducted on the demographic variables ethnicity, region, gender, and age (see Table 1). The sample size of high school adolescents used in this study was 2,423 participants. The region in which the participants indicated they lived was as follows: north east 489 (20.2%), north central 568 (23.4%), south 812 (33.5%), and west 554 (22.9%). Of the 2,423 participants, 1,111 (49%) were males and 1,156 (51%) were females. Race was distributed as follows: 280 (13.7%) black, 1,406 (69%) white, and 352 (17.3%) Hispanic. This distribution of race is interesting. There were more participants who reported Hispanic than being black. Also, it is not clear as to how many individuals who reported being Caucasian or African Americans who are in fact of Hispanic decedent because of the lack of depth of race questions. Furthermore, 1,017 (43.2%) of the participants were less than 18 years of age while 1,335 (56.8%) of the participants were 18 or older. All questions that were not answered in the survey were coded -9 indicating missing variable. Univariate statistics describe the sample or support of it, while bivariate statics test for a relationship between two variables.

Dependent Variables

Delinquency was measured by a Likert scale of 15 questions containing delinquent behavior. For each variable it was necessary to recode responses in order to have equal categories. The ordinal variables measuring smoking, alcohol, barbiturates, inhalants, marijuana, and amphetamines use were recoded so that 0 = 0 occasions, 1 = 1-2 occasions, 2 = 3-5, occasions, 3 = 6-9 occasions, and 4 = over 10 occasions. The categorical variables measuring fighting, gang fighting, trespassing, damage school property, the taking of an item over \$50 in value, the taking of an item under \$50 in value, hurting someone, and shoplifting were recoded so that 0 = Not at all, 1 = Once, 2 = Twice, 3 = 3 or 4 times, 4 = 5 or more times. The results of the frequencies are as follows (see Tables 2 and 3). Three variables, smoking, marijuana, and alcohol, had higher means than the other 12 variables. Smoking had a mean of .93, alcohol had a mean of 1.83, and marijuana had a mean of .92. Taking of an item less than \$50 and shoplifting had a slightly higher mean compared to the other delinquency variables at .61 and .62 respectively. The variable measuring alcohol use was the only variable in which the majority of the participants reported the value of 2. Each of the other categorical variables received a score of 0 for the mode.

Independent Variables

Independent variables were taken to further measure the relationship between interscholastic sports and delinquency as well as Thornberry's (1987) interactional theory. Four variables, sports, clubs, newspaper or yearbook, music or arts, measured to what extent each participant engaged in school activities. These variables were recoded as 0 = not at all, 1 = slight, 2 = moderate, 3 = considerable, and 4 = great. Delinquent peers were measured using five variables: Friend Tobacco, Friend Alcohol, Friend Marijuana, Friend Inhalant, and Friend

Narcotic. These variables were recoded as 0 = none, 1 = a few, 2 = some, 3 = most, 4 = all. Frequency and frequency statistics were as follows (see Tables 4 and 5): Sports had a mean of 1.72 with a standard deviation of 1.748. Clubs had a mean of 1.72 with a standard deviation of 1.529. Yearbook and Newspaper had a mean of .50 with a standard deviation of 1.104. Music and Arts had a mean of 1.05 and 1.556. Friend Tobacco had a mean of 1.39 with a standard deviation of 1.004. Friend Alcohol had a mean of 2.30 and standard deviation of 1.267. Friend Inhalant had a mean of .25 and a standard deviation of .613. Friend Marijuana had a mean of 1.42 and a standard deviation of 1.022. Friend Narcotic had a mean of .30 and a standard deviation of .658. Seven variables had a mode of 0, three variables had a mode of 1, two variables had a mode of 2, four variables had a mode of 3, and one variable had a mode of 4.

Bivariate Analysis

Several studies have indicated that participation in interscholastic athletics is a protective factor against delinquency and drug use. Others have suggested that interscholastic sports allow adolescents to project their masculinity, which creates more aggressive and delinquent adolescents. Using the Chi-Squared goodness of fit test, this section further explores the relationship between interscholastic athletics and delinquency. Each chi-square test was conducted with layers to investigate if a second and third variable had any influence on the primary relationship between interscholastic athletics and delinquency. For example the variable “race” was the first layer, and the second layer in the cross-tabulations was the variable “gender.” In other words, each bivariate relationship was tested within 6 distinct racial and gender-specific groups: white females, black females, Hispanic females, white males, black males, and Hispanic males.

Drug Use

Drug use among adolescents who participated in athletics, music, clubs, and yearbook was analyzed using the layered chi-square goodness of fit test with the first and second layers as race and gender. Several relationships were found to be significant when analyzing drug use and participation in school activities while investigating what influence the race and the gender of the respondent may have. Several variables were significant at $p \leq .05$ and $p \leq .01$ (see Table 6).

Chi-square tests revealed that smoking (cigarettes) is significantly related to participation in athletics for black males and white females; ($X^2=27.864$, $p = .033$ and $X^2=48.011$, $p=.000$ respectively). Because the Chi-square statistic is non-directional (i.e., the direction of the bivariate relationship cannot be determined with the Chi-square test), I report some cell percentages show how the proportions of the dependent variable were distributed between different groups. For example, among black males who participated greatly in sports, 47.1% reported no tobacco use. However among white females who participated greatly in athletics, a little over 33% reported no tobacco use.

For other school-related activities analyses showed significant relationships for white females between smoking and club participation ($X^2=83.727$, $p=.000$) as well as smoking and music or arts participation ($X^2=59.453$, $p=.000$). For example among white females who greatly participated in music or arts, a little over 32% did not use tobacco.

As hypothesized, alcohol use was significantly related to participation in athletics for white males ($X^2=31.014$, $p = .013$). That is, for white males who participated greatly in sports 24% did not use alcohol. Except for white females and club ($X^2=56.639$, $p=.046$) and music or arts ($X^2=74.316$, $p=.000$) participation, there were no other relationships between alcohol use and school participation. For instance 17% of white females who had great participation in sports

reported using alcohol 10 or more times, but over 30% of white females who had no participation in sports and admitted to using alcohol 10 or more times.

Sports participation was significantly related to narcotics use for black males ($X^2=37.963$, $p=.000$), black females ($X^2=36.469$, $p=.000$), and white females ($X^2=27.743$, $p=.034$). For example roughly 44% of black males who greatly participated in sports reported using no narcotics. The relationship between school club participation and narcotics was also significant for white females ($X^2=32.405$, $p=.009$). Furthermore, significant relationships were uncovered between narcotics use among black males and several variables including participation in yearbook or newspaper ($X^2=32.268$, $p=.000$) and participation in music or arts ($X^2=21.209$, $p=.047$).

The relationship between barbiturates use and sports participation was only significant for black females ($X^2=22.757$, $p=.004$); of black females who greatly participated in school sports, about 24% disclosed no barbiturate use. For all other groups, there were no other significant Chi-square values for the use of barbiturates for athletes or for those who participated in other interscholastic activities.

Association between participation in athletics and the use of inhalants was found to be significant for several comparisons. For black, white, and Hispanic males there was a significant relationship between the use of inhalants and participation in interscholastic athletics. The chi-square value for black males was $X^2=25.885$, $p=.011$, for white males was $X^2=28.700$, $p=.026$, and for Hispanic males, was $X^2=28.329$, $p=.000$. There were no significant chi-square values between participation in interscholastic athletics and inhalant use for females. Moreover, other school participation variables for males and females of all races were not significant.

A significant relationship was found between sports participation and marijuana use for white females with a chi square value of $X^2=46.222$, $p=.000$. Almost 32% of white females who greatly participated in school sports did not use marijuana. For example white females who participated in music or arts ($X^2=38.472$, $p=.001$) and clubs ($X^2=50.669$, $p=.000$) showed a significant relationship between delinquency and participation. Marijuana use among white males was also found to be significantly related to school club participation at $X^2=26.441$, $p=.048$.

The relationship of amphetamine use to interscholastic athletes was only significant for black males ($X^2=37.652$, $p=.000$). Roughly 44% of black males who greatly participated in interscholastic athletics had no use of amphetamines. It was also found that there was a statistically significant relationship ($X^2=35.588$, $p=.000$) for black males between amphetamine usage and yearbook or school newspaper participation. In addition, a significant relationship ($X^2=32.497$, $p=.009$) was found for females between amphetamine use and participation in school clubs.

Behavioral Delinquency

Behavioral delinquency among high school adolescents was measured using the chi square goodness of fit test with layers. The first layer was race and the second was gender. This allows for a more in-depth comparison between the independent and dependent variable by determining if a second or third independent variable has any effect on the primary relationship. The result of the chi squared test is as follows (see Table 7).

To begin, a significant relationship was found for one's participation in school sports and fighting for white females ($X^2=40.072$, $p=.001$) and Hispanic ($X^2=15.885$, $p=.044$) females. Additionally, the relationship between school participation and fighting was significant for

Hispanic males ($X^2=25.149$, $p=.014$) who participated in yearbook or school newspaper. Gang fighting was also examined along with individual fighting. A significant relationship was found for black males who participated in yearbook or school newspaper ($X^2=28.965$, $p=.024$) and white females who participated in the arts ($X^2=32.208$, $p=.009$). There was a significant relationship among Hispanic males between participation in music or performing arts and both variables “stealing greater than \$50” ($X^2=28.038$, $p=.031$) and “stealing less than \$50” ($X^2=26.308$, $p=.050$).

There was a significant relationship between the variables “hurting someone bad” and participation in interscholastic athletics for white females ($X^2=34.445$, $p=.005$). A significant relationship between participation in yearbook or school newspaper and hurting someone bad for white females ($X^2=26.582$, $p=.046$). There was a significant relationship between the variables of shoplifting and participation in school clubs for white females ($X^2=42.433$, $p=.000$) and shoplifting and participation in the music or arts for black males. ($X^2=29.707$, $p=.020$).

The relationship between the variables damaging school property and school participation in school was significant for black females who participated in yearbook ($X^2=37.101$, $p=.002$), black females who participated in the music or performing arts ($X^2=30.747$, $p=.014$), and Hispanic females who participated in music or performing arts ($X^2=33.219$, $p=.007$). The relationship between trespassing and participation in music or arts was significant for black females ($X^2=33.219$, $p=.007$).

Theoretical Model

Thornberry’s (1987) interaction theory is a modified social learning and social bond theory that incorporates a reciprocal path analysis model of delinquency and predictors thereof. His model contains attachment to school, commitment, belief, delinquent values, and delinquent

peers. Together these variables are likely predictors of delinquency among adolescents. The purpose of this chi-square test was to determine if the variables of Thornberry's (1987) interaction theory are independent of the delinquency variables previously identified. That is to say is the respondents' delinquency independent of their friends' delinquent acts? It is possible that gender and race of the respondent may have influence over the original relationship of delinquency and the theoretical measure. Therefore, two layers were included in the chi-square analysis to further identify the influences of the two independent variables.

Delinquent Peers

Delinquent peers consisted of five variables that measured to what extent their friends participated in the following delinquent acts; tobacco use, alcohol use, marijuana use, inhalant use, and narcotic use. The original chi-square test indicated that there is a significant relationship between the 15 delinquency variables and the five delinquent peers variables (see Table 8). Further investigation reveals the following relationships are significant when race and gender are taken into account.

There was a significant relationship between the respondent's response to use of tobacco (smoking) and having friends who use tobacco for white males ($X^2=198.920$, $p = .000$), Hispanic males ($X^2=40.121$, $p = .000$), black females ($X^2=49.446$, $p = .000$), white females ($X^2=313.055$, $p = .000$), and Hispanic females ($X^2=, 38.510$, $p = .000$). For example it was found that approximately 42% of white males who reported that most of their friends use tobacco used tobacco 10 or more times. There also exists a relationship between the participants' use of tobacco and their friends' use of alcohol for white males ($X^2=116.534$, $p=.000$), white females ($X^2=99.914$, $p=.000$), and Hispanic females ($X^2=26.294$, $p=.050$). Findings indicated that approximately 39% of white males who reported all of their friends use alcohol had reported

using tobacco (smoking) 10 or more times. As previous results, these findings may allow one to infer that having friends who use alcohol may be a risk factor for the underage consumption of alcohol.

A significant relationship was found for the variables smoking and friend use of inhalants for black males ($X^2=48.934$, $p = .000$), black females ($X^2=19.604$, $p = .001$), and white females ($X^2=39.604$, $p = 000$). The chi square analysis indicated that a significant relationship exists between the respondent's use of tobacco and having friends who use marijuana. This relationship was significant for white males ($X^2=92.061$, $p=.000$), white females ($X^2=138.707$, $p=.000$), and Hispanic females ($X^2=31.769$, $p =.002$). An association between the participants use of tobacco and their friends use of narcotics was found to be significant for black males ($X^2=31.048$, $p = .013$), white males ($X^2=68.575$, $p=.000$), black females ($X^2=32.962$, $p=.007$), and white females ($X^2=71.615$, $p=.000$).

When considering alcohol and friend delinquency, there are several relationships that were significant. To begin, there was a significant relationship to the respondent's use of alcohol and having friends who use tobacco for white males ($X^2=128.110$, $p = .000$), Hispanic males ($X^2=34.578$, $p = .000$), white females ($X^2=174.574$, $p = .000$), and Hispanic females ($X^2=22.953$, $p = .028$). It is also important to note that for no white male or and black female participants whose friends had used tobacco reported never using alcohol; one might infer that the friend's use of tobacco is a significant risk factor for the respondent's use of alcohol.

Perhaps most striking was the relationship of the respondent's use of alcohol when compared to the reporting of their friend's use of alcohol. This relationship was significant for all groups: white females, black females, Hispanic females, white males, black males, and Hispanic males. For example 50% of black males whose friends did not use alcohol did not use alcohol

themselves. Further analysis revealed that there was a significant relationship between the respondent's use of alcohol and having peers who used inhalants for white females ($X^2=29.633$, $p = .020$). In fact 84.2% of white females who reported not having friends who use inhalants did not use alcohol.

Chi-square analysis revealed a significant relationship between the participants' reported alcohol use and their friends' use of marijuana for all comparisons except black females and Hispanic females. Among Hispanic males whose friends all used marijuana, all used alcohol themselves. Likewise only 1% of white males whose friends used marijuana were alcohol free. A friend's marijuana use may be a risk factor for the personal use of alcohol. The association between the participant's use of alcohol and having a friend or friends who use narcotics was significant for white males ($X^2=31.371$, $p=.012$), white females ($X^2=48.198$, $p=.000$) and black females ($X^2=38.847$, $p=.025$). All white males, black females, and white females who had friends using narcotics reported using alcohol. Having a friend who uses narcotics is a risk factor for the use of alcohol for some demographic groups.

The relationship between the use of narcotics and having a friend who uses tobacco was significant for black males ($X^2=30.576$, $p = .008$), white males ($X^2=86.054$, $p = .000$), black females ($X^2=23.022$, $p = .003$), and white females ($X^2=130.167$, $p = .000$). For white males ($X^2=47.469$, $p=.000$) and white females ($X^2=44.122$, $p=.000$), there was an association between using narcotics and having a friend who used alcohol. Analysis showed a significant relationship between the use of narcotics and having a friend who uses inhalants for black males ($X^2=78.775$, $p=.000$), white males ($X^2=680$, $p = .001$), black females ($X^2=35.438$, $p = .000$), and white females ($X^2=, 117.131$, $p = .000$). For instance over 90% of black males who did not have friends who use alcohol did not use inhalants, and almost 90% of black females with friends who did not use

alcohol did not use inhalants. Chi-square analysis also revealed a significant consociation between the participants use of narcotics and having a friend who uses narcotics for white males ($X^2=75.900$, $p = .000$), Hispanic males ($X^2=18.045$, $p = .006$), black females ($X^2=148.655$, $p=.000$), and white females ($X^2=274.403$, $p = .000$). It was found that the relationship between the participant's use of narcotics and having a friend who uses narcotics was significant for all comparisons except for Hispanic females. Just over 90% of black males who did not have friends who use narcotics did not use narcotics compared to 0% of black males who reported all friends use narcotics and recorded no narcotic use. A little over 80% of white males whose friends did not use narcotics did not use narcotics compared to under 1% of white males whose friends all used narcotics and reported no narcotic use. An approximated 81% of Hispanic males who reported having no friends who use narcotics did not use narcotics compared to about 1% of Hispanic males who reported having friends who all used narcotics and had reported no personal use of narcotics. It was found that about 90% of black females who did not have friends who use narcotics did not use narcotics compared to about 1% of black females who reported having friends who all used narcotics and reported no narcotic use. Furthermore, 81.7% of white females who did not have friends that use narcotics did not use narcotics compared to 0% of white females whose friends all use narcotics and reported no narcotic use. It appears as though an inference can be made based on the reported percentages that for certain groups having friends who use narcotics is a risk factor for the personal use of narcotics.

There was a significant association between the respondents use of barbiturates and having a friend who uses tobacco for white males ($X^2=22.563$, $p = .000$), white females ($X^2=82.252$, $p = .000$), black males ($X^2=22.563$, $p = .004$), black females ($X^2=29.250$, $p = .000$), and Hispanic females ($X^2=7.792$, $p = .050$). Further analysis showed a significant relationship

between the use of barbiturates and having a friend who uses alcohol for white males and white females at $X^2=37.408$, $p = .002$ and $X^2=30.667$, $p = .015$ respectively. The relationship between the use of barbiturates and having a friend who uses inhalants was significant for all comparisons except for Hispanic females. For example cross-tabulations indicated that 90.5% of black males whose friends did not use inhalants had no barbiturate use, and over 90% of black females who did not have friends who used inhalants did not use barbiturates. Additionally there was a significant relationship between the participants use of barbiturates and having friends who use marijuana for white males ($X^2=25.836$, $p = .011$), white females ($X^2=48.084$, $p = .000$), and Hispanic females ($X^2=10.294$, $p = .016$). There was a significant relationship between the respondent's use of barbiturates and having friends who used narcotics for each comparison group except for Hispanic females. The relationship between the respondent's use of inhalants and having a friend who uses tobacco was significant for black males ($X^2= 41.597$, $p=.000$), white males ($X^2=76.354$, $p = .000$), black females ($X^2=37.399$, $p=.000$), and white females ($X^2=70.601$, $p=.000$). There was only a significant relationship between the respondent's use of inhalants and having a friend who uses alcohol for black males with a chi-square value of $X^2=20.570$, $p=.008$. The relationship between the use of inhalants and having a friend who uses inhalants was significant for all comparisons. Results show that around 90% of black males who did not have friends who used inhalants did not use inhalants compared to 0% of black males who reported having friends who all used inhalants did not use inhalants. The relationship between the respondent's use of inhalants and having a friend who uses marijuana was significant for white males ($X^2=38.835$, $p = .000$), white females ($X^2=22.310$, $p = .034$), and Hispanic females ($X^2=20.221$, $p = .017$).

The relationship between the participant's use of inhalants and having a friend who uses narcotics was significant for black males ($X^2=137.695$, $p=.000$), white males ($X^2=125.673$, $p=.000$), black females ($X^2=58.782$, $p=.000$), and white females ($X^2=223.115$, $p=.000$). For example over 90% of black males who did not have friends who use narcotics reported no use of inhalants. The relationship between the respondent's use of marijuana and having a friend who used tobacco was significant for white males, ($X^2=128.639$, $p=.000$), Hispanic males ($X^2=32.446$, $p=.009$), black females ($X^2=37.224$, $p=.002$), white females ($X^2=158.548$, $p=.000$), and Hispanic females ($X^2=25.523$, $p=.013$). The relationship between having friends who use alcohol and the participant's recorded use of marijuana was significant for white males ($X^2=131.958$, $p=.000$), white females ($X^2=119.582$, $p=.000$), and Hispanic male ($X^2=32.510$, $p=.009$). The chi-square analysis revealed a significant relationship between the participant's use of marijuana and having a friend who uses inhalants for white males ($X^2=29.573$, $p=.000$) and females ($X^2=32.201$, $p=.010$) and black males ($X^2=29.573$, $p=.020$). A significant relationship was found for the respondent's use of marijuana and having friends who use marijuana for black males ($X^2=28.978$, $p=.020$), white males ($X^2=274.403$, $p=.000$), Hispanic males ($X^2=35.669$, $p=.000$), black females ($X^2=24.155$, $p=.019$), white females ($X^2=260.479$, $p=.000$), and Hispanic females ($X^2=32.979$, $p=.001$). It is also important to note that there were no white females, black males, or Hispanic males who refrained from using marijuana when all of their friends used the drug. Having friends who use marijuana is a major risk factor for adolescent marijuana use. The relationship between marijuana use by the respondent and having friends who use narcotics was significant for black males ($X^2=42.261$, $p=.000$), white males ($X^2=84.121$, $p=.000$), Hispanic males ($X^2=42.252$, $p=.000$), and white females ($X^2=115.322$, $p=.000$).

Amphetamine use by the respondent shared a significant relationship with having a friend who uses tobacco for white males ($X^2=210.591$, $p = .000$), black females ($X^2=31.636$, $p = .002$), and white females ($X^2=124.264$, $p = .000$). Chi-square analysis showed a significant relationship between the participant's use of amphetamines and having a friend who uses alcohol for white male participants and black female participants at $X^2=.72.539$, $p=.000$ and $X^2=46.819$, $p=.000$ respectively. It was found that the relationship between the participants use of amphetamines and having a friend who uses inhalants was significant for black males ($X^2=57.172$, $p = .000$), white males ($X^2=77.983$, $p = .000$), Hispanic males ($X^2=19.298$, $p = .023$), black females ($X^2=34.096$, $p = .001$), and white females ($X^2=102.995$, $p = .000$). For example approximately 90% of black males who did not have friends who used inhalants did not use amphetamines, and around 90% of black females who did not have friends who use inhalants did not use amphetamines. There was a significant relationship between the respondent's use of amphetamines and having a friend who uses marijuana for white males ($X^2=37.322$, $p=.000$) and white females ($X^2=82.909$, $p=.000$). The relationship of participants use of amphetamines and having a friend who uses narcotics was significant for black males ($X^2=38.862$, $p=.000$), white males ($X^2=150.946$, $p=.000$), Hispanic males ($X^2=23.449$, $p=.024$), black females ($X^2=40.587$, $p=.000$), and white females ($X^2=179.348$, $p=.000$). For example just over 91% of black males who did not have friends who use narcotics did not use amphetamines, and less than 92% of black females with friends who did not use narcotics did not use amphetamines themselves.

The relationship between the participants engagement in fighting and having a friend who uses tobacco was significant for white males ($X^2=72.845$, $p = .000$), black females ($X^2=36.855$, $p = .002$), and white females ($X^2=49.757$, $p = .000$). The relationship between fighting and having friends who use alcohol was only significant for white males ($X^2=36.076$, $p =$

.003). The relationship between the participant's engagement in fighting and having friends who use inhalants was significant for all comparisons. For instance cross-tabulations showed that about 93% of black males who did not have friends who use inhalants reported no fighting compared to 0% of black males who reported having friends who all used inhalants did not engage in fighting. There was a significant relationship between the participant's reported fighting and having a friends who use marijuana for Hispanic females ($X^2=12.722$, $p = .048$). Only 1.6% of Hispanic females who indicated having friends who used marijuana reported no instances of fighting. Black males ($X^2=31.298$, $p=.000$), white males ($X^2=166.044$, $p=.000$), Hispanic males ($X^2=131.355$, $p=.000$), and white females ($X^2=131.355$, $p=.000$) had a significant relationship between reported instance of fighting and having a friend who uses narcotics. The pattern was if the participant's friends had not use narcotics then the participant did not engage in fighting behavior. Conversely it would seem as though having a friend who uses narcotics is a risk factor for fighting.

The relationship between gang fighting and having a friend who uses tobacco was significant for white males ($X^2=77.735$, $p=.000$), Hispanic males ($X^2=29.085$, $p=.023$), black females ($X^2=42.162$, $p=.000$), white females ($X^2=47.757$, $p=.000$), and Hispanic females ($X^2=30.602$, $p=.002$). Involvement in gang fighting shared a significant relationship with having a friend who uses alcohol for white males ($X^2=28.275$, $p=.029$) and Hispanic females ($X^2=38.073$, $p=.001$). The participation in gang fighting by the respondent and having friends who use inhalants was significant for white ($X^2=56.069$, $p=.000$) males, Hispanic ($X^2=38.07$, $p = .000$) males, black females ($X^2=37.328$, $p=.002$), white females ($X^2=123.418$, $p=.000$), and Hispanic females ($X^2=34.332$, $p=.005$). For example close to 92% of Hispanic males who did not have any friends who use inhalants did not participate in gang fighting. Furthermore Hispanic

female participants had a significant relationship between reported gang fighting and having friends who use marijuana at $X^2=19.554$, $p = .021$. Moreover the relationship between gang fighting and having a friend who uses narcotics was significant for Hispanic males ($X^2=37.0444$, $p=.022$). For example slightly greater than 84% of Hispanic males who did not have friends who use narcotics did not participate in gang fighting. Additionally the relationship between gang fighting and having friends who use marijuana was significant for white males ($X^2=108.966$, $p=.000$) and white females ($X^2=125.339$, $p=.000$).

The relationship between the participants stealing of items greater than \$50 and having friends who use tobacco was significant for black males ($X^2=36.815$, $p=.002$), white males ($X^2=158.650$, $p=.000$), black females ($X^2=263.855$, $p=.000$), white females ($X^2=48.342$, $p=.000$), and Hispanic females ($X^2=28.385$, $p=.001$). The relationship between the participant's stealing of an item greater than \$50 and having a friend who uses alcohol was significant for white males ($X^2=53.415$, $p=.000$), white females ($X^2=45.658$, $p=.000$), and Hispanic females ($X^2=24.019$, $p=.000$). The relationship between the stealing of items greater than \$50 and having friends who use inhalants was significant for black males ($X^2=79.969$, $p=.000$), white males ($X^2=77.547$, $p=.000$), black females ($X^2=48.865$, $p=.000$), white females ($X^2=283.192$, $p=.000$), and Hispanic females ($X^2=16.497$, $p=.002$). The participants stealing of items less than \$50 when reporting they have friends who use tobacco was significant for white males ($X^2=62.220$, $p = .000$), white females ($X^2=107.717$, $p=.000$), black females ($X^2=38.867$, $p=.001$), and Hispanic females ($X^2=45.894$, $p=.000$). White males ($X^2=48.894$, $p=.000$) and white females ($X^2=60.558$, $p=.000$) had a significant relationship between the stealing of items less than \$50 and having friends who use alcohol. The relationship between stealing of items less than \$50 and having friends who use inhalants was significant for white males ($X^2=29.646$, $p = .020$), black

females ($X^2=40.167$, $p = .001$), and white females ($125.693p = .000$). There was a significant relationship between stealing of items less than \$50 and having friends who use marijuana for white males ($X^2=52.096$, $p = .000$), black males ($X^2=27.849$, $p = .006$), and white females ($X^2=59.936$, $p = .000$). There was a significant relationship between the participant's stealing of items less than \$50 and having friends who use narcotics for black males ($X^2=41.400$, $p=.000$), white males ($X^2=77.256$, $p=.000$), Hispanic males ($X^2=28.243$, $p=.000$), black females ($X^2=8834/5$, $p=.000$), and white females ($X^2=90.337$, $p=.000$). For example an estimated 94% of black males who did not have friends who used narcotics did not steal any items less than \$50.

There was a significant relationship between hurting someone bad and having friends who use tobacco for white males ($X^2=66.024$, $p = .000$), Hispanic males ($X^2=36.058$, $p = .003$), black females ($X^2=27.730$, $p = .006$), and white females ($X^2=62.260$, $p = .000$). There was also a relationship between hurting someone bad and having a friend who uses alcohol for white males ($X^2=37.275$, $p = .002$) and black females ($X^2=22.670$, $p = .031$). There was a significant relationship between the participant hurting someone bad and having friends who use inhalants for white males ($X^2=90.751$, $p=.000$), Hispanic males ($X^2=52.084$, $p=.000$), black females ($X^2=51.304$, $p=.000$), white females ($X^2=195.450$, $p=.000$), and Hispanic females ($X^2=38.273$). For example close to 93% of Hispanic males who did not have friends who used inhalants did not hurt someone bad, and about 93% of Hispanic females who did not have friends who use inhalants did not hurt someone bad.

The relationship between hurting someone bad and having friends who use marijuana was significant for only black females at $X^2=16.56$, $p = .049$. Significance was found for the variable hurting someone bad when reporting having friends who use narcotics for white males

($X^2=182.534$, $p=.000$), Hispanic males ($X^2=44.386$, $p=.000$), black females ($X^2=52.073$, $p=.000$), and white females ($X^2=165.895$, $p=.000$).

There was a significant relationship between the participant's reported shoplifting and having a friend who uses tobacco for white males ($X^2=60.031$, $p=.000$) and white females ($X^2=103.451$, $p=.000$). For white males ($X^2=58.721$, $p=.000$) and white females ($X^2=45.550$, $p=.000$), there was a significant relationship between shoplifting and having friends who use alcohol. There was also a significant relationship between shoplifting and having a friend who uses inhalants for black males ($X^2=31.241$, $p=.013$), white males ($X^2=47.810$, $p=.000$), black females ($X^2=26.650$, $p=.020$), and white females ($X^2=95.715$, $p=.000$). For white males and females, there was a significant relationship between shoplifting and having friends who use marijuana at $X^2=90.520$, $p=.000$ and $X^2=85.739$, $p=.000$ respectively. Chi-square analysis showed a significant relationship between shoplifting and having a friend who uses narcotics for white males ($X^2=90.520$, $p=.000$) and white females ($X^2=85.739$, $p=.000$). Chi-square analysis revealed a significant relationship between damaging school property and having friends who use tobacco was for white males ($X^2=53.844$, $p=.000$), white females ($X^2=41.471$, $p=.000$), and Hispanic females ($X^2=12.786$, $p = .047$).

The relationship between the respondent's engagement in damaging school property and having a friend who uses alcohol was significant for white males ($X^2=27.785$, $p = .034$). The relationship between damaging school property and having friends who use inhalants was significant for black males ($X^2=39.026$, $p=.000$), white males ($X^2=49.590$, $p=.000$), Hispanic males ($X^2=37.167$, $p=.000$), black females ($X^2=128.163$, $p=.000$), and white females ($X^2=220.994$, $p=.000$). Damaging school property was significant for white males who responded having friends who use marijuana at $X^2= 32.533$, $p = .001$. There was a significant relationship

between having a friend who uses narcotics and the participants engagement in trespassing for black males ($X^2=42.183$, $p=.000$), white males ($X^2=134.488$, $p=.000$), Hispanic males ($X^2=35.281$, $p=.004$), black females ($X^2=60.431$, $p=.000$), and white females ($X^2=211.612$). Chi-square analysis showed a significant relationship between the engagement in trespassing and having a friend who uses tobacco for white males ($X^2=64.301$, $p = .000$), Hispanic males ($X^2=32.505$, $p = .009$), and white females ($X^2=49.440$, $p = .000$) when reporting having friends who use tobacco. There was also a significant relationship between the participants trespassing and having a friend who uses alcohol for white males ($X^2=46.970$, $p=.000$) and white females ($X^2=49.162$, $p=.000$). There was a significant relationship between trespassing by the respondent and having a friend who uses inhalants for black males ($X^2=36.263$, $p=.003$), white males ($X^2=63.860$, $p=.000$), Hispanic males ($X^2=30.770$, $p=.002$), black females ($X^2=101.779$, $p=.000$), and white females ($X^2=108.806$, $p=.000$).

There was a significant relationship between the respondent's engagement in trespassing and having a friend who uses marijuana for white males and white females at $X^2 = 69.584$, $p = .000$ and $X^2 = 56.570$, $p = .000$ respectively. Finally, there was a significant relationship between trespassing and having a friend who uses narcotics for black males ($X^2=27.702$, $p=.034$), white males ($X^2=92.525$, $p=.000$), Hispanic males ($X^2=33.426$, $.006$), black females ($X^2=64.959$, $p=.000$), and white females ($X^2=74.884$, $p=.000$).

Delinquent Values

Delinquent values suggest that the more an adolescent believes that a behavior is acceptable, the more the adolescent is willing to engage in that type of behavior Because delinquent values genesis lies within social learning theories, the nature of the behavior, acceptable or prohibited, is only a piece of the equation when assessing one's views on a

particular delinquent behavior. Delinquent values was measured using three variables assessing the respondent's values on the risk of using marijuana, having two alcoholic drinks daily, and having five or more alcoholic drinks on the weekend. Several relationships were significant between the delinquency measures and delinquent value measures.

To begin, there is a significant relationship between the variable smoking and risk of marijuana use for white males ($X^2=133.242$, $p = .000$), black females ($X^2=29.311$, $p = .022$), white females ($X^2=156.401$, $p = .000$), and Hispanic females ($X^2=39.224$, $p = .001$). Chi-square analysis showed a significant relationship between the use of tobacco and the perceived risk of having two drinks a day for black males ($X^2=28.498$, $p=.028$), white males ($X^2=41.932$, $p=.000$), black females ($X^2=31.715$, $p=.000$), and white females ($X^2=42.620$, $p=.000$).

Finally, there was a significant relationship between the use of tobacco and the risk of five drinks for black males ($X^2=36.473$, $p=.002$), white males ($X^2=130.518$, $p = .000$), black females ($X^2=26.314$, $p = .050$), white females ($X^2=75.476$, $p = .000$), and Hispanic females ($X^2=49.481$, $p = .000$). Chi-square analysis shows a significant relationship between the participants response of alcohol use and their views on the risk of marijuana use for white males ($X^2=145.204$, $p=.000$), white females ($X^2=163.474$, $p = .000$), and Hispanic females ($X^2=34.775$, $p = .004$). The relationship between alcohol use and risk of having two drinks per day was significant for black males ($X^2=27.233$, $p=.039$), white males ($X^2=86.797$, $p=.000$), black females ($X^2=36.648$, $p=.000$), and white females ($X^2=65.209$, $p=.000$).

The relationship between participants' response to alcohol use and their views of having five or more drinks on the weekend was significant for black males ($X^2=34.937$, $p=.000$), white males ($X^2=188.931$, $p=.000$), Hispanic males ($X^2=32.034$, $p=.010$), white females ($X^2=163.143$, $p=.000$), and Hispanic females ($X^2=47.808$, $p=.000$). Responses of the

participant's narcotic use shared a significant relationship for risk of marijuana for white males ($X^2=80.257$, $p = .000$), black males ($X^2=31.949$, $p = .001$), black females ($X^2=16.637$, $p = .034$), and white females ($X^2=116.599$, $p = .000$). Chi-squared analysis showed a significant relationship between the use of narcotics and believing there is a risk of having two drinks per day for white males ($X^2=42.089$, $p = .000$), black females ($X^2=21.805$, $p = .005$), and white females ($X^2=51.900$, $p = .000$). Black males ($X^2=21.961$, $p = .038$), white males ($X^2=50.062$, $p = .000$), and white females ($X^2=38.411$, $p = .001$) showed a significant relationship between narcotic use and risk of five drinks on the weekend. Additionally the relationship of the participant's use of barbiturates and the risk of marijuana use was significant for black males ($X^2=16.105$, $p=.041$), white males ($X^2=69.058$, $p=.000$), black females ($X^2=16.371$, $p=.037$), and white females ($X^2=110.338$, $p=.000$).

There was a significant relationship between the use of barbiturates and the risk of having two drinks per day for black males ($X^2=20.393$, $p=.009$) and white males ($X^2=34.353$, $p=.005$). The relationship between the use of barbiturates and the risk of five drinks per weekend was significant for white males ($X^2=41.645$, $p = .000$), black females ($X^2=21.773$, $p = .005$), and Hispanic females ($X^2=16.386$, $p = .003$). There was a significant relationship between the use of inhalants and the perceived risk of marijuana use for white males ($X^2=36.084$, $p=.003$), black females ($X^2=16.637$, $p=.034$), and white females ($X^2=38.182$, $p=.001$).

The relationship between inhalants and risk of two drinks per day was only significant for Hispanic males ($X^2=22.138$, $p = .036$) and white females ($X^2=40.244$, $p = .001$). The relationship between the participants use of inhalants and their view of risk for five drinks on the weekend was significant for black males ($X^2=41.433$, $p = .000$) and black females

($X^2=25.055$, $p = .002$). Based on these reported risk of having five drinks on a weekend day is a protective factor for the use of inhalants.

Chi-square analysis showed a significant relationship between the respondent's use of marijuana and risk of using marijuana regularly for black males ($X^2=29.549$, $p=.020$), white males ($X^2=257.893$, $p=.000$), Hispanic males ($X^2=43.422$, $p=.000$), black females ($X^2=27.684$, $p=.034$), white females ($X^2=269.596$, $p=.000$), and Hispanic females ($X^2=28.491$, $p=.028$).

The use of marijuana and the risk of two drinks per day was only significant for white males ($X^2=55.580$, $p=.000$) and females ($X^2=44.622$, $p = .000$). Only 4% of white males who thought there was no risk of having two drinks per day did not use marijuana, and less than 4% of white females who thought there was no risk of having two drinks per day did not use marijuana. For white males and females, having two drinks per day and using marijuana seem to represent a type of comorbidity of risk factors of delinquency. Furthermore, this relationship of risk of five drinks per weekend and use of marijuana was significant for Hispanic males at $X^2=39.241$, $p = .001$.

The participants use of amphetamines and risk of using marijuana regularly was significant for black males ($X^2=25.691$, $p=.25.691$), white males ($X^2=51.410$, $p=.000$), Hispanic males ($X^2=23.867$, $p=.021$), and white females ($X^2=117.593$, $p=.000$). Only white females had a significant relationship between amphetamine use and the risk of two drinks per day at $X^2=41.957$, $p=.000$. The relationship between the use of amphetamines and believing there is a risk of having five drinks on a weekend day was significant for black males ($X^2=25.793$, $p=.011$), white males ($X^2=39.436$, $p=.001$), Hispanic males ($X^2=21.602$, $p=.003$), black females ($X^2=29.726$, $p=.003$), and white females ($X^2=41.608$, $p=.000$).

Chi-square analysis indicates that there is a significant relationship between the respondents reporting fighting and their belief of risk of marijuana use every day for white males ($X^2=42.381$, $p=.000$), Hispanic males ($X^2=43.436$, $p=.000$), and Hispanic females ($X^2=26.014$, $p=.011$). There was a significant relationship between the participants reported fighting and risk of having two drinks per day for black females ($X^2=30.273$, $p = .017$). The relationship between fighting and the respondent's perceived risk of having five or more drinks on the weekend was significant for white males ($X^2=46.761$, $p = .000$) and black females ($X^2=44.046$, $p = .000$).

There was a significant relationship between the respondents' participation in gang fighting and the risk of regularly using marijuana for white males ($X^2=56.710$, $p = .000$), Hispanic males ($X^2=29.226$, $p = .022$), and black females ($X^2=30.631$, $p = .015$). Gang fighting also shared a significant relationship with the perceived risk of five or more drinks on the weekend for white males, ($X^2=45.208$, $p = .000$), Hispanic males ($X^2=29.324$, $p = .022$), and white females ($X^2=43.780$, $p = .000$).

The stealing of items greater than \$50 shared a significant relationship with the participants' belief in the risk of using marijuana regularly for white males ($X^2=47.796$, $p=.000$), Hispanic males ($X^2=27.968$, $p=.032$), white females ($X^2=29.241$, $p=.022$), and Hispanic females ($X^2=24.311$). A significant relationship was found for stealing greater than \$50 and the risk of two drinks per day for white females at $X^2=28.256$, $p = .029$. There was a significant relationship between the stealing of items over \$50 and the participants perceived risk of having five drinks on a weekend day for white males ($X^2=42.684$, $p=.000$) and black female ($X^2=37.499$, $p=.002$). Chi-square results also pointed to a significant relationship between the stealing of items less than \$50 and risk of marijuana use for white males ($X^2=77.452$, $p = .000$), white females ($X^2=97.804$, $p = .000$), and Hispanic females ($X^2=28.097$, $p = .031$). For white females, there was

a significant relationship for the stealing of an item less than \$50 and the risk of two alcoholic drinks per day at $X^2=53.475$, $p= .000$. The stealing of items less than \$50 and the risk of five drinks or more drinks on the weekend was significant for white males ($X^2=26.683$, $p = .020$), black females ($X^2=16$, $p = .013$), white females ($X^2=57.905$, $p = .000$), and Hispanic females ($X^2=31.025$, $p = .013$). The relationship between the participants' response of hurting someone bad and the risk of regular marijuana use was significant for white males ($X^2=32.588$, $p = .008$), Hispanic males ($X^2=40.931$, $p = .001$), and white females ($X^2=35.504$, $p = .003$). Hispanic female participants and their response to hurting someone risk of two drinks per day was the only significant relationship at $X^2=23.5788$, $p = .023$.

The relationship between hurting someone bad and the risk of five drinks on the weekend was significant for white males ($X^2=39.781$, $p=.001$) and females ($X^2=37.216$, $p=.002$) at $p < .002$. The relationship between the risk of regular marijuana use and shoplifting was significant for white males ($X^2=73.719$, $p=.000$) and white females ($X^2=98.417$).

There was a significant relationship between shoplifting and risk of two drinks per day for white males ($X^2=23.013$, $p=.000$) and white females ($X^2=28.383$, $p=.028$). White males ($X^2=53.165$, $p = .000$), white females ($X^2=37.602$, $p = .002$), and Hispanic females ($X^2=42.484$, $p = .000$) showed a significant relationship between shoplifting and the risk of five drinks on the weekend. The relationship of damaging school property and the use of marijuana was only significant for white males ($X^2=53.165$, $p=.000$). There was also a significant relationship between damaging school property and the respondents' perceived risk of two drinks per day for black males ($X^2=30.208$, $p = .017$), black females ($X^2=50.760$, $p = .000$), and white females ($X^2=40.713$, $p = .001$). Black males ($X^2=42.439$, $p=.000$), white males ($X^2=42.810$, $p=.000$), and

white females ($X^2=37.578$, $p=.002$) had a significant relationship between the damaging school property and the risk of five drinks per weekend.

There was a significant relationship between trespassing and the risk of using marijuana on a regular basis for white males ($X^2=58.227$, $p=.000$) and white females ($X^2=40.646$, $p=.001$). Chi-square analysis showed a significant relationship between the risk of having two drinks per day and trespassing for white males ($X^2=26.805$, $p=.044$). Finally, there was a significant relationship between the respondent's trespassing and the risk of having five drinks on a weekend day for white males ($X^2=47.606$, $p=.000$).

Belief

The belief that one can succeed is another factor in the path model proposed by Thornberry (1987). This suggests that the more the person participates in wholesome activities the less likely he or she is to participate in maladaptive activities while creating a sense of success. This component was measured by the variable "attending a 4-year college." One's future hope of attending a 4-year college suggests at least in part that the juvenile believes that she or he is capable of succeeding at a higher level, thus reducing the likelihood of delinquency. The result of the chi-square test is as follows (see Table 10).

There was a significant relationship between the respondent's use of tobacco and the attending a 4-year college white males ($X^2=22.036$, $p=.037$), black females ($X^2=26.194$, $p=.010$), and white females ($X^2=73.034$, $p=.000$). The relationship between the respondent's use of alcohol and the likelihood of attending a 4-year college was significant for Hispanic males ($X^2=32.311$, $p=.001$) and black females ($X^2=24.496$, $p=.017$). There was a significant relationship between the use of narcotics and the possibility of attending a 4-year college for black females ($X^2=16.767$, $p=.010$) and white females ($X^2=61.872$, $p=.000$). For example 75% of

white females who definitely will go to a 4-year college reported no narcotics use. Chi-square also showed a significant relationship between the use of barbiturates and attending a 4-year college for black females ($X^2=23.536$, $p=.001$) and white females ($X^2=48.974$, $p=.000$).

The relationship between the participants response to the use of inhalants and the likelihood of attending a 4-year college was significant for white males ($X^2=25.587$, $p = .012$) and black females ($X^2=20.297$, $p = .002$). Chi-square analysis showed a significant relationship between the participant's marijuana use and attending a 4-year college for white males ($X^2=21.513$, $p = .043$), black females ($X^2=24.117$, $p = .020$), and white females ($X^2=27.639$, $p = .006$). For example 80% of white females who definitely will go to a 4-year college did not use marijuana. Furthermore black females ($X^2=36.898$, $p=.000$) and white females ($X^2=37.312$, $p=.000$) participants had a significance relationship between amphetamines and likelihood of attending a 4-year college.

There was a significant relationship between the participants engagement in fighting and attending a 4-year college for black males ($X^2=21.258$, $p=.047$), white males ($X^2=51.776$, $p=.000$), Hispanic males ($X^2=23.225$, $p=.026$), black females ($X^2=26.993$, $p=.008$), white females ($X^2=30.776$, $p=.002$), and Hispanic females ($X^2=19.283$, $p=.023$). The relationship between gang fighting and attending a 4-year college was only significant for white males ($X^2=29.470$, $p = .003$).

White males ($X^2=28.296$, $p=.005$) and white females ($X^2=29.209$, $p=.004$) shared a significant relationship between the stealing of an item greater than \$50 and the desire of attending a 4-year college. The relationship between the stealing of an item less than \$50 and attending a 4-year college only showed significance for white males at $X^2=21.293$, $p = .046$.

Hurting someone bad and attending a 4-year college was significant for white males ($X^2=26.458$, $p=.009$). The relationship between shoplifting and attending a 4-year college was significant for Hispanic males ($X^2=56.3487$, $p=.026$), black females ($X^2=29.503$, $p=.003$), and white females ($X^2=32.365$, $p=.001$). There was also a significant relationship between damaging school property and attending a 4-year college for black males ($X^2=23.610$, $p=.023$), white males ($X^2=21.934$, $p=.038$), Hispanic males ($X^2=21.095$, $p=.049$), black females ($X^2=23.384$, $p=.025$), and white females ($X^2=28.740$). The relationship of trespassing and attending a 4-year college was significant for only black females at $X^2=27.576$, $p=.006$.

Commitment

Commitment to conventional means is also a pathway in Thornberry's (1987) theoretical model of delinquency. This implies that the more a person is committed to a conventional way of life the less likely he or she is willing to engage in behaviors that would ruin the relationship with that activity. Commitment was measured using the variable "number of hours per week spent on homework" (see Table 11).

The relationship between using tobacco and the amount of time spent on homework each week was significant for white males ($X^2=34.995$, $p=.004$) and white females ($X^2=57.169$, $p=.000$). There exists a significant relationship between the participant's response to the use of alcohol and the amount of time spent on homework for white males ($X^2=29.671$, $p=.020$) and white females at ($X^2=33.592$, $p=.006$). There was also a significant relationship between the participants use of narcotics and the amount of time spent on homework for Hispanic females ($X^2=18.565$, $p=.001$). The relationship between barbiturates and the amount of time spent on homework was significant for white females at $X^2=37.611$, $p=.002$. There was a significant relationship between the use of inhalants and the amount of time spent on homework per week

for white females. A significant relationship exists for white females between inhalant use and how much time is spent on homework each day ($X^2=40.444$, $p = .001$). Chi-square analysis showed a significant relationship between marijuana use and amount of time spent on homework for white females ($X^2=32.562$, $p = .008$). There was a significant relationship between the use of amphetamines and how much time is spent on homework for white males ($X^2=32.025$, $p=.010$) and white females ($X^2=37.486$, $p=.002$). Additionally fighting is significantly related to the amount of time spent on homework for Hispanic males ($X^2=35.096$, $p = .004$).

The relationship between stealing greater than \$50 and the amount of time spent on homework was significant for white females at $X^2=41.132$, $p =.001$. There was a significant relationship between shoplifting and not working on homework for white males ($X^2=31.710$, $p=.011$) and white females ($X^2=32.096$, $p=.010$). The relationship between damaging school property and the amount of time spent on homework was significant for white females (43.478 , $p = .000$). Trespassing and spending time on homework was significant for white females with a chi-square of $X^2=43.478$, $p=.000$. For example approximately 50% of white females who spent 1-4 hours a week on homework did not trespass.

Attachment to School

Attachment to school is the most salient factor in the path model in Thornberry's (1987) interaction theory. Attachment is the strength of the relationship between one person and another person or entity. In this case attachment to school is measured by how much the adolescent likes going to school. In theory attachment to school should result in less delinquent behavior for the fear of being reprimanded by the school (see Table 12).

The relationship between smoking and how much one likes school is significant for white males ($X^2=65.802$, $p=.000$), white females ($X^2=79.773$, $p.000$), Hispanic males ($X^2=28.266$,

p=.029), and Hispanic females ($X^2=32.0255$, p=.010). Analysis found a significant relationship between the participants' use of alcohol and how much they like school for black males ($X^2=$, 38.155 p = .013), white males ($X^2=43.813$, p = .000), Hispanic males ($X^2=28.976$, p = .024), white females ($X^2=54.854$, p = .000), and Hispanic females ($X^2=29.732$, p = .019). The relationship between narcotic use and how much the respondent likes school was significant for white males ($X^2=33.117$, p=.007), white females ($X^2=48.661$, p=.000), and black females ($X^2=20.883$, p=.007). Chi-square analysis showed a significant relationship between the use of barbiturates and how much one likes school was significant for black females ($X^2=21.898$, p = .005) and white females ($X^2= 39.501$, p =.001). A significant relationship also exists between the use of inhalants and how much one likes school for black females ($X^2=20.883$, p=.007).

The relationship between marijuana use and how much the respondent likes school was significant for white males ($X^2=56.555$, p=.000) and white females ($X^2=64.086$, p=.000). The relationship of amphetamine use and how much the respondent likes school was significant for white males ($X^2=94.438$, p = .000), Hispanic males ($X^2=21.453$, p = .044), and white females ($X^2=44.567$, p = .000). A significant relationship exists between the participation in fighting and how much the respondent likes school for white males ($X^2=40.073$, p = .001) and Hispanic females ($X^2=15.786$, p = .046).

The relationship between gang fighting and how much one like school was significant for white males ($X^2=29.825$, p = .019) and black males ($X^2=26.744$, p = .044). White male ($X^2=$, 57.731 p = .000), black female ($X^2=28.973$, p = .024), and white female ($X^2=34.515$, p = .005) participants showed a significant relationship between stealing items greater than \$50 and how much they like school. White male respondents had the only significant relationship between liking school and stealing less than \$50 ($X^2=35.898$, p=.003). There was a significant relationship

between hurting someone bad and of how much one likes school for Hispanic females ($X^2=47.556$, $p = .000$). White males ($X^2=52.662$, $p=.000$) and white females ($X^2= 57.995$, $p=000$) had a significant relationship between shoplifting and liking school. Analyses showed a significant relationship between damaging school property and how much one likes school for white males at $X^2=55.332$, $p=.000$. Finally a significant relationship was found for trespassing and damaging school property for white males at $X^2=28.828$, $p=.000$.

Principle Component Analysis

The chi-square test allowed for the comparison of two variables to see if they were statistically dependent of one another. However the variables in the chi-square analysis were categorical in nature. Several items of interest were measured continuously; therefore, chi-square was not appropriate. Analysis of variance (ANOVA) and principle component analysis were used to analyze variables of a continuous level of measurement. In particular principle component analysis was used to build scales of the various delinquency measures.

Assessing the various delinquency measures resulted in the building of three scales; drug scale, behavior scale, and full scale. These scales were included in principle component analysis for dimension comparison (see Table 25). The drug scale variable extracted four items on component 1 and three items on component 2. This resulted in two dimensions for drug scale; the first being hard drugs (barbiturates, amphetamines, narcotics, and inhalants) and the second being soft drugs (alcohol, marijuana, cigarettes). The second scale constructed included measures of delinquent behavior other than drug use. The behavior scale variable extracted five items on component 1 and three items on component 2 resulting in two dimensions: property delinquency and fighting delinquency (see Table 25). The final scale of the full model resulted in the combination of the first two scales. The full scale variable extracted five items on component 1,

four items on component 2, three items on component 3, and three items on component four. This resulted in four dimensions as previously mentioned. The four factors combined explained 62.020% of the variance for the 15 different variables. The first component accounted for 17.322% of the variance, the second component accounted for 15.960% of the variance, the third component accounted for 14.487% of the variance, and the fourth component accounted for 14.251% of the variance. Approximately 37% of the variance is not explained by the 15 factors.

Analysis of Variance

The relationship between interscholastic athletics and other participation was further examined using a bivariate statistical technique known as analysis of variance (ANOVA). Using Crombach's alpha to check reliability, three scales were built. The first scale was computed using seven dependent variables measuring drug use. Crombach's alpha revealed a reliability statistic of $\alpha = .780$ between the seven drug use measures. The second scale constructed consisted of eight variables of behavioral delinquency. This scale resulted in a Crombach's alpha of $\alpha = .808$. The final scale constructed was a full scale model combining the seven drug variables and the eight behavioral delinquency variables. The full-scale model resulted in a reliability statistic of $\alpha = .828$. The results of the ANOVA statistics were as follows. When comparing the three delinquency scales to sports participation, there were no significant differences between the means of any of the three scales and sports participation (see Table 8).

When comparing the scales to club participation, there were significant differences between the means of the scales and the mean of club participation (see Table 13). The results are as follows; Drug Scale by Club $F(4,1906) = 14.583$, $p = .000$; Behavior Scale by Club $F(4,2012) = 10.089$, $p = .000$; Full Scale by Club $F(4,1882) = 16.751$, $p = .000$. Further examination was necessary to determine which responses were responsible for the difference in

means. Bonferroni's post-hoc test indicated that there were significant differences in means for several responses (see Tables 14, 15, and 16).

The third analysis was conducted for the three scales and participation in yearbook or school newspaper. Results indicated that there were no significant differences in means for Drug Scale by Yearbook, Behavior Scale by Yearbook, or Full Scale by Yearbook.

The final comparisons were made for the three scales with participation in music or arts as the predictor variable. The results of the ANOVA showed significant differences in means of Drug Scale by Arts $F(4,1911) = 5.589, p = .000$ and for the means of Full Scale by Arts $F(4,1886) = 4.665, p = .001$ (see Table 17). There was no significant relationship between the means of Behavior Delinquency Scale and Arts. Further investigation of Bonferroni's post-hoc test reveals significant relationships between several responses (see Tables 18 and 19).

In order to parallel the chi-square results, analysis of variance was used to determine if there are differences in means between the three delinquency scales and race and gender. When race was the predictor variable, there were significant differences in means for drug scale and race $F(2,1900) = 36.779, p = .000$, behavior scale and race $F(2,1994) = 6.122, p = .002$, and for full scale and race $F(2,1875) = 9.593, p = .000$ (see Table 20). Post-hoc tests reveal significance differences between race and the three scales (see Tables 21, 22, and 23).

When the second variable gender was the predictor variable, it was found that there was a significant difference in means between behavioral delinquency and gender $F(1,2220) = 54.469, p = .000$ and full scale and gender $F(1,2091) = 25.209, p = .000$ (see Table 24). There was no significant difference in means for the relationship between drug scale and gender.

Summary

The goal of this chapter was to statistically examine the relationship between athletic and other school participation and various forms of delinquency. Bivariate analyses revealed several statistically significant relationships between sports participation and delinquency. Moreover, additional analysis showed significant associations between delinquency and nonathletic participation. Principle component analysis shows four dimensions for delinquency: hard drug use, soft drug use, fighting, and theft.

CHAPTER 5

DISCUSSION

The purpose of this study was to explore the ongoing relationship between interscholastic athletics and delinquency. The review of existing literature suggests that interscholastic athletics may serve as a risk factor rather than a protective factor for delinquency. In addition the literature also suggests that other forms of activities, specifically leisure activities, allow for individuals to engage in delinquent behavior due to the lack of formal structure. The main thesis of this research is that participation in interscholastic athletics produces more reported delinquency than participation in other school activities such as clubs, yearbook and newspaper, and music or arts. This research was guided using Thornberry's (1987) interactional theory of delinquency that suggests that delinquency can be reduced or enhanced through five factors: attachment to school, commitment, belief, delinquent values, and delinquent peers. The first three factors of Thornberry's (1987) theory have roots in social control theory while the latter two factors are taken from social learning theory. The primary argument of this particular theory is delinquency can be reduced or enhance the individuals interactions throughout their life course. This theory is uniquely different from previous theories because it takes into consideration the individual's dynamic, changing behaviors.

Results showed significant relationships between interscholastic athletics and delinquency. Furthermore, participation in other interscholastic activities resulted in some significant associations for several groups while not having any relationship for others. The existing literature suggests that for male athletes, there is a need to express one's masculinity and aggressiveness (Hartmann, 2007; Sabo, 1999). Interscholastic athletics is the preferred means to an end for males who require this need for expression. The literature also suggests that the

female athlete and females in general do not report as much delinquency as male athletes and participation in athletics reduces the female's engagement in sexual relationships. Moreover, the literature attests black females enjoy more protection from delinquency by participating in interscholastic athletics than white or Hispanic females. These variables were included in this research along with many other variables noted in the literature.

Methodology

This study was conducted by using target questions from the 2008 senior Monitoring the Future survey (Johnson et al., 2008). Each question was either a direct measure or a proxy measure of delinquency and independent variables that would affect delinquency. The vast majority of measures were coded in such a way that no true ratio or interval level measures existed. The Monitoring the Future data used in the research came from a questionnaire that was given to high school seniors throughout the United States based on a clustered random sample. Each school was chosen through a highly rigorous selection process in which the regions were obtained through the census data.

Each variable in this study was taken into account based on the current body of literature. Delinquency was measured using 15 categorical variables ranging from hard to soft drug use and fighting to theft. Other variables used in this research were participation in athletics and other school activities, race, gender, and variables that proxy Thornberry's (1987) model. The analytical techniques used in this study were univariate, bivariate, and principle component analyses. Multivariate regression modeling could not be conducted due to the level of measurement for each variable (see below). Furthermore, for some variables scales were conducted for possible research in the future.

Findings

Adolescent Delinquency and Interscholastic Participation

Univariate descriptives of the delinquency measures show that participants responded to each question with the value “0” the most, which indicates that the respondent marked “no use” for the majority of the items. The mean of the delinquency variables all equaled 0 ($\bar{x} = 0$) except for the variable alcohol which had a mean of 2 ($\bar{x} = 2$). The univariate descriptives for the independent measures resulted in a heterogeneous distributions of means, modes, and standard deviations. For eight of the 15 factors, the majority of the respondents marked the response with a value of 0.

Bivariate analyses of adolescent delinquency were used to investigate the hypothesis that delinquency and participation in interscholastic activities (athletics, clubs, newspaper or yearbook, music or arts) are independent of each other. This was examined using a two-layered chi-square test of independence. The first layer was the race of the participant, and the second was the gender of the participant. This allowed for a more complete analysis of the relationship.

The hypothesis that participation in interscholastic athletics is unrelated to the delinquency of the adolescent is rejected. However, it is important to note that several variables are only significant for certain genders and races. As predicted, the participant’s reported use of drugs is dependent on the participation in interscholastic athletics. All analyses showed at least one significant relationship for each of the comparisons. Perhaps the most striking finding of drug use among adolescents was the significant relationship between barbiturates and sports and narcotics and sports. Each chi-square analysis for these groups indicated a significant relationship between female use of these drugs and athletics.

The further examination of interscholastic participation and delinquency revealed significance for several comparisons. The hypothesis that participation in less structured activities will have a significant impact on one's delinquency has been confirmed. As previously noted, female drug use and school participation were significantly related for several different racial groups. Again, this finding is striking due to overwhelming evidence in the literature suggesting that females in general will report less delinquency than their male counterparts. Though correlations cannot be made, this finding is an important one.

The analysis of variance analysis was used to investigate if there is a significant relationship between school participation and delinquency. The hypothesis that there is a difference in means of the delinquency scales for sports participation was nonsignificant. Relying solely on this statistic, the hypothesis of the relationship between interscholastic athletics and delinquency must be rejected. This finding is not what was expected and quite surprising.

Analysis of variance was significant for the delinquency scales and different levels of participation in arts, music, and clubs. This finding was to be expected because these activities can sometimes be unstructured giving no guidance to adolescents. Bonferonni's post-hoc tests indicate that there is a significant difference in means between the response of "Not at all" and "Great" for arts or music and club participation. No other mean differences were significance between levels of participation.

Finally an ANOVA was conducted to test the relationship between race, gender, and the various forms of delinquency. The first ANOVA static showed significant relationships between all scales and gender. The post-hoc test for drug scale by race showed that there was a significant difference in means for white and black participants and white and Hispanic participants. For all

post-hoc comparisons, the mean of the response “not at all” was greater than the responses of “slight”, “great”, “moderate”, and “considerable.”

In this case hindsight proves to be 20/20. One would expect that white adolescents are exposed to certain types of drugs, and black or Hispanic adolescents are exposed to another type. For examples common stereotypes indicate that black and Hispanics are more likely to use the solid form of cocaine while the white population is more inclined to use the powder form of cocaine. The post-hoc test for the behavior scale by race indicates a significant difference in means for black and white adolescents and black and Hispanic adolescents. No significant differences were found for the means between white and Hispanic adolescents. It is entirely plausible that certain acts are being committed by black adolescents while others are being committed by white adolescents. Unfortunately, correlations between the types of delinquency and race could not be conducted due to the level of measurement of the variables. The post-hoc test for full scale by race indicates significant mean differences in delinquency between white and black adolescents and white and Hispanic adolescents.

The second ANOVA conducted was the comparisons of means for the various delinquency scales and the variable gender. Except for drug scale, which was not significant, there was a significant difference in the means of the delinquent behavior scales between males and females. This might suggest that males are more likely to engage in certain delinquency while females engage in another type of delinquency. Once again these comparisons could not be made due to the level of measurement.

Adolescent Delinquency by the Theoretical Model

As with the previous chi-square analysis, each delinquency variable was compared to each of the theoretical components of Thornberry’s (1987) theory. For this analysis, the

respondent's report of the various delinquency measures was compared to each of the theoretical variables in the path analysis model. While several comparisons were significant, the most striking results were the analyses of the participants drug use when asked about their friends use of drugs. Nearly all chi-square tests showed significant associations between drug use and friends' drug use. For example the participants' use of marijuana was found to be dependent on their friends' use of marijuana. This is true for narcotics, alcohol, and tobacco use as well. It is possible to infer that the more friends an adolescent has who use a particular drug or engage in a particular behavior the more the adolescent is inclined to do the same. However, this can only be inferred and not confirmed. Further analysis is needed to confirm this hypothesis.

Principle Component Analysis

Principle component analysis was conducted in conjunction with the building of the various scales of delinquency. Factor analysis concluded the when taken all delinquency variables into account there were four different dimensions of delinquency. The first dimension which had the highest factor loading on component 1 was the variables that comprised behavior delinquency: stealing >\$50 and < \$50, shoplifting, trespassing, and damaging school property. The second dimension was hard drug use which had the highest factor loading on component 2. This was made up of what most consider harder drugs: barbiturates, amphetamines, narcotics, and inhalants. The third dimension was made up of aggressive behavior variables fighting, gang fighting, and hurting someone bad. Finally, the fourth dimension was the soft drug variables which include smoking, alcohol, and marijuana. Together, the four components explained about 62% of the variance for the 15 variables included. This analysis of the variables gives insight as to the different types of delinquency in which the participants were engaged. It is likely that if

someone is using one type of hard drug he or she might also be using other types of hard drugs. Further analysis is needed to confirm this statement.

Limitations

Though methodological procedures were taken with great caution, there are important limitations to this study that need to be discussed. First, and most pertinent, the use of secondary data severely limited the amount of statistical analysis that was able to be conducted. Because the data were not collected by the researcher, variables were used as a proxy measures for some components mainly attachment, commitment, and belief. There was great effort used in determining which questions were able to be selected for analysis. However, these variables may not portray certain aspects of Thornberry's (1987) theory or delinquency as well as others might have.

A second limitation to this study was the format of the questionnaires. Unfortunately, the distribution of the questions did not lend itself to a sophisticated analysis. While all the participants answered questions about demographics, not every participant answered questions about various delinquent acts which ultimately left out several key variables that potentially could have led to a more scientific exploration of adolescent delinquency. Moreover, some questions about coital relationships and family structure were left out intentionally to ensure confidentiality of the individual. Therefore, it was not possible to explore what effect interscholastic athletics had on adolescent pregnancy and sexual relationships.

In addition to the format of the questions, the questionnaire may have led to issues of validity and reliability. While the agency that was used to deliver the Monitoring the Future survey was given specific instructions on how to monitor, there is always room for human error. In some instances participants will refuse to answer a question or mistakenly forget to answer a

question. It is also important to note that participants may lie on surveys in order to please the examiner. No safeguards were used to prevent this type of behavior.

The composition of the questions did not lend itself to a full statistical comparison of adolescent delinquency and interscholastic participation. Each question was asked in such a way that multivariate analysis was not able to be conducted for individual variables in this study. This is a critical limitation that does not allow for correlations or the main path model to be conducted (see below).

The sample that was used in this study kindled limitations to this research. Unfortunately, the results of this study cannot be used to umbrella the general public and their behaviors. In addition the results of this study cannot be used to represent the entire population of high school adolescents throughout the country. However, because a strict sample was taken, comparisons to adolescents from all corners of the country are able to be made, not limited to metropolitan areas.

Implications

The findings of this research suggest that there is a significant relationship between interscholastic athletics, other interscholastic participation, and delinquency. While the F statistic did not show any significance between the means of sports participation and yearbook participation and the scales of delinquency, the ANOVA showed significant mean differences in delinquency for club and arts participation. This finding indicates that there is some attribute besides normal variation causing these variables to be related to one another. In-depth examinations of the chi-square statistic revealed that there are significant relationships between certain delinquent acts and school participation for adolescents who belong to a certain races and genders such as white females. This relationship may prove a crucial role in understanding adolescent behavior specifically understanding why one acts as she or he does.

It is also important to note the results of the principle component analysis. The PCA resulted in the findings of four separate dimensions of delinquency; hard drugs, soft drugs, fighting, and theft. Knowing this, the school administration may be able to take measures reduce these behaviors. It seems as though if an adolescent is engaging in a certain type of delinquent behavior he or she may be participating in similar types of behavior; programs may be developed to address each of these dimensions of delinquency.

Another striking finding was the reported use of drugs by the participant and having a friend who uses the same drug. The relationship between the respondent's use of drugs and having a friend using the same drug was significant for all males and females who were black, white, and Hispanic except for Hispanic females. In hindsight, this finding should not be surprising. Conventional wisdom suggests that behaviors in which a friend engages will also be perpetrated by the adolescent. Birds of a feather flock together. It is clear that this is what is happening for this sample. School administration and parents can benefit from this knowledge by being able to monitor juveniles more carefully and "crack down" on this type of group behavior by adolescents. However, in the past there have been several attempts to reduce drug use in children; disrupting social networks might be included in existing program and services.

There is also some indication that participation in other types of school activities may increase one's delinquent behavior. The ANOVA shows significance for all scale comparisons and club participation. The literature seems to suggest that the less structured an activity is the more opportunities there are for one to engage in delinquent behaviors (Angew & Petersen, 1989). Though the questionnaire did not operationalize club participation, one could infer from conventional wisdom that club participation is naturally unstructured. Traditionally, there have been clubs dedicated to math, science, chess, religion, theater, after school events, and robotics.

It is often times that these types of clubs do not meet formally and have specific guidelines to govern their activity. This can potentially lead to outside delinquent behavior due to the lack of structure needed to help reduce delinquency in adolescents. The implications of this finding suggest that perhaps educational institutions need to examine club participation further and determine if there is a need for more organization and structure within the clubs.

Future Directions

Though this study has found significant relationships between delinquency and the adolescent participation in athletics, the lack of multivariate analysis hinders its ability to contribute to the existing body of literature in a meaningful way. However, future studies may benefit from Thornberry's (1987) theory given there are adequate data to do so. This study has given indication of support to several if not all of the variables for Thornberry's (1987) interaction theory. Assuming that the variables were able to be used in such a way, the model to demonstrate his theory would be as follows below.

In addition to including variables for path modeling, it would be wise to include several different questions identifying the different athletics adolescents participate in. This was not able to be done for this research due to the use of secondary data. It has been suggested (Messner, 1992) that the more physically demanding the sport, the more likely one is to engage in delinquent behavior.

Finally, using Thornberry's (1987) model, future research could implement a more complex assessment of the relationship between interscholastic athletics and delinquency (see Figure 1). Because Thornberry's (1987) theory suggests that behavior is not unidirectional, a longitudinal study can be executed to explore the changes in adolescent behavior. When considering conducting a longitudinal study, one must be cautious not to ignore the hardships of

this type of analysis: attrition, cost, and privacy. Traditionally the adolescent population has been considered to be an “at risk” population. This study has demonstrated that confidentiality and ethical issues can cause some variables to be dismissed from the data set. Though this study has not been a key contributor to the existing body of literature, hope still exists of evoking interest of other researchers to pursue and examine different aspects of what effects interscholastic athletics have on adolescent delinquency.

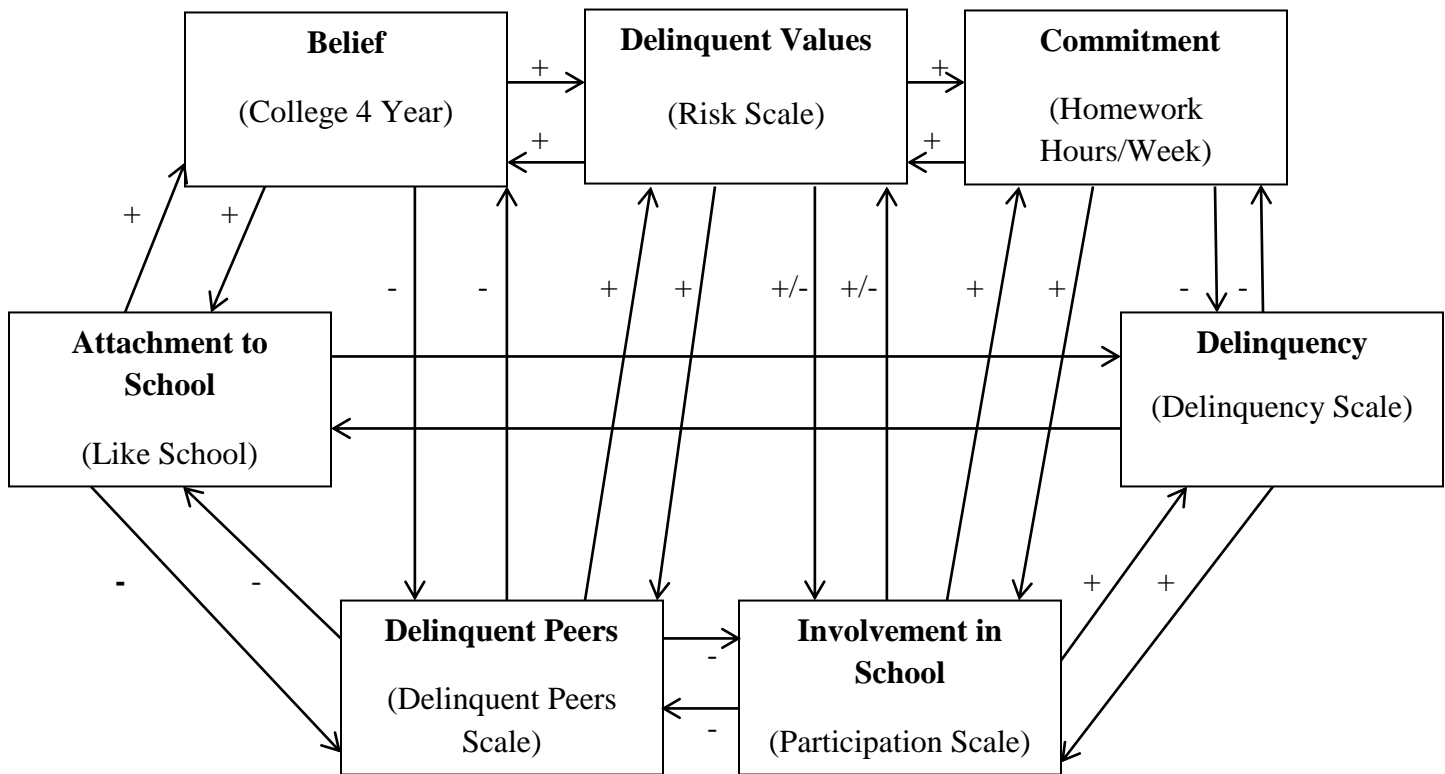


Figure 1. Modified Interactional Delinquency Model

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APPENDIX

Tables

Table 1

Demographic Frequencies

	Variable	Frequency	Percent
Ethnicity			
	Black	280	13.7
	White	1406	69.0
	Hispanic	352	17.3
	Total	2038	100
Region			
	North East	489	20.2
	North Central	568	23.4
	South	812	33.5
	West	554	22.9
	Total	2423	100
Gender			
	Male	1111	49.0
	Female	1156	51.0
	Total	2267	100
Age			
	Over 18	1335	56.8
	Under 18	1017	43.2
	Total	2352	100

Table 2

Delinquency Frequencies

	Variable	Frequency	Percent
Smoking			
	0 Occasions	1298	55.0
	1-2 Occasions	456	19.3
	3-5 Occasions	283	11.7
	6-9 Occasions	120	5.1
	Over 10 Occasions	202	8.6
	Total	2359	100
Alcohol			
	0 Occasions	756	33.3
	1-2 Occasions	360	15.9
	3-5 Occasions	301	13.3
	6-9 Occasions	224	9.9
	Over 10 Occasions	629	27.0
	Total	2270	100
Narcotics			
	0 Occasions	2120	90.5
	1-2 Occasions	93	4.0
	3-5 Occasions	53	2.3
	6-9 Occasions	26	1.1

Table 2 (continued)

	Variable	Frequency	Percent
Narcotics			
	Over 10 Occasions	50	2.1
	Total	2342	100
Barbiturates			
	0 Occasions	2188	90.5
	1-2 Occasions	86	3.7
	3-5 Occasions	36	1.5
	6-9 Occasions	26	1.1
	Over 10 Occasions	17	0.7
	Total	2253	100
Inhalant			
	0 Occasions	2241	95.7
	1-2 Occasions	49	2.1
	3-5 Occasions	22	0.9
	6-9 Occasions	8	0.3
	Over 10 Occasions	21	0.9
	Total	2342	100
Marijuana			
	0 Occasions	1557	67.1
	1-2 Occasions	199	8.6
	3-5 Occasions	113	4.9

Table 2 (continued)

	Variable	Frequency	Total
Marijuana			
	6-9 Occasions	94	4.1
	Over 10 Occasions	357	15.4
	Total	2320	100
Amphetamine			
	0 Occasions	2166	91.9
	1-2 Occasions	94	4.0
	3-5 Occasions	44	1.9
	6-9 Occasions	18	0.8
	Over 10 Occasions	36	1.5
	Total	2342	100
Fighting			
	Not at all	2088	87.9
	Once	160	6.7
	Twice	62	2.6
	3 or 4 times	32	1.3
	5 or more times	33	1.4
	Total	2375	100
Gang Fighting			
	Not at all	1967	82.8
	Once	229	9.5
	Twice	83	3.4

Table 2 (continued)

Variable	Frequency	Total
Gang Fighting		
3 or 4 times	50	2.1
5 or more times	46	1.9
Total	2375	100
Steal Greater Than \$50		
Not at all	2135	90.3
Once	101	4.3
Twice	37	1.6
3 or 4 times	33	1.4
5 or more times	58	2.4
Total	2364	100
Steal Less Than \$50		
Not at all	1687	71.1
Once	290	12.2
Twice	177	7.5
3 or 4 times	76	3.2
5 or more times	143	6.0
Total	2373	100

Table 2 (continued)

Variable	Frequency	Total
Hurt Someone Bad		
Not at all	2069	87.2
Once	169	7.1
Twice	61	2.6
3 or 4 times	40	1.7
5 or more times	33	1.4
Total	2372	100
Shoplift		
Not at all	1689	71.3
Once	287	11.8
Twice	142	6.0
3 or 4 times	96	4.1
5 or more times	155	6.5
Total	2423	100
Damage School Property		
Not at all	2098	85
Once	125	5.3
Twice	80	3.4
3 or 4 times	33	1.4
5 or more times	34	1.4
Total	2370	100

Table 2 (continued)

Variable	Frequency	Total
Trespassing		
Not at all	1736	73.2
Once	304	12.8
Twice	150	6.3
3 or 4 times	86	3.6
5 or more times	95	4.0
Total	2371	100

Table 3

Descriptive Statistics of Delinquency

	Mean	Median	Mode	STD
Smoking	.93	0.00	0	1.281
Alcohol	1.83	2.00	0	1.634
Narcotics	.20	0.00	0	.728
Barbiturates	.13	0.00	0	.544
Inhalant	.09	0.00	0	.475
Marijuana	.92	0.00	0	1.504
Amphetamine	.16	0.00	0	.634
Fighting	.22	0.00	0	.685
Gang	.31	0.00	0	.801
Steal Greater \$50	.21	0.00	0	.760
Steal Less \$50	.61	0.00	0	1.142
Hurt Someone	.23	0.00	0	.704
Shoplift	.62	0.00	0	1.176
Trespass	.22	0.00	0	.703

Table 4

Independent Variable Frequencies

	Variable	Valid Frequency	Percent
Athletics			
	Not at all	920	44.4
	Slight	163	7.9
	Moderate	184	8.9
	Considerable	190	9.2
	Great	613	29.6
	Total	2070	100
Clubs			
	Not at all	682	33.1
	Slight	323	15.7
	Moderate	350	17.0
	Considerable	300	14.5
	Great	407	19.7
	Total	2062	100
Yearbook			
	Not at all	1603	77.6
	Slight	201	9.7
	Moderate	85	4.1
	Considerable	49	2.4
	Great	128	6.2
	Total	2066	100

Table 4 (continued)

Variable	Valid Frequency	Percent
Arts		
Not at all	1297	62.7
Slight	180	8.7
Moderate	138	6.7
Considerable	101	4.9
Great	352	17.0
Total	2068	100
Friend Tobacco		
None	449	20.6
A few	793	36.4
Some	623	28.6
Most	277	11.4
All	38	1.7
Total	2180	100
Friend Alcohol		
None	299	13.9
A few	261	12.1
Some	445	20.6
Most	805	37.3
All	347	16.1
Total	2157	100

Table 4 (continued)

Variable	Valid Frequency	Percent
Friend Inhalant		
None	299	13.9
A few	261	12.1
Some	445	20.6
Most	805	37.3
All	347	16.1
Total	2157	100
Friend Marijuana		
None	457	21.7
A few	701	33.3
Some	563	26.7
Most	387	18.4
All	68	3.1
Total	2176	100
Friend Narcotics		
None	1680	78.4
A few	329	15.3
Some	101	4.7
Most	22	1.0
All	12	0.6
Total	2176	100

Table 4 (continued)

Variable	Valid Frequency	Percent
Risk of Marijuana		
No Risk	209	8.7
Slight Risk	288	12.1
Moderate Risk	492	20.6
Great Risk	1306	54.6
Can't Say	95	4.0
Total	2390	100
Risk of 2 Drinks		
No Risk	199	8.3
Slight Risk	476	19.8
Moderate Risk	897	37.4
Great Risk	776	32.3
Can't Say	52	2.2
Total	2400	100
Risk of 5 Drinks		
No Risk	150	6.2
Slight Risk	302	12.6
Moderate Risk	652	27.1
Great Risk	1242	51.7
Can't Say	57	2.4
Total	2403	100

Table 4 (continued)

Variable	Valid Frequency	Percent
Like School		
I don't like at all	175	8.4
I don't like very much	394	18.8
I like some	849	40.5
I like quite a lot	441	18.2
I like school very much	235	9.7
Total	2094	100
College (4-year)		
Definitely Won't	162	7.2
Probably Won't	188	8.3
Probably Will	523	23.1
Definitely Will	1391	61.4
Total	2264	100
Like School		
0 Hours	242	11.6
1-4 Hours	1016	48.6
5-9 Hours	421	20.1
10-14 Hours	177	8.5
15 or more hours	234	11.2
Total	2090	100

Table 5

Independent Variable Descriptives

	Mean	Median	Mode	STD
Athletics	1.72	1.00	0	1.748
Clubs	1.72	2.00	0	1.529
Yearbook	.59	0.00	0	1.104
Arts	1.05	0.00	0	1.556
Friend Tobacco	1.39	1.00	1	1.004
Friend Alcohol	2.30	3.00	3	1.267
Friend Inhalant	.25	0.00	0	.613
Friend Marijuana	1.50	1.00	1	1.102
Friend Narcotic	.30	0.00	0	.658
Risk Marijuana	2.33	3.00	0	1.033
Risk 2 Drinks	2.00	2.00	2	.970
Risk 5 Drinks	2.31	3.00	3	.943
College 2 Year	1.24	1.00	0	1.172
Like School	2.08	2.00	2	1.085
Homework	1.59	1.00	1	1.147

Table 6

Crosstabs of Drug Use and Interscholastic Sports and School Participation by Race and Gender

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Smoking	Sports	Black	Male	27.864*	16	.033
		White	Male	13.990	16	.599
		Hispanic	Male	18.855	16	.276
		Black	Female	13.516	16	.635
		White	Female	48.011***	16	.000
		Hispanic	Female	14.309	16	.576
Smoking	Clubs	Black	Male	25.173	16	.067
		White	Male	12.670	16	.697
		Hispanic	Male	25.293	16	.065
		Black	Female	13.786	16	.615
		Black	Female	13.786	16	.615
		White	Female	83.727***	16	.000
		Hispanic	Female	6.672	16	.979
		Hispanic	Female	6.672	16	.979
Smoking	Yearbook	Black	Male	20.586	16	.195
		White	Male	20.209	16	.211
		Hispanic	Male	10.895	16	.538
		Black	Female	20.208	16	.219
		White	Female	13.729	16	.619
		Hispanic	Female	6.672	16	.979

Table 6 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Smoking	Arts	Black	Male	23.927	16	.091
		White	Male	17.294	16	.367
		Hispanic	Male	6.374	16	.984
		Black	Female	17.600	16	.348
		White	Female	59.453***	16	.000
		Hispanic	Female	13.789	16	.614
Alcohol	Sports	Black	Male	11.728	16	.763
		White	Male	31.014*	16	.013
		Hispanic	Male	13.533	16	.633
		Black	Female	8.938	16	.916
		White	Female	12.919	16	.679
		Hispanic	Female	14.718	16	.545
Alcohol	Clubs	Black	Male	10.920	16	.814
		White	Male	16.813	16	.398
		Hispanic	Male	17.371	16	.362
		Black	Female	11.055	16	.806
		White	Female	26.639*	16	.046
		Hispanic	Female	17.270	16	.368
Alcohol	Yearbook	Black	Male	8.062	16	.947
		White	Male	16.716	16	.404
		Hispanic	Male	12.283	12	.423

Table 6 (continued)

Response	Predictor	Layer 1	Layer2	X ²	DF	Sig.
Alcohol	Yearbook	Black	Female	16.399	16	.425
		White	Female	12.255	16	.726
		Hispanic	Female	11.722	16	.763
Alcohol	Arts	Black	Male	7.983	16	.949
		White	Male	20.545	16	.197
		Hispanic	Male	14.409	16	.360
		Black	Female	8.320	16	.939
		White	Female	74.316 ^{***}	16	.000
		Hispanic	Female	7.555	16	.960
Narcotics	Sports	Black	Male	37.963 ^{***}	12	.000
		White	Male	13.224	16	.656
		Hispanic	Male	5.696	4	.223
		Black	Female	36.469 ^{***}	8	.000
		White	Female	27.743 [*]	16	.034
		Hispanic	Female	.826	4	.935
Narcotics	Clubs	Black	Male	11.217	12	.510
		White	Male	14.261	16	.579
		Hispanic	Male	5.959	4	.202
		Black	Female	8.795	8	.360
		White	Female	32.405 ^{**}	16	.009
		Hispanic	Female	2.135	4	.711

Table 6 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Narcotics	Yearbook	Black	Male	36.268*	12	.000
		White	Male	12.876	16	.682
		Hispanic	Male	1.015	3	.798
		Black	Female	.539	8	.999
		White	Female	19.997	16	.220
		Hispanic	Female	.257	4	.992
Narcotics	Arts	Black	Male	21.209*	12	.047
		White	Male	12.527	16	.707
		Hispanic	Male	2.764	4	.598
		Black	Female	8.068	8	.427
		White	Female	39.513**	16	.001
		Hispanic	Female	.676	4	.954
Barbiturates	Sports	Black	Male	13.407	8	.099
		White	Male	12.389	16	.717
		Hispanic	Male	20.369	12	.060
		Black	Female	22.757**	8	.004
		White	Female	15.120	16	.516
		Hispanic	Female	3.325	4	.505
Barbiturates	Clubs	Black	Male	6.893	8	.548
		White	Male	11.276	16	.792
		Hispanic	Male	11.321	12	.502

Table 6 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Barbiturates	Clubs	Black	Female	7.326	8	.502
		White	Female	21.320	16	.167
		Hispanic	Female	2.714	4	.607
Barbiturates	Yearbook	Black	Male	14.711	8	.065
		White	Male	25.301	16	.065
		Hispanic	Male	1.663	9	.996
		Black	Female	.815	8	.999
		White	Female	10.947	16	.813
		Hispanic	Female	4.519	4	.340
Barbiturates	Arts	Black	Male	5.898	8	.659
		White	Male	14.540	16	.352
		Hispanic	Male	16.633	12	.164
		Black	Female	1.934	8	.983
		White	Female	19.3786	16	.230
		Hispanic	Female	1.649	4	.800
Inhalant	Sport	Black	Male	25.885*	12	.011
		White	Male	28.700*	16	.026
		Hispanic	Male	28.329***	8	.000
		Black	Female	10.861	8	.210
		White	Female	12.368	16	.718
		Hispanic	Female	18.875	12	.092

Table 6 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Inhalant	Clubs	Black	Male	10.716	12	.553
		White	Male	17.224	16	.371
		Hispanic	Male	9.951	8	.268
		Black	Female	7.812	8	.452
		White	Female	17.800	16	.336
		Hispanic	Female	10.837	12	.543
Inhalant	Yearbook	Black	Male	20.085	12	.065
		White	Male	16.950	16	.389
		Hispanic	Male	.991	6	.986
		Black	Female	.539	8	.999
		White	Female	15.455	16	.492
		Hispanic	Female	14.320	12	.281
Inhalant	Arts	Black	Male	16.486	12	.170
		White	Male	10.295	16	.851
		Hispanic	Male	1.087	8	.998
		Black	Female	1.277	8	.996
		White	Female	16.737	16	.403
		Hispanic	Female	14.330	12	.280
Marijuana	Sports	Black	Male	13.785	16	.615
		White	Male	18.000	16	.324
		Hispanic	Male	17.321	16	.365

Table 6 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Marijuana	Sports	Black	Female	14.498	16	.562
		White	Female	46.222 ^{***}	16	.000
		Hispanic	Female	19.546	16	.241
Marijuana	Clubs	Black	Male	15.147	16	.514
		White	Male	26.441	16	.048
		Hispanic	Male	11.240	16	.794
		Black	Female	19.500	16	.244
		White	Female	50.669 ^{***}	16	.000
		Hispanic	Female	18.954	16	.271
Marijuana	Yearbook	Black	Male	5.241	16	.994
		White	Male	12.885	16	.681
		Hispanic	Male	8.585	12	.738
		Black	Female	11.764	16	.760
		White	Female	21.440	16	.162
		Hispanic	Female	4.804	16	.997
Marijuana	Arts	Black	Male	18.696	16	.285
		White	Male	8.302	16	.939
		Hispanic	Male	17.815	16	.335
		Black	Female	7.347	16	.966
		White	Female	38.472 ^{**}	16	.001
		Hispanic	Female	14.486	16	.563

Table 6 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Amphet.	Sports	Black	Male	37.652***	12	.000
		White	Male	21.880	16	.147
		Hispanic	Male	10.962	12	.532
		Black	Female	6.261	12	.902
		White	Female	23.088	16	.111
		Hispanic	Female	3.156	8	.924
Amphet.	Clubs	Black	Male	12.668	12	.394
		White	Male	13.382	16	.645
		Hispanic	Male	5.371	12	.944
		Black	Female	11.815	12	.461
		White	Female	32.497**	16	.009
		Hispanic	Female	7.040	8	.532
Amphet.	Yearbook	Black	Male	35.588***	12	.000
		White	Male	15.284	16	.504
		Hispanic	Male	3.535	9	.939
		Black	Female	1.097	12	.999
		White	Female	11.158	16	.800
		Hispanic	Female	5.239	8	.732

Table 6 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Amphet.	Arts	Black	Male	20.661	12	.056
		White	Male	19.743	16	.232
		Hispanic	Male	5.630	12	.934
		Black	Female	2.603	12	.998
		White	Female	21.442	16	.162
		Hispanic	Female	3.894	8	.867

p < .05 *

p < .01 **

p < .001 ***

Table 7

Chi Square of Behavioral Delinquency and Involvement of Race and Gender

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Fighting	Sports	Black	Male	24.395	16	.081
		White	Male	10.9066	16	.265
		Hispanic	Male	11.637	16	.769
		Black	Female	20.508	16	.198
		White	Female	40.072**	16	.001
		Hispanic	Female	15.885	8	.044
Fighting	Club	Black	Male	17.456	16	.357
		White	Male	19.590	16	.239
		Hispanic	Male	16.970	16	.388
		Black	Female	15.702	16	.474
		White	Female	12.940	16	.677
		Hispanic	Female	7.352	8	.499
Fighting	Yearbook	Black	Male	12.335	16	.721
		White	Male	15.429	16	.493
		Hispanic	Male	25.149**	12	.014
		Black	Female	8.327	16	.939
		White	Female	24.426	16	.081
		Hispanic	Female	2.333	8	.969

Table 7 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Fighting	Arts	Black	Male	17.156	16	.376
		White	Male	14.872	16	.534
		Hispanic	Male	10.505	16	.839
		Black	Female	12.724	16	.693
		White	Female	18.277	16	.308
		Hispanic	Female	5.887	8	.660
Gang Fight	Sports	Black	Male	19.220	16	.257
		White	Male	18.370	16	.303
		Hispanic	Male	10.836	16	.820
		Black	Female	15.974	16	.455
		White	Female	21.026	16	.178
		Hispanic	Female	23.703	16	.096
Gang Fight	Club	Black	Male	18.196	16	.313
		White	Male	11.662	16	.767
		Hispanic	Male	13.572	16	.631
		Black	Female	14.692	16	.547
		White	Female	18.880	16	.275
		Hispanic	Female	15.889	16	.461
Gang Fight	Yearbook	Black	Male	28.965*	16	.024
		White	Male	25.992	16	.054
		Hispanic	Male	12.633	12	.396

Table 7 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Gang Fight	Yearbook	Black	Female	6.177	16	.986
		White	Female	14.439	16	.566
		Hispanic	Female	4.468	16	.988
Gang Fight	Arts	Black	Male	15.567	16	.484
		White	Male	22.609	16	.125
		Hispanic	Male	11.535	16	.775
		Black	Female	16.604	16	.412
		White	Female	32.208**	16	.009
		Hispanic	Female	7.044	16	.972
Steal > \$50	Sports	Black	Male	9.080	16	.910
		White	Male	12.500	16	.709
		Hispanic	Male	17.481	16	.355
		Black	Female	16.364	16	.428
		White	Female	11.353	16	.787
		Hispanic	Female	7.307	12	.837
Steal > \$50	Clubs	Black	Male	8.209	16	.942
		White	Male	14.971	16	.527
		Hispanic	Male	9.626	16	.885
		Black	Female	20.030	16	.219
		White	Female	10.597	16	.834
		Hispanic	Female	11.830	12	.459

Table 7 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Steal > \$50	Yearbook	Black	Male	5.420	16	.993
		White	Male	15.214	16	.509
		Hispanic	Male	7.732	12	.806
		Black	Female	12.127	16	.735
		White	Female	20.451	16	.201
		Hispanic	Female	7.360	12	.833
Steal > \$50	Arts	Black	Male	11.205	16	.797
		White	Male	19.320	16	.252
		Hispanic	Male	28.038*	16	.031
		Black	Female	13.629	16	.626
		White	Female	11.380	16	.785
		Hispanic	Female	13.835	12	.311
Steal < \$50	Sports	Black	Male	25.374	16	.064
		White	Male	18.026	16	.322
		Hispanic	Male	15.510	16	.488
		Black	Female	16.874	16	.394
		White	Female	17.831	16	.334
		Hispanic	Female	16.114	16	.445
Steal < \$50	Clubs	Black	Male	7.376	16	.965
		White	Male	18.861	16	.273
		Hispanic	Male	21.460	16	.161

Table 7 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Steal < \$50	Clubs	Black	Female	12.052	16	.740
		White	Female	13.539	16	.633
		Hispanic	Female	14.200	16	.584
Steal < \$50	Yearbook	Black	Male	15.780	16	.468
		White	Male	11.682	16	.766
		Hispanic	Male	3.712	12	.988
		Black	Female	18.000	16	.321
		White	Female	13.264	16	.653
		Hispanic	Female	3.996	16	.999
Steal < \$50	Arts	Black	Male	14.878	16	.534
		White	Male	12.786	16	.688
		Hispanics	Male	26.308*	16	.050
		Black	Female	24.453	16	.080
		White	Female	12.743	16	.691
		Hispanic	Female	20.600	16	.194
Hurt Bad	Sports	Black	Male	17.965	16	.326
		White	Male	12.394	16	.716
		Hispanic	Male	8.421	16	.935
		Black	Female	6.790	12	.871
		White	Female	34.441**	16	.005
		Hispanic	Female	10.768	12	.549

Table 7 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Hurt Bad	Clubs	Black	Male	11.907	16	.750
		White	Male	13.158	16	.661
		Hispanic	Male	19.429	16	.247
		Black	Female	8.974	12	.705
		White	Female	19.442	16	.246
		Hispanic	Female	11.865	12	.454
Hurt Bad	Yearbook	Black	Male	19.360	16	.237
		White	Male	22.363	16	.132
		Hispanic	Male	8.377	12	.755
		Black	Female	12.861	12	.379
		White	Female	26.582	16	.046
		Hispanic	Female	7.403	12	.830
Hurt Bad	Arts	Black	Male	17.649	16	.345
		White	Male	26.062	16	.053
		Hispanic	Male	10.210	16	.855
		Black	Female	13.385	12	.342
		White	Female	12.813	16	.686
		Hispanic	Female	8.422	12	.751
Shoplift	Sports	Black	Male	15.110	16	.517
		White	Male	21.609	16	.156
		Hispanic	Male	7.788	16	.955

Table 7 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Shoplift	Sport	Black	Female	14.018	16	.570
		White	Female	22.166	16	.138
		Hispanic	Female	11.175	16	.799
Shoplift	Clubs	Black	Male	13.724	16	.619
		White	Male	24.297	16	.083
		Hispanic	Male	14.225	16	.582
		Black	Female	18.452	16	.298
		White	Female	42.433 ^{***}	16	.000
		Hispanic	Female	9.430	16	.895
Shoplift	Yearbook	Black	Male	29.707 [*]	16	.020
		White	Male	10.129	16	.860
		Hispanic	Male	9.109	12	.694
		Black	Female	13.342	16	.648
		White	Female	10.791	16	.822
		Hispanic	Female	6.973	16	.974
Shoplift	Arts	Black	Male	12.597	16	.702
		White	Male	14.044	16	.595
		Hispanic	Male	18.734	16	.283
		Black	Female	18.367	16	.303
		White	Female	26.209	16	.051
		Hispanic	Female	15.196	16	.510

Table 7 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Damage Prop. Sports		Black	Male	9.759	16	.879
		White	Male	10.794	16	.822
		Hispanic	Male	24.394	16	.081
		Black	Female	8.259	16	.941
		White	Female	14.189	16	.585
		Hispanic	Female	6.539	8	.587
Damage Prop. Clubs		Black	Male	12.961	16	.676
		White	Male	15.176	16	.512
		Hispanic	Male	12.425	16	.714
		Black	Female	12.706	16	.694
		White	Female	15.869	16	.462
		Hispanic	Female	11.024	8	.200
Damage Prop. Yearbook		Black	Male	25.436	16	.063
		White	Male	7.015	16	.973
		Hispanic	Male	6.070	12	.913
		Black	Female	37.101	16	.002
		White	Female	17.933	16	.328
		Hispanic	Female	5.419	8	.712
Damage Prop Arts		Black	Male	23.517	16	.101
		White	Male	17.540	16	.352
		Hispanic	Male	8.070	16	.947

Table 7 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Damage Prop. Arts		Black	Female	30.747*	16	.014
		White	Female	15.011	16	.524
		Hispanic	Female	14.477	8	.070
Trespass	Sports	Black	Male	23.499	16	.101
		White	Male	21.992	16	.143
		Hispanic	Male	13.410	16	.643
		Black	Female	16.611	16	.411
		White	Female	14.363	16	.572
		Hispanic	Female	17.510	16	.353
Trespass	Clubs	Black	Male	12.442	16	.713
		White	Male	11.767	16	.760
		Hispanic	Male	19.326	16	.252
		Black	Female	11.514	16	.777
		White	Female	13.206	16	.658
		Hispanic	Female	16.741	16	.403
Trespass	Yearbook	Black	Male	11.905	16	.751
		White	Male	15.155	16	.513
		Hispanic	Male	6.182	12	.907
		Black	Female	23.139	16	.110
		White	Female	24.424	16	.081
		Hispanic	Female	3.231	16	.999

Table 7 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Trespass	Arts	Black	Male	9.128	16	.908
		White	Male	17.993	16	.324
		Hispanic	Male	12.915	16	.679
		Black	Female	33.219**	16	.007
		White	Female	15.462	16	.491
		Hispanic	Female	8.205	16	.943

p < .05 *

p < .01 **

p = .000 ***

Table 8

Chi Square of Delinquent Peers and Delinquency of Race and Gender

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Smoking	Friend Tobac	Black	Male	24.796	16	.074
		White	Male	198.920 ^{***}	16	.000
		Hispanic	Male	40.121 ^{**}	16	.001
		Black	Female	49.446 ^{***}	16	.000
		White	Female	313.055 ^{***}	16	.000
		Hispanic	Female	38.510 ^{***}	12	.000
Smoking	Friend Alc	Black	Male	19.870	16	.226
		White	Male	116.534 ^{***}	16	.000
		Hispanic	Male	18.158	16	.315
		Black	Female	21.169	16	.172
		White	Female	99.914 ^{***}	16	.000
		Hispanic	Female	26.294 [*]	16	.050
Smoking	Friend Inhale	Black	Male	48.934 ^{***}	16	.000
		White	Male	23.785	16	.094
		Hispanic	Male	7.975	12	.787
		Black	Female	19.604 ^{**}	16	.001
		White	Female	39.604 ^{**}	16	.001
		Hispanic	Female	4.376	16	.998

Table 8 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Smoking	Friend Mari J	Black	Male	8.378	12	.755
		White	Male	92.061 ^{***}	12	.000
		Hispanic	Male	22.338 [*]	12	.034
		Black	Female	8.894	12	.712
		White	Female	138.707 ^{***}	12	.000
		Hispanic	Female	31.769 ^{**}	12	.002
Smoking	Friend Narc	Black	Male	31.048 [*]	16	.013
		White	Male	68.575 ^{***}	16	.000
		Hispanic	Male	25.935	16	.055
		Black	Female	32.962 ^{**}	16	.007
		White	Female	71.615 ^{***}	16	.000
		Hispanic	Female	13.758	12	.316
Alcohol	Friend Tobac	Black	Male	18.914	16	.273
		White	Male	128.110 ^{***}	16	.000
		Hispanic	Male	34.578 ^{**}	16	.005
		Black	Female	16.282	16	.433
		White	Female	174.574 ^{***}	16	.000
		Hispanic	Female	22.953 [*]	12	.028

Table 8 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Alcohol	Friend Alc.	Black	Male	42.760 ^{***}	16	.000
		White	Male	223.023 ^{***}	16	.000
		Hispanic	Male	44.385 ^{***}	16	.000
		Black	Female	47.374 ^{***}	16	.000
		White	Female	288.773 ^{***}	16	.000
		Hispanic	Female	31.397 [*]	16	.012
Alcohol	Friend Inhale	Black	Male	25.381	16	.063
		White	Male	14.149	16	.588
		Hispanic	Male	11.312	12	.502
		Black	Female	20.278	16	.208
		White	Female	29.633 [*]	16	.020
		Hispanic	Female	8.303	16	.939
Alcohol	Friend Mari J	Black	Male	29.743 ^{**}	12	.003
		White	Male	165.291 ^{***}	12	.000
		Hispanic	Male	38.215 ^{***}	12	.000
		Black	Female	13.320	12	.346
		White	Female	195.315 ^{***}	12	.000
		Hispanic	Female	19.644	12	.074
Alcohol	Friend Narc	Black	Male	19.326	12	.081
		White	Male	31.371 [*]	16	.012
		Hispanic	Male	11.345	16	.788

Table 8 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Alcohol	Friend Narc	Black	Female	38.847*	16	.025
		White	Female	48.198***	16	.000
		Hispanic	Female	6.784	12	.872
Narcotics	Friend Tobac	Black	Male	30.576**	8	.008
		White	Male	86.054***	16	.000
		Hispanic	Male	7.567	8	.477
		Black	Female	23.022**	8	.003
		White	Female	130.367***	16	.000
		Hispanic	Female	3.927	3	.269
Narcotics	Friend Alc.	Black	Male	12.219	8	.142
		White	Male	47.469***	16	.000
		Hispanic	Male	4.640	8	.795
		Black	Female	8.099	8	.424
		White	Female	44.122***	16	.000
		Hispanic	Female	2.412	4	.660
Narcotics	Friend Inhale	Black	Male	78.775***	8	.000
		White	Male	39.680***	16	.001
		Hispanic	Male	2.256	6	.895
		Black	Female	35.438***	8	.000
		White	Female	117.131***	16	.000
		Hispanic	Female	.256	4	.992

Table 8 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Narcotics	Friend Mari J	Black	Male	5.246	6	.513
		White	Male	75.900 ^{***}	12	.000
		Hispanic	Male	18.045 ^{***}	6	.006
		Black	Female	3.730	3	.292
		White	Female	68.203 ^{***}	12	.000
		Hispanic	Female	1.575	3	.665
Narcotics	Friend Narc	Black	Male	78.775 ^{***}	8	.000
		White	Male	190.642 ^{***}	16	.000
		Hispanic	Male	72.753 ^{***}	8	.000
		Black	Female	148.655 ^{***}	8	.000
		White	Female	274.403 ^{***}	16	.000
		Hispanic	Female	.162	4	.997
Barbiturates	Friend Tobac	Black	Male	22.563 ^{**}	8	.004
		White	Male	112.150 ^{***}	16	.000
		Hispanic	Male	5.552	12	.937
		Black	Female	29.250 ^{***}	8	.000
		White	Female	82.252 ^{***}	16	.000
		Hispanic	Female	7.792 [*]	3	.050
Barbiturates	Friend Alc.	Black	Male	8.087	8	.425
		White	Male	37.408 ^{**}	16	.002
		Hispanic	Male	9.254	12	.681

Table 8 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Barbiturates	Friend Alc.	Black	Female	9.064	8	.337
		White	Female	30.667**	16	.015
		Hispanic	Female	5.553	4	.235
Barbiturates	Friend Inhale	Black	Male	79.523***	8	.000
		White	Male	99.442***	16	.000
		Hispanic	Male	20.865**	9	.013
		Black	Female	43.002***	8	.000
		White	Female	219.460***	16	.000
		Hispanic	Female	3.530	4	.473
Barbiturates	Friend Mari J	Black	Male	7.130	6	.309
		White	Male	25.836*	12	.011
		Hispanic	Male	8.241	9	.510
		Black	Female	2.331	3	.507
		White	Female	48.084***	12	.000
		Hispanic	Female	10.294*	3	.016
Barbiturates	Friend Narc	Black	Male	79.523***	8	.000
		White	Male	276.962***	16	.000
		Hispanic	Male	40.304***	12	.000
		Black	Female	43.310***	8	.000
		White	Female	297.543***	16	.000
		Hispanic	Female	.669	4	.995

Table 8 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Inhalant	Friend Tobac	Black	Male	41.597***	8	.000
		White	Male	76.354***	16	.000
		Hispanic	Male	4.056	8	.852
		Black	Female	37.399***	8	.000
		White	Female	70.601***	16	.000
		Hispanic	Female	8.286	9	.506
Inhalant	Friend Alc	Black	Male	20.570***	8	.008
		White	Male	13.991	16	.607
		Hispanic	Male	9.168	8	.417
		Black	Female	10.746	8	.217
		White	Female	20.979	16	.179
		Hispanic	Female	14.334	12	.280
Inhalant	Friend Inhale	Black	Male	137.685***	8	.000
		White	Male	181.154***	16	.000
		Hispanic	Male	18.429**	6	.005
		Black	Female	52.472***	8	.000
		White	Female	352.336***	16	.000
		Hispanic	Female	105.948***	12	.000
Inhalant	Friend Mari J	Black	Male	2.785	3	.476
		White	Male	38.835***	12	.000
		Hispanic	Male	4.651	6	.589

Table 8 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Inhalant	Friend Mari J	Black	Female	4.441	3	.218
		White	Female	22.310*	12	.034
		Hispanic	Female	20.221	9	.017
Inhalant	Friend Narc	Black	Male	137.695***	8	.000
		White	Male	125.673***	16	.000
		Hispanic	Male	2.008	8	.981
		Black	Female	51.782***	8	.000
		White	Female	223.115***	16	.000
		Hispanic	Female	11.908	12	.453
Marijuana	Friend Tobac	Black	Male	19.872	16	.226
		White	Male	128.639***	16	.000
		Hispanic	Male	32.446**	16	.009
		Black	Female	37.224**	16	.002
		White	Female	158.548***	16	.000
		Hispanic	Female	25.523**	12	.013
Marijuana	Friend Alc	Black	Male	26.001	16	.054
		White	Male	131.958***	16	.000
		Hispanic	Male	32.510**	16	.009
		Black	Female	18.354	16	.304
		White	Female	119.582***	16	.000
		Hispanic	Female	23.291	16	.106

Table 8 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Marijuana	Friend Inhale	Black	Male	29.573*	16	.020
		White	Male	43.226***	16	.000
		Hispanic	Male	6.538	8	.587
		Black	Female	17.147	16	.376
		White	Female	32.201*	16	.010
		Hispanic	Female	5.604	16	.995
Marijuana	Friend Mari J	Black	Male	28.978**	12	.004
		White	Male	274.403***	12	.000
		Hispanic	Male	35.669***	12	.000
		Black	Female	24.155*	12	.019
		White	Female	260.479***	12	.000
		Hispanic	Female	32.979**	12	.001
Marijuana	Friend Narc	Black	Male	42.261***	16	.000
		White	Male	84.121***	16	.000
		Hispanic	Male	45.252***	12	.000
		Black	Female	16.758	16	.401
		White	Female	115.322***	16	.000
		Hispanic	Female	10.624	16	.832
Amphet.	Friend Tobac	Black	Male	5.068	8	.750
		White	Male	210.591***	16	.000
		Hispanic	Male	19.684	12	.073

Table 8 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Amphet	Friend Tabac	Black	Female	31.636**	12	.002
		White	Female	124.264***	16	.000
		Hispanic	Female	9.291	6	.158
Amphet.	Friend Alc	Black	Male	12.557	8	.128
		White	Male	72.539***	16	.000
		Hispanic	Male	10.594	12	.564
		Black	Female	12.602	12	.399
		White	Female	46.819***	16	.000
		Hispanic	Female	5.491	8	.704
Amphet	Friend Inhale	Black	Male	57.172***	6	.000
		White	Male	77.983***	16	.000
		Hispanic	Male	19.298*	9	.023
		Black	Female	34.096**	12	.001
		White	Female	102.995***	16	.000
		Hispanic	Female	1.270	8	.996
Amphet	Friend Mari J	Black	Male	10.776	6	.096
		White	Male	37.322***	12	.000
		Hispanic	Male	3.706	6	.716
		Black	Female	11.936	9	.217
		White	Female	82.909***	12	.000
		Hispanic	Female	3.822	6	.701

Table 8 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Amphet	Friend Narc	Black	Male	38.862 ^{***}	6	.000
		White	Male	150.946 ^{***}	16	.000
		Hispanic	Male	23.449 [*]	12	.024
		Black	Female	40.587 ^{***}	12	.000
		White	Female	179.348 ^{***}	16	.000
		Hispanic	Female	.829	8	.999
Fighting	Friend Tobac	Black	Male	12.610	16	.701
		White	Male	72.845 ^{***}	16	.000
		Hispanic	Male	23.770	16	.095
		Black	Female	36.855 ^{**}	16	.002
		White	Female	49.757 ^{***}	16	.000
		Hispanic	Female	5.678	6	.460
Fighting	Friend Alc	Black	Male	17.921	16	.329
		White	Male	36.076 ^{**}	16	.003
		Hispanic	Male	11.899	16	.751
		Black	Female	15.539	16	.486
		White	Female	19.669	16	.235
		Hispanic	Female	12.740	8	.121
Fighting	Friend Inhale	Black	Male	58.027 ^{***}	16	.000
		White	Male	92.380 ^{***}	16	.000
		Hispanic	Male	33.823 ^{**}	12	.001

Table 8 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Fighting	Friend Inhale	Black	Female	36.156**	16	.003
		White	Female	159.825***	16	.000
		Hispanic	Female	24.861**	8	.002
Fighting	Friend Mari J	Black	Male	11.797	12	.462
		White	Male	11.407	12	.494
		Hispanic	Male	20.549	12	.057
		Black	Female	12.600	12	.399
		White	Female	14.880	12	.248
		Hispanic	Female	12.722*	6	.048
Fighting	Friend Narc	Black	Male	61.298***	16	.000
		White	Male	166.044***	16	.000
		Hispanic	Male	35.581**	16	.003
		Black	Female	19.643	16	.237
		White	Female	131.355***	16	.000
		Hispanic	Female	7.563	8	.477
Gang	Friend Tobac	Black	Male	16.608	16	.411
		White	Male	74.735***	16	.000
		Hispanic	Male	29.085**	16	.023
		Black	Female	42.162***	16	.000
		White	Female	47.757***	16	.000
		Hispanic	Female	30.602**	12	.002

Table 8 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Gang	Friend Alc	Black	Male	13.881	16	.608
		White	Male	28.275*	16	.029
		Hispanic	Male	12.510	16	.708
		Black	Female	24.910	16	.071
		White	Female	25.645	16	.059
		Hispanic	Female	38.073***	16	.001
Gang	Friend Inhale	Black	Male	15.726	16	.472
		White	Male	56.069***	16	.000
		Hispanic	Male	36.485***	12	.000
		Black	Female	37.328**	16	.002
		White	Female	123.418***	16	.000
		Hispanic	Female	34.332**	16	.005
Gang	Friend Mari J	Black	Male	13.069	12	.364
		White	Male	19.405	12	.079
		Hispanic	Male	15.572	12	.212
		Black	Female	6.318	9	.708
		White	Female	16.400	12	.174
		Hispanic	Female	19.554*	9	.021
Gang	Friend Narc	Black	Male	13.311	16	.650
		White	Male	108.966***	16	.000
		Hispanic	Male	37.044**	16	.002

Table 8 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Gang	Friend Narc	Black	Female	20.095	16	.216
		White	Female	125.339 ^{***}	16	.000
		Hispanic	Female	24.552	16	.078
Steal > \$50	Friend Tobac	Black	Male	36.815 ^{**}	16	.002
		White	Male	158.650 ^{***}	16	.000
		Hispanic	Male	14.760	16	.542
		Black	Female	263.855 [*]	16	.043
		White	Female	48.342 ^{***}	16	.000
		Hispanic	Female	28.385 ^{**}	9	.001
Steal > \$50	Friend Alc	Black	Male	23.098	16	.111
		White	Male	53.415 ^{***}	16	.000
		Hispanic	Male	14.324	16	.575
		Black	Female	11.817	16	.756
		White	Female	45.658 ^{***}	16	.000
		Hispanic	Female	24.019 [*]	12	.020
Steal > \$50	Friend Inhale	Black	Male	79.969 ^{***}	16	.000
		White	Male	77.547 ^{***}	16	.000
		Hispanic	Male	17.854	12	.120
		Black	Female	48.865 ^{***}	16	.000
		White	Female	283.192 ^{***}	16	.000
		Hispanic	Female	41.774 ^{***}	12	.000

Table 8 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Steal > \$50	Friend Mari J	Black	Male	26.035*	12	.011
		White	Male	34.405**	12	.001
		Hispanic	Male	11.741	12	.467
		Black	Female	6.242	12	.903
		White	Female	26.663**	12	.009
		Hispanic	Female	16.497**	9	.002
Steal > \$50	Friend Narc	Black	Male	85.582***	16	.000
		White	Male	201.459***	16	.000
		Hispanic	Male	28.685**	16	.001
		Black	Female	40.972**	16	.001
		White	Female	344.510***	16	.000
		Hispanic	Female	47.861***	12	.000
Steal < \$50	Friend Tobac	Black	Male	23.255	16	.107
		White	Male	62.22***	16	.000
		Hispanic	Male	10.786	16	.823
		Black	Female	38.867**	16	.001
		White	Female	107.717***	16	.000
		Hispanic	Female	45.894***	12	.000
Steal < \$50	Friend Alc	Black	Male	17.847	16	.333
		White	Male	48.250***	16	.000
		Hispanic	Male	23.089	16	.111

Table 8 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Steal < \$50	Friend Alc	Black	Female	22.280	16	.134
		White	Female	60.558 ^{***}	16	.000
		Hispanic	Female	23.532	16	.100
Steal < \$50	Friend Inhale	Black	Male	38.573 ^{**}	16	.001
		White	Male	29.646 [*]	16	.020
		Hispanic	Male	16.254	12	.180
		Black	Female	40.167 ^{**}	16	.001
		White	Female	125.693 ^{***}	16	.000
		Hispanic	Female	23.411	16	.103
Steal < \$50	Friend Mari J	Black	Male	27.849 ^{**}	12	.006
		White	Male	52.096 ^{***}	12	.000
		Hispanic	Male	14.368	12	.278
		Black	Female	16.742	12	.160
		White	Female	59.936 ^{***}	12	.000
		Hispanic	Female	18.866	12	.092
Steal < \$50	Friend Narc	Black	Male	41.400 ^{***}	16	.000
		White	Male	77.256 ^{***}	16	.000
		Hispanic	Male	28.243 [*]	16	.030
		Black	Female	55.182 ^{***}	16	.000
		White	Female	90.337 ^{***}	16	.000
		Hispanic	Female	21.277	16	.168

Table 8 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Hurt Someone Friend Tobac		Black	Male	25.101	16	.068
		White	Male	66.024 ^{***}	16	.000
		Hispanic	Male	36.058 ^{**}	16	.003
		Black	Female	27.730 ^{**}	12	.006
		White	Female	62.260 ^{***}	16	.000
		Hispanic	Female	6.700	9	.668
Hurt Someone Friend Alc		Black	Male	26.446 [*]	16	.048
		White	Male	37.275 ^{**}	16	.002
		Hispanic	Male	16.539	16	.416
		Black	Female	22.670 [*]	12	.031
		White	Female	16.970	16	.388
		Hispanic	Female	12.178	12	.432
Hurt Someone Friend Inhale		Black	Male	10.363	16	.847
		White	Male	90.751 ^{***}	16	.000
		Hispanic	Male	52.084 ^{***}	12	.000
		Black	Female	51.304 ^{***}	12	.000
		White	Female	195.450 ^{***}	16	.000
		Hispanic	Female	38.273 ^{***}	12	.000
Hurt Someone Friend Mari J		Black	Male	15.596	12	.210
		White	Male	11.947	12	.450
		Hispanic	Male	18.052	12	.114

Table 8 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Hurt Someone	Friend Mari J	Black	Female	16.990*	9	.049
		White	Female	9.191	12	.687
		Hispanic	Female	15.714	9	.073
Hurt Someone	Friend Narc	Black	Male	9.8080	16	.876
		White	Male	182.534***	16	.000
		Hispanic	Male	44.386***	16	.000
		Black	Female	52.073***	12	.000
		White	Female	165.895***	16	.000
		Hispanic	Female	18.709	12	.093
Shoplift	Friend Tobac	Black	Male	20.433	16	.201
		White	Male	60.031***	16	.000
		Hispanic	Male	9.508	16	.091
		Black	Female	13.148	16	.662
		White	Female	103.451***	16	.000
		Hispanic	Female	12.861	12	.379
Shoplift	Friend Alc	Black	Male	22.730	16	.121
		White	Male	58.721***	16	.000
		Hispanic	Male	12.280	16	.724
		Black	Female	24.902	16	.072
		White	Female	45.550***	16	.000
		Hispanic	Female	21.528	16	.159

Table 8 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Shoplift	Friend Inhale	Black	Male	31.241 [*]	16	.013
		White	Male	47.810 ^{***}	16	.000
		Hispanic	Male	10.218	12	.597
		Black	Female	29.650 [*]	16	.020
		White	Female	95.715 ^{***}	16	.000
		Hispanic	Female	3.788	16	.999
Shoplift	Friend Mari J	Black	Male	18.902	12	.091
		White	Male	84.290 ^{***}	12	.000
		Hispanic	Male	14.136	12	.292
		Black	Female	8.900	12	.711
		White	Female	75.750 ^{***}	12	.000
		Hipsanic	Female	17.047	12	.148
Shoplift	Friend Narc	Black	Male	26.080	16	.053
		White	Male	90.520 ^{***}	16	.000
		Hispanic	Male	24.235	16	.084
		Black	Female	14.837	16	.537
		White	Female	85.739 ^{***}	16	.000
		Hispanic	Female	5.552	16	.992
Damage Prop	Friend Tobac	Black	Male	15.085	16	.518
		White	Male	53.844 ^{***}	16	.000
		Hispanic	Male	23.729	16	.096

Table 8 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Damage Prop	Friend Tobac	Black	Female	23.124	16	.110
		White	Female	41.471 ^{***}	16	.000
		Hispanic	Female	12.786 ^{**}	6	.047
Damage Prop	Friend Alc	Black	Male	16.043	16	.450
		White	Male	27.785 ^{**}	16	.034
		Hispanic	Male	15.516	16	.487
		Black	Female	13.441	16	.640
		White	Female	13.237	16	.655
		Hispanic	Female	7.608	8	.473
Damage Prop	Friend Inhale	Black	Male	39.026 ^{**}	16	.001
		White	Male	49.590 ^{***}	16	.000
		Hispanic	Male	37.167 ^{***}	12	.000
		Black	Female	128.163 ^{***}	16	.000
		White	Female	220.994 ^{***}	16	.000
		Hispanic	Female	2.562	8	.959
Damage Prop	Friend Mari J	Black	Male	10.074	12	.609
		White	Male	32.533 ^{**}	12	.001
		Hispanic	Male	13.182	12	.356
		Black	Female	8.440	12	.756
		White	Female	15.682	12	.206
		Hispanic	Female	7.000	6	.321

Table 8 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Damage Prop	Friend Narc	Black	Male	42.183 ^{***}	16	.000
		White	Male	134.488 ^{***}	16	.000
		Hispanic	Male	35.281 ^{**}	16	.004
		Black	Female	60.431 ^{***}	16	.000
		White	Female	211.612 ^{***}	16	.000
		Hispanic	Female	11.084	8	.197
Trespassing	Friend Tobac	Black	Male	22.959	16	.115
		White	Male	64.301 ^{***}	16	.000
		Hispanic	Male	32.505 ^{**}	16	.009
		Black	Female	20.051	16	.218
		White	Female	49.440 ^{***}	16	.000
		Hispanic	Female	19.037	12	.088
Trespassing	Friend Alc	Black	Male	23.375	16	.104
		White	Male	64.970 ^{***}	16	.000
		Hispanic	Male	17.389	16	.361
		Black	Female	19.452	16	.246
		White	Female	49.162 ^{***}	16	.000
		Hispanic	Female	19.336	16	.252
Trespassing	Friend Inhale	Black	Male	36.263 ^{**}	16	.003
		White	Male	63.860 ^{***}	16	.000
		Hispanic	Male	30.770 ^{**}	12	.002

Table 8 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Trespassing	Friend Inhale	Black	Female	101.779***	16	.000
		White	Female	108.806***	16	.000
		Hispanic	Female	3.622	16	.999
Trespassing	Friend Mari J	Black	Male	19.945	16	.389
		White	Male	69.584***	16	.000
		Hispanic	Male	21.054	16	.176
		Black	Female	15.741	16	.471
		White	Female	56.570***	16	.000
		Hispanic	Female	13.972	16	.601
Trespassing	Friend Narc	Black	Male	27.702*	16	.034
		White	Male	92.525***	16	.000
		Hispanic	Male	33.426**	16	.006
		Black	Female	64.959***	16	.000
		White	Female	74.884***	16	.000
		Hispanic	Female	3.366	16	1.00

p < .05 *

p < .01 **

p < .001 ***

Table 9

Delinquency and Delinquent Values by Race and Gender

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Smoking	Risk of MariJ	Black	Male	20.133	16	.214
		White	Male	133.242 ^{***}	16	.000
		Hispanic	Male	18.829	16	.278
		Black	Female	29.311	16	.022
		White	Female	156.401 ^{***}	16	.000
		Hispanic	Female	39.224 ^{**}	16	.001
Smoking	Risk 2 Drinks	Black	Male	28.498	16	.028
		White	Male	41.932 ^{***}	16	.000
		Hispanic	Male	16.047	16	.450
		Black	Female	31.715 [*]	16	.011
		White	Female	42.620 ^{***}	16	.000
		Hispanic	Female	13.747	16	.618
Smoking	Risk 5 Drink	Black	Male	36.473 ^{**}	16	.002
		White	Male	130.518 ^{**}	16	.000
		Hispanic	Male	23.430	16	.103
		Black	Female	26.314 [*]	16	.050
		White	Female	75.476 ^{***}	16	.000
		Hispanic	Female	49.481 ^{***}	16	.000

Table 9 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Alcohol	Risk of MariJ	Black	Male	13.715	16	.620
		White	Male	145.204 ^{***}	16	.000
		Hispanic	Male	24.111	16	.087
		Black	Female	20.862	16	.184
		White	Female	163.474 ^{***}	16	.000
		Hispanic	Female	34.775 ^{**}	16	.004
Alcohol	Risk 2 Drink	Black	Male	27.233 [*]	16	.039
		White	Male	86.797 ^{***}	16	.000
		Hispanic	Male	18.84	16	.277
		Black	Female	36.648 ^{**}	16	.002
		White	Female	65.209 ^{***}	16	.000
		Hispanic	Female	18.206	16	.312
Alcohol	Risk 5 Drink	Black	Male	34.937 ^{**}	16	.004
		White	Male	188.931 ^{***}	16	.000
		Hispanic	Male	32.034 [*]	16	.010
		Black	Female	22.264	16	.135
		White	Female	163.143 ^{***}	16	.000
		Hispanic	Female	47.808 ^{***}	16	.000
Narcotics	Risk of MariJ	Black	Male	31.949 ^{**}	12	.001
		White	Male	80.257 ^{***}	16	.000
		Hispanic	Male	16.953	12	.151

Table 9 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Narcotics	Risk of MariJ	Black	Female	16.637*	8	.034
		White	Female	116.599***	16	.000
		Hispanic	Female	6.676	4	.154
Narcotics	Risk 2 Drinks	Black	Male	14.648	12	.261
		White	Male	42.089***	16	.000
		Hispanic	Male	3.875	12	.986
		Black	Female	21.805**	8	.005
		White	Female	51.900***	16	.000
		Hispanic	Female	6.994	4	.136
Narcotics	Risk 5 Drink	Black	Male	21.961*	12	.038
		White	Male	50.062***	16	.000
		Hispanic	Male	10.750	12	.550
		Black	Female	12.997	8	.112
		White	Female	38.411***	16	.001
		Hispanic	Female	3.965	4	.411
Barbiturates	Risk of Mari J	Black	Male	16.105*	8	.041
		White	Male	69.058***	16	.000
		Hispanic	Male	10.870	12	.540
		Black	Female	16.371*	8	.037
		White	Female	110.338***	16	.000
		Hispanic	Female	1.232	4	.873

Table 9 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Barbiturates	Risk 2 Drink	Black	Male	20.393**	8	.009
		White	Male	34.353**	16	.005
		Hispanic	Male	12.364	12	.417
		Black	Female	18.274*	8	.019
		White	Female	63.619***	16	.000
		Hispanic	Female	1.189	4	.880
Barbiturates	Risk 5 Drink	Black	Male	18.638	8	.071
		White	Male	41.645***	16	.000
		Hispanic	Male	5.056	12	.956
		Black	Female	21.773**	8	.005
		White	Female	23.537	16	.100
		Hispanic	Female	16.386**	4	.003
Inhalant	Risk of Mari J	Black	Male	20.622	12	.056
		White	Male	36.084**	16	.003
		Hispanic	Male	12.137	12	.435
		Black	Female	16.637*	8	.034
		White	Female	38.182**	16	.001
		Hispanic	Female	20.914	12	.052
Inhalant	Risk 2 Drink	Black	Male	13.417	12	.358
		White	Male	15.290	16	.504
		Hispanic	Male	22.138*	12	.036

Table 9 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Inhalant	Risk 2 Drink	Black	Female	13.859	8	.086
		White	Female	40.244**	16	.001
		Hispanic	Female	8.119	12	.776
Inhalant	Risk 5 Drink	Black	Male	41.433***	12	.000
		White	Male	15.004	16	.524
		Hispanic	Male	6.549	12	.886
		Black	Female	25.055**	8	.002
		White	Female	15.643	16	.478
		Hispanic	Female	20.422	12	.060
Marijuana	Risk of MariJ	Black	Male	29.549*	16	.020
		White	Male	257.893***	16	.000
		Hispanic	Male	43.422***	16	.000
		Black	Female	27.684*	16	.034
		White	Female	269.596***	16	.000
		Hispanic	Female	28.491**	16	.028
Marijuana	Risk 2 Drink	Black	Male	14.573	16	.556
		White	Male	55.580***	16	.000
		Hispanic	Male	14.076	16	.593
		Black	Female	21.316	16	.167
		White	Female	44.622***	16	.000
		Hispanic	Female	15.913	16	.459

Table 9 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Marijuana	Risk 5 Drink	Black	Male	19.075	16	.265
		White	Male	133.946 ^{***}	16	.000
		Hispanic	Male	39.241 ^{**}	16	.001
		Black	Female	14.414	16	.568
		White	Female	109.733 ^{***}	16	.000
		Hispanic	Female	23.325	16	.105
Amphet.	Risk of MariJ	Black	Male	25.691 [*]	12	.012
		White	Male	51.410 ^{***}	16	.000
		Hispanic	Male	23.867 [*]	12	.021
		Black	Female	20.838	12	.053
		White	Female	117.593 ^{***}	16	.000
		Hispanic	Female	9.626	8	.292
Amphet.	Risk 2 Drink	Black	Male	10.618	12	.562
		White	Male	20.908	16	.182
		Hispanic	Male	6.918	12	.863
		Black	Female	17.363	12	.136
		White	Female	41.957 ^{***}	16	.000
		Hispanic	Female	2.509	8	.961
Amphet.	Risk 5 Drink	Black	Male	25.793 [*]	12	.011
		White	Male	39.436 ^{**}	16	.001
		Hispanic	Male	21.602 ^{**}	12	.003

Table 9 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Amphet.	Risk 5 Drink	Black	Female	29.726**	12	.003
		White	Female	41.608***	16	.000
		Hispanic	Female	6.439	.8	.598
Fight	Risk of MariJ	Black	Male	17.535	16	.352
		White	Male	42.381***	16	.000
		Hispanic	Male	43.436***	16	.000
		Black	Female	24.601	16	.077
		White	Female	.16.600	16	.412
		Hispanic	Female	26.014*	12	.011
Fight	Risk 2 Drink	Black	Male	18.291	16	.307
		White	Male	15.082	16	.519
		Hispanic	Male	24.605	16	.077
		Black	Female	30.273*	16	.017
		White	Female	8.547	16	.931
		Hispanic	Female	13.456	12	.337
Fight	Risk 5 Drink	Black	Male	16.225	16	.241
		White	Male	46.76***	16	.000
		Hispanic	Male	15.492	16	.489
		Black	Female	44.046***	16	.000
		White	Female	18.222	16	.311
		Hispanic	Female	14.163	12	.290

Table 9 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Gang	Risk MariJ	Black	Male	11.846	16	.751
		White	Male	56.710 ^{***}	16	.000
		Hispanic	Male	29.226 [*]	16	.022
		Black	Female	30.631 [*]	16	.015
		White	Female	12.919	16	.679
		Hispanic	Female	7.567	16	.961
Gang	Risk 2 Drink	Black	Male	13.078	16	.667
		White	Male	25.307	16	.065
		Hispanic	Male	16.680	16	.623
		Black	Female	19.836	16	.228
		White	Female	11.175	16	.799
		Hispanic	Female	25.329	16	.064
Gang	Risk 5 Drink	Black	Male	23.191	16	.109
		White	Male	45.208 ^{***}	16	.000
		Hispanic	Male	29.324 [*]	16	.022
		Black	Female	23.882	16	.092
		White	Female	43.780 ^{***}	16	.000
		Hispanic	Female	10.916	16	.815
Steal > \$50	Risk of MariJ	Black	Male	14.444	16	.566
		White	Male	47.796 ^{***}	16	.000
		Hispanic	Male	27.968 [*]	16	.032

Table 9 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Steal > \$50	Risk of MariJ	Black	Female	17.328	16	.365
		White	Female	29.241*	16	.022
		Hispanic	Female	24.311*	12	.018
Steal > \$50	Risk 2 Drink	Black	Male	10.167	16	.858
		White	Male	11.794	16	.758
		Hispanic	Male	19.256	16	.256
		Black	Female	20.634	16	.193
		White	Female	28.256*	16	.029
		Hispanic	Female	12.491	12	.407
Steal > \$50	Risk 5 Drink	Black	Male	18.914	16	.273
		White	Male	42.684***	16	.000
		Hispanic	Male	16.967	16	.388
		Black	Female	37.499**	16	.002
		White	Female	24.180	16	.086
		Hispanic	Female	15.315	12	.225
Steal < \$50	Risk of MariJ	Black	Male	12.391	16	.717
		White	Male	77.452***	16	.000
		Hispanic	Male	15.080	16	.519
		Black	Female	10.407	16	.845
		White	Female	97.804***	16	.000
		Hispanic	Female	28.097*	16	.031

Table 9 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Steal > \$50	Risk 2 Drink	Black	Male	7.976	16	.950
		White	Male	15.612	16	.480
		Hispanic	Male	25.056	16	.069
		Black	Female	20.968	16	.180
		White	Female	53.475***	16	.000
		Hispanic	Female	17.741	16	.339
Steal > \$50	Risk 5 Drink	Black	Male	12.253	16	.726
		White	Male	29.683*	16	.020
		Hispanic	Male	16.723	16	.404
		Black	Female	31.221*	16	.013
		White	Female	57.905***	16	.000
		Hispanic	Female	31.025*	16	.013
Hurt Someone Risk of MariJ	Risk of MariJ	Black	Male	17.156	16	.376
		White	Male	32.588**	16	.008
		Hispanic	Male	40.931**	16	.001
		Black	Female	8.691	12	.729
		White	Female	35.504**	16	.003
		Hispanic	Female	17.532	12	.131
Hurt Someone Risk 2 Drink	Risk 2 Drink	Black	Male	14.746	16	.543
		White	Male	20.511	16	.198
		Hispanic	Male	21.210	16	.171

Table 9 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Hurt Someone Risk 2 Drink		Black	Female	17.175	12	.143
		White	Female	20.225	16	.210
		Hispanic	Female	23.578*	12	.023
Hurt Someone Risk 5 Drink		Black	Male	22.909	16	.116
		White	Male	39.781**	16	.001
		Hispanic	Male	25.127	16	.068
		Black	Female	20.890	12	.052
		White	Female	37.216**	16	.002
		Hispanic	Female	13.820	12	.312
Shoplift	Risk of MariJ	Black	Male	22.650	16	.123
		White	Male	73.719***	16	.000
		Hispanic	Male	17.695	16	.342
		Black	Female	18.585	16	.291
		White	Female	98.417***	16	.000
		Hispanic	Female	21.052	16	.177
Shoplift	Risk 2 Drink	Black	Male	12.121	16	.736
		White	Male	23.013*	16	.010
		Hispanic	Male	14.343	16	.573
		Black	Female	16.040	16	.450
		White	Female	28.383*	16	.028
		Hispanic	Female	16.672	16	.407

Table 9 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Shoplift	Risk 5 Drink	Black	Male	8.300	16	.939
		White	Male	55.451***	16	.000
		Hispanic	Male	13.430	16	.641
		Black	Female	19.547	16	.241
		White	Female	37.602**	16	.002
		Hispanic	Female	42.484***	16	.000
Damage Prop	Risk of MariJ	Black	Male	25.489	16	.062
		White	Male	53.165***	16	.000
		Hispanic	Male	19.539	16	.242
		Black	Female	25.929	16	.055
		White	Female	25.512	16	.061
		Hispanic	Female	9.603	8	.294
Damage Prop	Risk 2 Drink	Black	Male	30.208*	16	.017
		White	Male	17.753	16	.339
		Hispanic	Male	9.590	16	.887
		Black	Female	50.760***	16	.000
		White	Female	40.716***	16	.001
		Hispanic	Female	9.785	8	.280
Damage Prop	Risk 5 Drink	Black	Male	42.439***	16	.000
		White	Male	42.810***	16	.000
		Hispanic	Male	16.753	16	.402

Table 9 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Damage Prop	Risk 5 Drink	Black	Female	21.901 ^{***}	16	.000
		White	Female	37.578 ^{***}	16	.002
		Hispanic	Female	8.300	8	.405
Trespass	Risk of MariJ	Black	Male	15.424	16	.494
		White	Male	58.2273 ^{***}	16	.000
		Hispanic	Male	14.425	16	.567
		Black	Female	9.434	16	.894
		White	Female	40.646 ^{**}	16	.001
		Hispanic	Female	23.840	16	.093
Trespass	Risk 2 Drink	Black	Male	18.340	16	.304
		White	Male	26.805 [*]	16	.044
		Hispanic	Male	17.368	16	.362
		Black	Female	17.730	16	.340
		White	Female	23.411	16	.103
		Hispanic	Female	12.509	16	.708
Trespass	Risk 5 Drink	Black	Male	11.701	16	.764
		White	Male	47.606 ^{***}	16	.000
		Hispanic	Male	13.357	16	.646
		Black	Female	12.806	16	.687
		White	Female	15.921	16	.458
		Hispanic	Female	11.001	16	.809

p < .05 * p < .01 ** p = .000 ***

Table 10

Delinquency and Belief by Race and Gender

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Smoking	College 4 Yr.	Black	Male	12	12	.459
		White	Male	22.036*	12	.037
		Hispanic	Male	7.581	12	.817
		Black	Female	26.194*	12	.010
		White	Female	73.034***	12	.000
		Hispanic	Female	16.561	12	.167
Alcohol	College 4 Yr.	Black	Male	8.489	12	.746
		White	Male	7.566	12	.818
		Hispanic	Male	32.311**	12	.001
		Black	Female	24.496*	12	.017
		White	Female	15.566	12	.212
		Hispanic	Female	16.629	12	.164
Narcotics	College 4 Yr.	Black	Male	6.310	6	.389
		White	Male	14.026	12	.299
		Hispanic	Male	5.352	9	.803
		Black	Female	16.767*	6	.010
		White	Female	61.872***	12	.000
		Hispanic	Female	.875	3	.832

Table 10 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Barbiturates	College 4 Yr.	Black	Male	7.270	6	.297
		White	Male	11.684	12	.471
		Hispanic	Male	8.755	9	.460
		Black	Female	23.536**	6	.001
		White	Female	48.974***	12	.000
		Hispanic	Female	2.984	3	.394
Inhalant	College 4 Yr.	Black	Male	14.502*	6	.025
		White	Male	25.587*	12	.012
		Hispanic	Male	6.162	9	.724
		Black	Female	20.297***	6	.002
		White	Female	8.933	12	.709
		Hispanic	Female	9.801	9	.367
Marijuana	College 4 Yr.	Black	Male	6.372	12	.896
		White	Male	21.513*	12	.043
		Hispanic	Male	11.311	12	.502
		Black	Female	24.117*	12	.020
		White	Female	27.639**	12	.006
		Hispanic	Female	5.044	12	.956
Amphet.	College 4 Yr.	Black	Male	8.874	6	.181
		White	Male	16.537	12	.168
		Hispanic	Male	9.169	9	.422

Table 10 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Amphet	College 4 Yr.	Black	Female	36.838***	9	.000
		White	Female	37.312***	12	.000
		Hispanic	Female	9.721	6	.137
Fighting	College 4 Yr.	Black	Male	21.258*	12	.047
		White	Male	51.776***	12	.000
		Hispanic	Male	23.225*	12	.026
		Black	Female	26.993**	12	.008
		White	Female	30.776**	12	.002
		Hispanic	Female	19.283*	9	.023
Gang	College 4 Yr.	Black	Male	20.936	12	.051
		White	Male	29.470***	12	.003
		Hispanic	Male	16.741	12	.160
		Black	Female	18.423	12	.103
		White	Female	11.511	12	.486
		Hispanic	Female	19.523	12	.077
Steal > \$50	College 4 Yr.	Black	Male	12.174	12	.432
		White	Male	28.296**	12	.005
		Hispanic	Male	15.029	12	.240
		Black	Female	19.368	12	.080
		White	Female	29.209**	12	.004
		Hispanic	Female	9.206	9	.419

Table 10 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Steal < \$50	College 4 Yr.	Black	Male	20.773	12	.054
		White	Male	21.293*	12	.046
		Hispanic	Male	8.296	12	.762
		Black	Female	8.380	12	.755
		White	Female	18.882	12	.091
		Hispanic	Female	5.135	12	.953
Hurt Someone	College 4 Yr.	Black	Male	17.474	12	.133
		White	Male	26.458**	12	.009
		Hispanic	Male	9.287	12	.678
		Black	Female	14.958	9	.092
		White	Female	12.325	12	.420
		Hispanic	Female	10.055	9	.346
Shoplift	College 4 Yr.	Black	Male	13.971	12	.303
		White	Male	10.527	12	.570
		Hispanic	Male	23.154*	12	.026
		Black	Female	29.503**	12	.003
		White	Female	32.365**	12	.001
		Hispanic	Female	12.4040	12	.414
Damage Prop	College 4 Yr.	Black	Male	23.610*	12	.023
		White	Male	21.934*	12	.038
		Hispanic	Male	21.095*	12	.049

Table 10 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Damage Prop	College 4 Yr.	Black	Female	23.384*	12	.025
		White	Female	28.740*	12	.004
		Hispanic	Female	5.186	6	.520
Trespass	College 4 Yr.	Black	Male	14.824	12	.251
		White	Male	20.107	12	.065
		Hispanic	Male	12.146	12	.434
		Black	Female	27.576**	12	.006
		White	Female	11.534	12	.484
		Hispanic	Female	9.271	12	.680

p < .05 *

p < .01 **

p < .001 ***

Table 11

Chi Square of Delinquency and Commitment of Race and Gender

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Smoking	Homework	Black	Male	11.708	16	.764
		White	Male	34.995**	16	.004
		Hispanic	Male	16.405	16	.425
		Black	Female	13.463	16	.639
		White	Female	57.169***	16	.000
		Hispanic	Female	22.102	16	.140
Alcohol	Homework	Black	Male	21.778	16	.151
		White	Male	29.671*	16	.020
		Hispanic	Male	18.308	16	.306
		Black	Female	22.941	16	.115
		White	Female	33.592**	16	.006
		Hispanic	Female	24.975	16	.070
Narcotics	Homework	Black	Male	19.582	12	.075
		White	Male	13.851	16	.610
		Hispanic	Male	2.918	4	.572
		Black	Female	5.656	8	.686
		White	Female	20.955	16	.180
		Hispanic	Female	18.565**	4	.001

Table 11 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Barbiturates	Homework	Black	Male	9.2001	8	.326
		White	Male	21.242	16	.169
		Hispanic	Male	9.532	12	.657
		Black	Female	8.003	8	.433
		White	Female	37.611**	16	.002
		Hispanic	Female	2.645	4	.619
Inhalant	Homework	Black	Male	16.687	12	.096
		White	Male	11.680	16	.766
		Hispanic	Male	7.063	8	.530
		Black	Female	12.346	8	.136
		White	Female	40.444**	16	.001
		Hispanic	Female	6.635	12	.881
Marijuana	Homework	Black	Male	11.791	16	.758
		White	Male	19.925	16	.224
		Hispanic	Male	21.190	16	.174
		Black	Female	19.683	16	.235
		White	Female	32.562**	16	.008
		Hispanic	Female	22.067	16	.141
Amphet	Homework	Black	Male	20.326	12	.061
		White	Male	32.025**	16	.010
		Hispanic	Male	9.439	12	.665

Table 11 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Amphet	Homework	Black	Female	14.227	12	.286
		White	Female	37.486**	16	.002
		Hispanic	Female	4.679	8	.791
Fighting	Homework	Black	Male	10.119	16	.860
		White	Male	24.939	16	.071
		Hispanic	Male	35.096**	16	.004
		Black	Female	11.068	16	.805
		White	Female	25.949	16	.055
		Hispanic	Female	4.234	8	.835
Gang	Homework	Black	Male	14.107	16	.591
		White	Male	20.976	16	.179
		Hispanic	Male	17.386	16	.361
		Black	Female	15.577	16	.483
		White	Female	14.109	16	.561
		Hispanic	Female	10.492	16	.840
Steal > \$50	Homework	Black	Male	23.801	16	.094
		White	Male	11.421	16	.783
		Hispanic	Male	14.248	16	.580
		Black	Female	16.569	16	.414
		White	Female	41.132**	16	.001
		Hispanic	Female	4.213	12	.979

Table 11 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Steal < \$50	Homework	Black	Male	15.005	16	.524
		White	Male	13.665	16	.624
		Hispanic	Male	10.953	16	.812
		Black	Female	9.102	16	.909
		White	Female	21.029	16	.177
		Hispanic	Female	22.774	16	.120
Hurt Someone	Homework	Black	Male	14.434	16	.566
		White	Male	27.163*	16	.040
		Hispanic	Female	16.435	16	.423
		Black	Female	7.063	12	.853
		White	Female	22.998	16	.114
		Hispanic	Female	8.783	12	.721
Shoplift	Homework	Black	Male	23.494	16	.101
		White	Male	31.710*	16	.011
		Hispanic	Male	11.880	16	.752
		Black	Female	16.242	16	.436
		White	Female	32.096*	16	.010
		Hispanic	Female	7.955	16	.950
Damage Prop	Homework	Black	Male	10.723	16	.826
		White	Male	14.645	16	.551
		Hispanic	Male	24.718	16	.075

Table 11 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Damage Prop	Homework	Black	Female	18.446	16	.298
		White	Female	43.478***	16	.000
		Hispanic	Female	4.656	8	.794
Trespass	Homework	Black	Male	10.723	16	.826
		White	Male	14.645	16	.551
		Hispanic	Male	24.718	16	.075
		Black	Female	18.446	16	.298
		White	Female	43.478***	16	.000
		Hispanic	Female	4.656	8	.794

p < .05 *

p < .01 **

p < .001 ***

Table 12

Delinquency and Attachment by Race and Gender

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Smoking	Like School	Black	Male	9.729	16	.880
		White	Male	65.802***	16	.000
		Hispanic	Male	28.266*	16	.029
		Black	Female	18.762	16	.281
		White	Female	79.773***	16	.000
		Hispanic	Female	32.055*	16	.010
Alcohol	Like School	Black	Male	31.188*	16	.013
		White	Male	43.813***	16	.000
		Hispanic	Male	28.976*	16	.024
		Black	Female	16.263	16	.435
		White	Female	54.854***	16	.000
		Hispanic	Female	29.732*	16	.019
Narcotics	Like School	Black	Male	13.066	12	.364
		White	Male	33.117**	16	.007
		Hispanic	Male	5.137	4	.274
		Black	Female	20.883**	8	.007
		White	Female	48.661***	16	.000
		Hispanic	Female	6.75	4	.152

Table 12 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Barbiturates	Like School	Black	Male	8.872	8	.353
		White	Male	25.484	16	.062
		Hispanic	Male	13.635	12	.325
		Black	Female	21.898**	8	.005
		White	Female	39.501**	16	.001
		Hispanic	Female	9.047	4	.060
Inhalant	Like School	Black	Male	20.240	12	.063
		White	Male	21.769	16	.151
		Hispanic	Male	13.756	8	.088
		Black	Female	20.883**	8	.007
		White	Female	18.767	16	.281
		Hispanic	Female	11.314	12	.502
Marijuana	Like School	Black	Male	13.438	16	.641
		White	Male	56.555***	16	.000
		Hispanic	Male	22.215	16	.136
		Black	Female	15.443	16	.492
		White	Female	64.086***	16	.000
		Hispanic	Female	24.398	16	.081
Amphet	Like School	Black	Male	12.283	12	.423
		White	Male	94.438***	16	.000
		Hispanic	Male	21.453*	12	.044

Table 12 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Amphet	Like School	Black	Female	20.554	12	.057
		White	Female	44.567***	16	.000
		Hispanic	Female	7.357	8	.499
Fighting	Like School	Black	Male	15.732	16	.472
		White	Male	40.073**	16	.001
		Hispanic	Male	13.340	16	.648
		Black	Female	18.544	16	.293
		White	Female	14.366	16	.571
		Hispanic	Female	15.786*	8	.046
Gang	Like School	Black	Male	26.744*	16	.044
		White	Male	29.825*	16	.019
		Hispanic	Male	21.794	16	.150
		Black	Female	24.089	16	.088
		White	Female	15.989	16	.454
		Hispanic	Female	22.982	16	.114
Steal > \$50	Like School	Black	Male	15.163	16	.513
		White	Male	57.731***	16	.000
		Hispanic	Male	11.761	16	.760
		Black	Female	28.973*	16	.024
		White	Female	34.515**	16	.005
		Hispanic	Female	5.255	12	.949

Table 12 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Steal < \$50	Like School	Black	Male	12.125	16	.735
		White	Male	35.989**	16	.003
		Hispanic	Male	17.283	16	.367
		Black	Female	6.386	16	.983
		White	Female	21.735	16	.152
		Hispanic	Female	12.769	16	.690
Hurt Someone	Like School	Black	Male	14.197	16	.584
		White	Male	23.471	16	.102
		Hispanic	Female	16.657	16	.408
		Black	Female	14.309	12	.281
		White	Female	18.044	16	.321
		Hispanic	Female	47.556***	12	.000
Shoplift	Like School	Black	Male	13.555	16	.632
		White	Male	52.665***	16	.000
		Hispanic	Male	16.668	16	.407
		Black	Female	24.433	16	.080
		White	Female	57.995***	16	.000
		Hispanic	Female	10.610	16	.833
Damage Prop	Like School	Black	Male	12.597	16	.702
		White	Male	55.332***	16	.000
		Hispanic	Male	14.540	16	.559

Table 12 (continued)

Response	Predictor	Layer 1	Layer2	X^2	DF	Sig.
Damage Prop	Like School	Black	Female	13.895	16	.607
		White	Female	21.525	16	.159
		Hispanic	Female	11.774	8	.162
Trespass	Like School	Black	Male	11.922	16	.749
		White	Male	28.828*	16	.025
		Hispanic	Male	18.455	16	.298
		Black	Female	21.183	16	.172
		White	Female	24.103	16	.087
		Hispanic	Female	15.724	16	.472

p < .05 *

p < .01 **

p < .001 ***

Table 13

Analysis of variance of Delinquency Scales by Club Participation

Scales	<i>df1</i>	<i>df2</i>	F	p
Drug Scale	4	1906	14.583	.000
Behavioral Scale	4	2012	10.089	.000
Full Scale	4	1882	16.751	.000

All values are significant at $p < .05$

Table 14

Post-Hoc test for Drug Scale by Club Participation

Response I	Response J	Mean Difference (I-J)	Sig.
Not at all	Moderate	1.240	.000
Not at all	Considerable	1.470	.000
Not at all	Great	2.122	.000

All values are significant at $p < .05$

Table 15

Post-Hoc test for Behavior Scale by Club Participation

Response I	Response J	Mean Difference (I-J)	Sig.
Not at all	Moderate	1.488	.000
Not at all	Considerable	1.528	.000
Not at all	Great	1.319	.000

All values are significant at $p < .05$

Table 16

Post-Hoc test for Drug Scale by Club Participation

Response I	Response J	Mean Difference (I-J)	Sig.
Not at all	Moderate	2.759	.000
Not at all	Considerable	2.894	.000
Not at all	Great	3.475	.000
Slight	Great	2.255	.001

All values are significant at $p < .05$

Table 17

Analysis of variance of Delinquency Scales by Arts or Music

Scales	df1	df2	F	p
Drug Scale	4	1911	5.589	.000***
Behavioral Scale	4	2018	1.628	.165
Full Scale	4	1886	4.665	.001***

$p < .05$ *

$p < .01$ **

$p < .001$ ***

Table 18

Post-Hoc test for Drug Scale by Arts or Music

Response I	Response J	Mean Difference (I-J)	Sig.
Not at all	Great	1.303	.000

all values are significant at $p < .05$

Table 19

Post-Hoc test for Drug Scale by Club Participation

Response I	Response J	Mean Difference (I-J)	Sig.
Not at all	Great	1.777	.000

All values are significant at $p < .05$

Table 20

Analysis of variance of Delinquency Scales by Race

Scales	df1	df2	F	p
Drug Scale	2	1900	36.779	.000
Behavioral Scale	2	1994	6.122	.002
Full Scale	2	1875	9.593	.000

All values are significant at $p < .05$

Table 21

Post-Hoc test for Drug Scale by Race

Response I	Response J	Mean Difference (I-J)	Sig.
White	Black	2.239	.000
White	Hispanic	1.787	.000

All values are significant at $p < .05$

Table 22

Post-Hoc test for Behavior Scale by Race

Response I	Response J	Mean Difference (I-J)	Sig.
Black	White	2.239	.002
Black	Hispanic	1.017	.015

All values are significant at $p < .05$

Table 23

Post-Hoc test for Full Scale by Race

Response I	Response J	Mean Difference (I-J)	Sig.
White	Black	1.437	.021*
White	Hispanic	1.837	.000***

$p < .05$ *

$p < .01$ **

$p < .001$ ***

Table 24

Analysis of variance of Delinquency Scales by Gender

Scales	<i>df1</i>	<i>df2</i>	F	p
Drug Scale	1	211	1.954	.162
Behavioral Scale	1	2220	54.469	.000***
Full Scale	1	2091	25.209	.000***

$p < .05$ *

$p < .01$ **

$p < .001$ ***

Table 25

Factor analysis for Delinquency Scales

Factors	Eigen Value	Component	Factor Loading
Steal < \$50	4.684	1	.847
Shoplifting	2.043	1	.798
Steal > \$50	1.390	1	.704
Trespass	1.186	1	.525
Damage School	.781	1	.524
Barbiturates	.744	2	.799
Amphetamines	.672	2	.768
Narcotics	.526	2	.731
Inhalant	.498	2	.579
Fighting	.482	3	.805
Hurt	.468	3	.803
Gang	.427	3	.802
Alcohol	.410	4	.819
Marijuana	.372	4	.787
Cigarette	.318	4	.772

VITA

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