The Impact of School Climate on Self-Reported Alcohol and Other Drug Use

Karen R. Humes

Western Michigan University

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THE IMPACT OF SCHOOL CLIMATE ON SELF-REPORTED ALCOHOL AND OTHER DRUG USE

by

Karen R. Humes

A Thesis
Submitted to the Faculty of The Graduate College in partial fulfillment of the requirements for the Degree of Master of Arts Department of Sociology

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Karen R. Humes
THE IMPACT OF SCHOOL CLIMATE ON SELF-REPORTED ALCOHOL AND OTHER DRUG USE

Karen R. Humes, M.A.
Western Michigan University, 1995

The purpose of this study was to examine the impact of dimensions of the school climate upon twelfth grade self-reported alcohol, marijuana, and cigarette use. In order to do this, social bond theory and its elements of attachment, belief, and commitment were tested. Data involving peer pressure to use drugs, perception of school drug policy enforcement, and college boundness were utilized in examining their relationship with drug use.

The data which were chosen for this study involved 141 Michigan public school districts and were based on the responses of 17,211 high school seniors collected during the 1993-1994 school year. Due to the fact that this study did not involve a random sample, the results are not generalizable to the state of Michigan, but only describe the participating school districts.

The results indicate that peer pressure to use drugs, particularly marijuana, was the strongest predictor of senior drug use. Therefore, this is an area to which school district administrators and educators can devote attention in their efforts to decrease senior high school student drug use.
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CHAPTER I

INTRODUCTION

Schools are one of the major interpersonal environments in children's lives (Ghory & Sinclair, 1987; Hawkins & Catalano, 1992; Hawkins, Catalano, & Miller, 1992; Varenhorst, 1981). Children spend a substantial amount of time in this environment, which, aside from the family and community, acts as a secondary socialization agency (Ghory & Sinclair, 1987). Indeed, it is one of the most powerful mechanisms that molds and shapes today's youth into tomorrow's leaders. There is no doubt about the tremendous influence that the school environment contributes to student's thought processes and behavior.

Certain elements (norms, beliefs, and attitudes) that exist within this environment are collectively called school climate (Coladarci & Donaldson, 1988; Ellis, 1988; Finlayson, 1987; Pallas, 1988). Halpin and Croft's (1963) analogy compares the relation between climate and the school to the relation between personality and the individual. Nwankwo (1979) suggests that a school climate is "the general 'we-feeling', group sub-culture or interactive life of the school" (p. 268). According to Pallas (1988), the school climate, for the most part, is also viewed as malleable. Therefore, administrators and educators strive to uphold a climate that not only creates high achievers, but also makes students resistant to
Drug use is a serious problem that is affecting the nation's adolescents today. "It is estimated that three million people fourteen to seventeen years old have problems related to the use of alcohol" (Kornblum & Julian, 1992, p. 131). "Recent national data demonstrate that by the time they reach the twelfth grade over half of all American students have used alcohol" (Kornblum & Julian, 1992, p. 130). A national study in 1993 showed that nearly nine-tenths of the twelfth graders have tried alcohol, and half of the seniors have used alcohol in the past thirty days (Johnston, 1994). Alcohol then, appears to be a widely used drug among youth today.

Cigarettes, considered a legal drug, are also commonly used by adolescents. "Smoking rates for high school seniors have been fairly steady for nearly a decade, and now are on the increase" (Johnston, 1994, p. 4). From 1992 to 1993, the rate of daily smoking rose from 17% to 19% among twelfth graders (Johnston, 1994). Johnston (1994) concluded that it is very important to recognize that a sizeable proportion of young people still are establishing regular cigarette habits. Since the Monitoring The Future study began in 1975, cigarettes have consistently been one of the most frequently used substances by high school students.

Marijuana is yet another major substance that adolescents choose to use at an alarming rate. The 1990 Youth Risk Behavior Study found that a third of all students had used marijuana at least once, and 14% had used marijuana during the past thirty days (Cen-
ters for Disease Control, 1991). The Monitoring The Future study found that marijuana was the most widely used illicit drug among seniors, with 35% using in their lifetime (Johnston, O'Malley, & Bachman, 1994). Therefore, marijuana use is a serious, and apparently increasing problem among high school students.

The school climate plays a powerful role in socializing adolescents today. There is little doubt that it contains factors that could impact students when they make decisions regarding alcohol and other drugs. With current adolescent drug use at alarming rates, it is essential to investigate a wide range of contributing and preventative factors within the school climate regarding this phenomenon.

Purpose and Significance of Study

The purpose of this study is to examine the relationships between elements of the school climate and self-reported drug use among high school seniors. The elements of the school climate included are, peer pressure, enforcement of school substance use policies, and commitment to education. The substances to be investigated are marijuana, alcohol, and cigarettes.

This study will be useful because it examines the impact that these elements of the school climate have on drug use. Many studies have investigated the impact of school drug policies (Goodstat, 1989; Grasmick & Bryjak, 1980; Jensen, Erickson, & Gibbs, 1978; Meier, Burkett, & Hickman, 1984; Moskowitz & Jones, 1988; Tittle,
1977), the commitment to education (Ghory & Sinclair, 1987; Gottfredson, 1988; Hawkins & Catalano, 1992; Hawkins et al., 1992), and peer pressure (Burkett & Jensen, 1975; Selnow & Crano, 1985; Dinges & Oetting, 1993). However, these studies have largely focused only on the individual impacts of these factors on adolescent drug use, not in combination or as part of the overall school climate.

The need for this research has been stated by Johnston (1993), a leader in the field of adolescent substance use, who asserts that, perhaps no area has proven more clearly appropriate for the application of systematic research and reporting than the drug field, given its rapid rate of change, its importance for the well-being of the nation, and the amount of legislative and administrative intervention which continues to be addressed to it. Young people are often at the leading edge of social change-and this has been particularly true in the case of drug use. The massive upsurge in illicit drug use during the last twenty-five years has proven to be very much a youth phenomenon, with onset of use most likely to occur during adolescence (p. 3).

This thesis hopes to provide valuable information for the war on drug use among the nation's youth. It attempts to examine whether or not low peer pressure, high commitment to education, and high perception of enforcement of school drug policies are protective factors against adolescent drug use. Establishing such relationships will enable administrators and educators to focus on these areas of the school climate, in collaboration with other preventative methods, in order to reduce alcohol and other drug use by adolescent students.
CHAPTER II

LITERATURE REVIEW

School Climate

School climate is a phenomenon that has often been categorized as difficult to research (Ellis, 1988). The National Institute of Education (1978) states that school district administrators and teachers acknowledge its importance when they commission studies intended to indicate the impact of school climate on productivity, morale, and satisfaction, among other things. Even though a consensus exists regarding the importance of this phenomenon, major questions remain as to what actually constitutes school climate and whether research really indicates in concrete terms its impact on students and school staff. The National Institute of Education concluded, however, that the school climate can be defined, and that this definition varies depending on which typology and classification system is utilized in research (Halpin & Croft, 1962; Moos, 1974; Taguiri, 1968).

In spite of some views questioning the ability to research school climate, it has been widely employed in educational research. Wallich (1982) found that the school climate is an important factor in student outcomes, including academics, acceptance, recognition, and self-actualization. Pallas (1988) suggests that the presence of certain kinds of students, such as higher achievers, may facilitate
the development of a positive climate. Coladarci and Donaldson (1988) have found that school climate research can encourage collaboration between students, staff, and parents to improve student outcomes. The Coladarci and Donaldson approach is interesting in that it not only includes student perceptions, but parent and staff perceptions as well. In this approach, all three groups' norms and attitudes can be compared. This of course, broadens the discussion pertaining to school climate improvement.

Examining, describing, and improving school climate is largely thought to be the key to excellence. For example, some researchers have found that schools which strive to become the best they can be are driven by key beliefs and values shared by students and staff, such as individual respect and self esteem (Sweeney, 1992; Tunney, 1977). Keefe, Kelley, and Miller (1985) assert that if a school is to be both productive and satisfying, it must have a positive school climate, which is assessed by looking at the student beliefs, attitudes, and values related to characteristics within the school environment.

Anderson (1992) provides a comprehensive review of the literature relating to school climate. For this review, the widely recognized Taguiri (1968) system of school climate conceptualization was discussed in detail. Taguiri developed a system in which school climate is composed of four dimensions: ecology, milieu, social system, and culture. The ecological dimension pertains to the physical and material variables in the school that are external to partici-
pants, such as the building structure or decorations. The school milieu refers to variables that represent characteristics of individuals in the school, such as achievement, race, or gender. The social system includes variables that concern patterns or rules of operating and interacting in the school. Culture deals with psychosocial characteristics that reflect norms and belief systems within the school.

Using Taguiri's system, this thesis investigates elements contained within three of the dimensions of school climate. Commitment to education will be viewed in terms of college bound seniors, which fits into the milieu dimension. Students' perception of the enforcement of school substance use policy will be used to reflect the social system dimension. The students' perceptions of peer pressures regarding the use of various substances will be viewed as an element of the culture dimension. Therefore, minus the ecology dimension, Taguiri's conceptualization of school climate will be applied to this study.

Social Bond Theory

Social bond theory stresses the importance of the three major elements of the relational bond: attachment, commitment, and belief. Hirschi (1969) links social behavior to the quality of these social bond elements, which are what an individual maintains with society. It is theorized that delinquent acts, which could include the use of illegal substances, occur when this bond is weak or broken. This
theory focuses on the idea that it is the individual's integration into society that serves as an important determinant of the individual's willingness to conform (Tittle, 1977).

The first of the major elements in the social bond is attachment. This refers to an attachment to conventional others. A sensitivity develops towards others, which is related to an individual's ability to internalize norms and to develop a conscience. It includes the ties of affection and respect one would have toward others, for example teachers, friends, or parents. This element asserts that the stronger the attachment, the more likely individuals will remember norms when they are tempted to commit delinquent acts (Hirschi, 1969).

The second major element of the social bond is commitment. This part of the bond refers to the individual's commitment to conventional activities and values. This element is based upon the idea that individuals are committed to the degree that they are willing to invest time, energy, and self in the pursuit of conventional goals, such as educational goals (Hirschi, 1969). The stronger the commitment adolescents have, the less willing an individual will be to risk forfeiting reaching these conventional goals by committing delinquent acts, such as drug use.

The third major element of the social bond is belief. This element involves one's belief that the rules of society are binding on one's conduct (Hirschi, 1969). This argues that potential delinquent acts can be deterred through the potential delinquent's belief
that laws and regulations in place are to be respected because they are directly applicable to the situation.

A number of studies have utilized social bond theory in examining types of delinquent behavior such as alcohol and other drug use. Hawkins and Catalano (1992), for example, use attachment, commitment, and belief as the basis for their social development model. These authors assert the importance of bonding as a key protective factor in children’s resistance to crime and drugs.

Hawkins et al. (1992) view social bonding as an area that needs further research. Their position is that the social bond needs to be examined in order to determine whether the elements of social bonding are best viewed simply as the opposites of already identified risk factors, or whether they are capable of reducing the effects of other risk factors.

Krohn, Kaduce, and Akers (1984) collected data from 3,065 high school students to examine relationships between the elements of the social bond and adolescent drug use. The study concluded that the variation in the elements appeared to account for the variance in deviant behavior. This was particularly true for peer pressure, which explained 58.0% of the variance of marijuana use.

Krohn and Massey (1980) sampled 3,000 adolescents to test the elements of the social bond on measures of deviance. They found that the elements of the bond are more predictive of less serious forms of deviance than they are of more serious forms. They also found that the commitment element held the strongest relationship with
deviant behavior. Belief and commitment elements were also found to be more strongly related for females than for males.

Commitment to Education

A commitment to education is viewed as a protective factor against adolescent alcohol and drug use (Kim, 1979; Krohn & Massey, 1980). Hawkins et al. (1992) discuss the idea of commitment to education as being an element of the social bond and a protective factor against drug use. The authors assert that strengthening that part of the bond relies heavily on teachers. Proactive classroom management, interactive teaching, and cooperative learning are needed, giving students a better, more meaningful experience. This, in turn, will foster the development of more enthusiasm and desire to increase their learning, which makes the students' commitment to school and excelling stronger, thereby protecting them from the temptation of drug use.

Gottfredson (1988) found that the more delinquent adolescents are apt to dislike school, be troublesome in school, have limited career objectives and are likely to drink, smoke, and use illegal drugs. He also argues that of the possible places where steps might be taken to reduce delinquent behavior, i.e., the family, the justice system, and the school—the school is the most promising.

Other studies also argue that commitment to education has an impact on drug and alcohol use. Friedman (1983) suggests that time spent on homework, and the perception of the relevance of coursework
are related to levels of drug use. Kelley and Balch (1971) state that variables such as how much students like school, are also related to adolescent drug use. Ghory and Sinclair (1987) conclude that those who view school as instrumental to achieving future goals tend to be less disengaged from school, which reveals more commitment to education and, therefore, less marginal behavior such as drug use. Johnston et al. (1993) also examined the relationship between commitment to education and adolescent drug use. They reported that college bound seniors had below average rates of illicit drug use. A study on the influence of the high school environment on student self-reported misbehavior was also done by DiPrete, Muller, and Schaeffer (1981). The authors concluded that students with strong commitment to educational goals are motivated to conform to school standards.

Drug Policy Enforcement in the Schools

Drug policy enforcement in the schools is an important factor in adolescent drug use. Moskowitz and Jones (1988) concluded in their study of 728 schools that the most common explanation provided by school administrators for a decreasing student drug problem was change in the school's discipline policy or increased enforcement of existing policy. They argue that, although few students are apprehended at school for alcohol or other drug involvement, the impact of these offenses on a school's climate and functioning may be highly consequential.
Goodstat (1989) argues that school drug policies alone cannot be effective as a deterrent for students to resist alcohol and other drugs. He asserts that a joint development must be created between drug education and drug policy which will serve as a more effective deterrent. However, Goodstat admits that objective evidence detailing the impact of school drug policy enforcement is almost nonexistent. He states that further systematic research is definitely needed to ascertain the effectiveness of school-based drug enforcement policies.

Durkheim's reasoning would suggest that school discipline fulfills a role which extends beyond merely maintaining order in the classroom. That it moves into the realm of values transmission was asserted by Cohen and Thomas (1984). The assertion is that students may learn values more easily from the way in which various misdemeanors (such as drinking and smoking) are punished than from written pronouncements. The authors conclude that values are transmitted through the disciplinary system of the school, and this in turn influences the school climate.

Lordon (1983) suggests that establishing a climate for effective school discipline involves both consistency and committed staff. The most serious detriment to a good school discipline system includes, "inconsistency in policies and approaches to deal with discipline problems, in expectations by teachers, in interpretation of rules and policies, and in types of punishment used" (p. 59). Teachers must be committed to enforcing school policy. This, of
course, heavily relies on supervision of students during non-instructional periods when delinquent behavior could occur. These periods include bus loadings and unloadings, when students are approaching and leaving the school premises, during recesses, and at other times when students are on the school grounds, but not in class.

Jensen, Erickson, and Gibbs (1978) focused on the perceived risk of punishment and self-reported delinquency. This study of six Arizona high schools produced results consistent with deterrence doctrine: the relation is inverse regardless of the location of the school (metropolitan or small town), type of delinquency, or the kind of measure of perceived risk. It is interesting to note that measures of perceived personal risk (the individual's perception of his or her own risk) provide more consistent support of the deterrence doctrine than measures of perceived aggregate risk (perception of the risk for all juveniles in the same community).

Grasmich and Bryjak (1980) question previous perceptual studies of the deterrence assertion that perceived certainty of punishment (but not perceived severity of punishment) is inversely related to involvement in illegal behavior. Their results, from a sample of 400 residents in a southwest metropolitan community, supports the hypothesis that perceived severity, at relatively high levels of perceived certainty, has a significant effect. In other words, people are more influenced by their perceptions of the certainty of punishment if they believe the penalty would be severe than if they
believe the penalty would be trivial.

Moskowitz (1983) compared school policies among a large number of schools with varying reports of alcohol and other drug problems among students. The schools that reported fewer student alcohol and other drug problems had several characteristics in common. Most faculty rigorously enforced their school's alcohol and drug policy, smoking by students at school was prohibited, and fewer alcohol retail outlets were located within a half mile. Thus, Moskowitz concluded that school enforcement of school drug policy plays an important role in reducing adolescent drug use.

Peer Pressure

Peer pressure appears to have the most important direct influence on adolescent alcohol and other drug use. Oetting and Beauvais (1987) claim that when drugs are actually used, it is almost always within a peer context. "Peers initiate the youth into drugs. Peers help provide drugs. Peers talk with each other about drugs and model drug using behaviors for each other and in doing so shape attitudes about drugs and drug using behaviors" (p. 137).

Brown (1982) did a retrospective analysis by investigating the assessments of 297 college undergraduates concerning how much pressure peers exerted in numerous areas of high school life. The results showed that perceptions of peer pressure were significantly associated with use of alcohol and other drugs, dating attitudes, and sexual activity.
Pruitt, Kingery, Mirzaee, et al. (1991) examined peer influence and drug use among rural adolescents. One thousand senior high school students in 23 small Texas communities were surveyed to determine their perceptions of the number of their friends who use drugs, the amount of information they received about drugs from their friends, and the connection between those perceptions and drug use. The main finding was that students who perceived a higher degree of drug use among their friends and who received more information about drug use from their friends tended to use drugs more frequently. Therefore, the authors assert that peer pressure is related to drug abuse, even in rural areas.

Alberts, Hecht, Miller-Rassulo, & Krizek (1992) research provides an analysis of the impact of peer pressure on the association between drug offers and resistance, as well as the differences between drug and alcohol offers. Sixty-nine high school student narrative accounts of successful and unsuccessful efforts to resist drugs were analyzed. Results indicated that peer pressure was applied in approximately 70% of the offers, usually after the first offers had been refused. In addition it was determined that simple offers were more likely with alcohol, while other drug offers were more likely to be persuasive and involve peer pressure during the initial offer.

The hypothesis that peer interactions predict a high degree of similarity in drug use among friends was tested by Dinges and Oetting (1993). Their study consisted of a survey of a large sample of
junior and senior high school students. Their findings showed that a youth who used a specific drug in the last thirty days almost invariably has friends who use those same drugs, but is much less likely to have friends who use other drugs or no drugs at all.

Selnow and Crano (1986) took a different approach to adolescent peer pressure. They argued that appropriate kinds of peer interactions may also work favorably to reduce drug usage. The study examined two kinds of peer affiliations—formal and informal group participation—and their relationship with use of alcohol and drugs. Their findings suggest that increased substance use is related to informal group affiliation, while reduced substance use related to formal group membership.

Finally, Burkett and Jensen (1975) examined peer influence along with the belief in the certainty of apprehension and their impact on self-reported drug use. Their main findings suggest that involvement with other users is important and that use is unlikely given the absence of group supports.

Drug Subcultures

Another part of the school atmosphere that has been investigated in relation to drug use is that of high school subcultures. Coleman (1961) argues that a child is cut off from the rest of society, so this child's interactions are forced between those of its own age group, developing a small society. He asserts that due to these interactions separate adolescent subcultures emerge, and that
these subcultures have values quite different from the adults in society.

Other researchers of adolescent subcultures agree with Coleman to a degree. Johnson claims that "like any society, the society of high school is made up of distinct groups or subcultures, each with its own values, mores, taboos, rites of initiation, even uniforms" (1981, p. 61). He distinguishes among three basic subcultures; the academic type, the delinquents, and the social type. Johnson asserts that typically the delinquent subculture is involved with drugs and alcohol and that all of the subcultures exert a strong influence on the values of their members. However, by the senior year in high school, the hold of the subcultures on the adolescents begins to weaken. The students become more secure in their egos as they grow older (Johnson, 1981). Therefore, the subcultures do exist and are particularly powerful during the early years of high school, but that influence subsides during the final stages of secondary education.

Another researcher also acknowledges that subcultures do exist in high school, but that they have a limited impact on adolescent drug usage, particularly alcohol use. Barnes (1981) collected data from 1,048 junior and senior high school students and 580 adults, both from the same rural/semi-suburban New York state community. She found that "the development of adolescent alcohol use does not appear to be so much a function of unique adolescent subcultural phenomena as it is a reflection of the norms and behaviors in the
larger adult society" (Barnes, 1981, p. 227). Thus, subcultures do exist in high schools and do exert an influence upon members' general values and behaviors, but when alcohol and drugs are examined the subculture impact may be limited.

Hirschi (1969) argues that the social bond theory asks the question, "why don't they do it?" as opposed to "why do they do it?" He states that human's basic impulses motivates them to become involved in crime and delinquency unless there is some reason for them to refrain from criminal behavior. Previous research concludes that commitment to education, perception of drug policy enforcement in schools, and peer pressure are factors related to adolescent drug use. Therefore, this social bond theory provides the framework to test the idea that senior high school students' degree of bonding to society, within dimensions of the school climate, will have an impact on the delinquent behavior of substance use.
CHAPTER III

METHODS

Data Sources

The data used in this survey were collected by the Michigan Alcohol and Other Drugs School Survey (MAOD), which is conducted through the Kercher Center for Social Research at Western Michigan University. This survey collects data from populations of eighth, tenth, and twelfth grade public school students in the state of Michigan, and involves their knowledge, use, and perceptions related to alcohol and other drugs. The MAOD project, which has been in existence since the 1989-1990 school year, has surveyed approximately 75% of Michigan public school districts. These 334,682 students constitute the total available MAOD data set.

This study uses a segment of the 1993-1994 MAOD data set. It uses data aggregated from individual responses to the level of the school district. In this manner, the school district is the unit of analysis, which is consistent with the focus of this study upon the school climate. In this way, the group atmosphere is investigated as opposed to sole individual reports of experience. Because these school districts were not randomly chosen, but rather selected due to the availability of their data, this study is not representative of the districts in Michigan, nor are the results generalizable. The results only describe the districts which were included in this
The data which were chosen for this study included 141 Michigan public school districts, including 17,211 high school seniors. Most of the districts (52.0%) were from counties located in metropolitan areas. The data were mostly collected from districts in the lower peninsula of Michigan, with the greatest clustering (26.0%) in the southeastern region of the state.

In order to insure that the most accurate self-reported data are obtained, several research methods are routinely followed during data collection. First, trained research associates are sent to school districts to handle survey administration. By having research associates perform administration, as opposed to school personnel, students have the opportunity to answer questionnaires without fear that the raw data will be handled by their teachers or principal. Secondly, the survey is administered in an environment that is conducive to honest responses. This is done by spacing students in such a way that they do not crowd each other, thereby reducing the degree to which the students feel afraid that other students will see their responses. Thirdly, the SPSS program that analyzes the collected data has built-in mechanisms that detect unbelievable responses. Questionnaires with three or more unbelievable answers are not included in analysis of the school district. These measures assist in maintaining the high validity of the MAOD self-reported data.

For crosstabulation analyses, the independent and dependent
variables were divided into high and low categories, based upon the midpoint from each variable's frequency distribution. By way of illustration, for marijuana use, percentages below 36.0 were considered low, any percent above was considered to be high marijuana usage. For cigarette and alcohol use the cutting points were 35.6 and 81.8, respectively.

The variables involving peer pressure to use drugs were similarly categorized. Peer pressure to use marijuana was considered low if percentages were below 22.0%, any districts with greater pressure to use marijuana were placed in the high category. For peer pressure to smoke cigarettes and use alcohol, the cutting points were 16.0% and 42.0%, respectively.

The variables involving perception of school drug policy enforcement were also divided into high and low categories. Low perception of illegal drug policy enforcement included all districts with percentages below 92.0, while high perceptions contained all remaining districts. In a similar manner, districts with low and high perceptions of cigarette policy enforcement were divided by percentages either below or above 52.0, while for perception of alcohol policy enforcement the cutting point was 83.0%.

Finally, commitment to education was also divided into high and low categories. Using 62.0% of the seniors planning to attend college as a cutting point.
Operationalization of Variables/Independent Variables

Peer Pressure

It is believed that students in school climates with strong attachment will have stronger affection and respect for their peers. In this way, the attachment element of the social bond will be investigated by examining the level of peer pressure among twelfth grade students. Peer pressure, for the purposes of this study, will be viewed as embodying the pressures and inducements perceived by twelfth grade students to use alcohol and other drugs. Thus, the amount of peer pressure, representing the amount of peer affection and respect in a school district, is expected to have an impact on the amount of student drug and alcohol use that is reported.

Three items on the MAOD questionnaire will be used to measure peer pressure. The survey asks, "How much pressure do you feel from your friends and schoolmates to (1) smoke cigarettes, (2) drink alcoholic beverages, and (3) use marijuana?" Possible responses were: "none," "a little," "some," or "a lot." To determine the percent of a district's seniors that felt any peer pressure to use the aforementioned drugs, the percent reporting "none" was subtracted from 100 for each of the drugs. These three percentages are reported for each school district, one representing the district's seniors who felt peer pressure to use cigarettes, the second to use alcohol, and the third to use marijuana.
Enforcement of School Drug Policies

Student perception of drug policy enforcement in school allows for the testing of the belief element of the social bond: students' belief that substance use policies will be enforced affects their self-reported use of alcohol and other drugs. A school drug policy is a policy that defines unacceptable and illegal behaviors and clearly delineates how the school will respond (Michigan Department of Education, 1991). In this study, enforcement of school drug policy is operationalized as the perception of twelfth grade students that the school will respond in some clearly delineated way if a student is caught using or possessing a substance.

An item on the MAOD survey asks, "If a student is caught doing each of the following things on school property by a teacher, how likely is it that something will be done (like punishment, notification of parents, referral to treatment, etc)?" This item is asked in reference to smoking cigarettes, using or possessing alcohol, and using or possessing an illegal drug. Possible responses were: "not at all likely," "somewhat likely," or "very likely." The category of "very likely" was chosen for analysis in order to capture the percent of a school district's seniors that felt the strongest that policy would be enforced. Three percentages are reported for each school district, one representing the district's seniors who perceive that the school policy will very likely be enforced for involvement with alcohol, the second for involvement with cigarettes, and a third for involvement with illegal drugs.
Commitment to Education

The concept behind the commitment element of the social bond will be tested involving the college bound rate of the high school seniors. Twelfth grade students declaring themselves as college bound shows a commitment to a conventional goal, which in this case is higher education. Commitment to education will be defined as twelfth grade students that report themselves as being college bound (Ghory & Sinclair, 1987). This variable allows for the examination of the impact student striving toward this type of goal would have on self-reported alcohol and other drug use.

Two items of the MAOD survey ask, "How likely is it that you will do each of the following things after high school? Graduate from a two year college and graduate from a four year college." Possible responses were: "definitely won't," "probably won't," "probably will," and "definitely will." All of a district's seniors indicating that they probably or definitely will attend either a two or four year college were combined into one average percent. This was done to simplify capturing a district's seniors reporting any tendency towards higher education, be it probable or definite. This tendency signifies commitment to education, whether it is at a small two year or large four year college. Thus, the MAOD data set records one percentage representing a school district's seniors that indicated they "probably will" or "definitely will" attend college.
Dependent Variables

In the MAOD data set, each school district reported three separate percentages representing the percent of their seniors' using (1) alcohol, (2) marijuana, and (3) cigarette use. One percentage is recorded for the district's seniors who reported using alcohol in the past year. One percentage is recorded for the district's seniors who reported using marijuana in the past year. One percentage is recorded for the district's seniors who reported using cigarettes in the past month for each school district. Past year percentages, as opposed to past month, were chosen in order to balance out expected increases in alcohol and marijuana use, such as right after new year's or spring break. Due to the MAOD survey construction, (which does not include a past year cigarette use question) past month cigarette use percentages were used, which is not as sensitive to particular seasons of the year.

Data Analysis

Four research hypotheses were developed based on a review of the literature, which examine the relationships among the independent and dependent variables involved in this thesis.

1. School districts with higher student perceptions of peer pressure will have higher student reports of drug use.
2. School districts with higher rates of college bound students will have lower student reports of drug use.
3. School districts with higher student perceptions of drug
policy enforcement in school will have lower student reports of drug use.

4. School districts with higher rates of college bound students, higher student perceptions of drug policy enforcement in school, and lower student perceptions of peer pressure will have lower reports of drug use.

Limitations of the Study

One limitation of this thesis is that self-reported data are utilized. It cannot be known whether or not the school districts' seniors were completely truthful when completing the survey. However, certain precautions were taken to place students in an atmosphere conducive to honest responses. Johnston et al. (1993) concludes that senior self-reported drug questionnaires produce largely valid data. He found that the data had a high degree of reliability, consistency, and construct validity. Therefore, as long as appropriate procedures are followed during survey administration, valid self-reported drug use data can be collected.

Another limitation involves the use of aggregated data. Due to the investigation's focus on the school climate, individual senior survey responses were aggregated to represent the drug use and related attitudes in a school district. Because the data are aggregated, drawing conclusions about high school seniors' attitudes toward and use of drugs may be somewhat questionable. This is akin to the "ecological fallacy" as described in the classic article by
Robinson (1950). However, although some accuracy may be lost in explaining senior drug use, it can be argued that the data are still largely valid due to the origins of the data set and the processes utilized in collecting it.

In addition, the inconsistent way that the several independent variables were measured is a limitation. Peer pressure to use marijuana, cigarettes, and alcohol combined the categories of "some," "a little," and "a lot." Commitment to education was determined by combining those that responded they "probably will" and "definitely will" go to college into one category. Those measures contrast with the perception of school drug policy enforcement, which includes only the category of "very likely." Thus, it could be artifactual that the impact of peer pressure to use drugs may appear stronger than the other independent variables.

This research also does not investigate specific drug subcultures within the high school environment. Research has shown that certain subcultures in the high school, such as the delinquent subculture (Johnson, 1981), could be more likely than others to engage in drug use. Although this is a very legitimate area of study concerning adolescent drug use, it is not examined in this thesis due to the subsiding influence these subcultures have over students as they reach the twelfth grade (Johnson, 1981). Other research has also concluded that where drugs and alcohol are concerned, the subcultures influence is reduced and the adult society's influence increases (Barnes, 1981).
CHAPTER IV

RESULTS

The main objective was to investigate the impact that dimensions of school climate exhibit upon twelfth grade drug use. In order to do this, social bond theory and elements of attachment, belief, and commitment were tested, which represent the cultural, social system, and milieu dimensions of school climate. In this study's testing of social bond theory, data involving peer pressure to use drugs, perception of school drug policy enforcement, and college bound rates, which represent the bond elements, were utilized in examining their relationship with drug use.

Previous research does indicate that peer pressure, perception of policy enforcement, and commitment to education all impact drug use. Peer pressure is often noted as being the strongest predictor of adolescent drug use (Brown, 1982; Oetting & Beauvais, 1987; Pruitt et al., 1991). Researchers have also linked commitment to education as a protective factor against drug use (Ghory & Sinclair, 1987; Gottfredson, 1987; Hawkins & Catalano, 1992; Kim, 1979). Deterrence studies have also revealed that perception of drug policy enforcement impacts drug use (Goodstat, 1989; Grasmick & Bryjak, 1980; Jensen et al., 1978; Lordon, 1983; Moskowitz & Jones, 1988). Therefore, these independent variables were selected to fit the school climate dimensions and social bond elements for investigation of their link.
with adolescent drug use.

School Climate Variables

/Peer Pressure to Use Drugs/

Peer pressure among seniors to use marijuana, alcohol, and cigarettes varied among the 141 school districts examined. The average pressure to use alcohol was the greatest (43.3%), followed by marijuana (21.8%) and cigarettes (17.1%). The minimum values for these variables also varied, with pressure to use marijuana and cigarettes being the lowest at 3.0% and 4.0%, respectively, and pressure to drink the largest with a minimum value of 13.0%. The maximum values of pressure to use alcohol, marijuana, and cigarettes reported by school districts were 75.0%, 69.0%, and 54.0%, respectively.

For pressure to use alcohol, marijuana and to smoke cigarettes, the distributions were all fairly normal. The standard deviations for peer pressure to use alcohol, marijuana, and cigarettes were also fairly close.

Perception of Drug Policy Enforcement Variables

The seniors' perception of school drug policy enforcement also varied among the 141 school districts examined. The averages for perception of illegal drug, alcohol, and cigarette policy enforcement were 91.8, 82.1, and 51.8. The minimum values for illegal drug and alcohol policy enforcement were fairly close (68.0% and 60.0%),
with cigarette policy enforcement being the least (15.0%). The maximum values for enforcement of illegal drugs and alcohol were again very similar (99.0% and 98.0%), with cigarette policy enforcement being the least again (82.0%).

Commitment to Education Variable

Commitment to education had an average of 59.8%. The minimum and maximum values of seniors planning to attend college reported by the school districts were 24.0% and 60.0%. The distribution was very close to normal.

Substance Usage Variables

Marijuana

The distribution of the dependent variable of reported past year marijuana usage was examined. All of the 141 valid school districts reported some marijuana usage among the twelfth graders. The minimum was 4.8% and the maximum was 69.7%. The average percentage of marijuana use for a school district was 35.8%. A kurtosis of .173 and -.356 skewness suggest that the distribution of marijuana is close to normal and slightly skewed toward smaller values. The standard deviation of 11.7 revealed that there is some variance from the mean among marijuana use reported. The percentage of twelfth graders who have used marijuana in the past year is actually 10.0% higher than the national twelfth grade data reported for marijuana use (Johnston, 1994).
Cigarettes

Regarding cigarette smoking, again, all of the 141 valid cases reported some cigarette usage in the past thirty days among the twelfth graders. The distribution yielded a minimum value of 9.4% and a maximum value of 78.0%. The average of cigarette smoking for all of the school districts was 36.1%. A kurtosis of 5.83 and 1.63 skewness implies that the distribution of cigarette use is also fairly close to normal and slightly skewed toward larger values. The standard deviation of 11.5 revealed that some variance existed from the mean among cigarette smoking seniors. In summary, the typical school district has about 36.0% of their seniors reporting cigarette use in the past month, which is about 6.0% higher than the national data reported for twelfth graders (Johnston, 1994).

Alcohol

With respect to the dependent variable of reported past year alcohol use, the minimum of 10.7% and a maximum of 96.0% produced the largest range among the drug use variables. A kurtosis of 20.6 and -2.98 skewness indicate that more cases create a "tail" in the distribution than normal, and is slightly skewed toward smaller values. The standard deviation of 9.34 reveals slightly less variation from the mean than was seen for marijuana and cigarettes. Then, in this population, the typical school district reported around 80.0% of their twelfth graders have used alcohol in the past year, which is slightly higher than the national senior data (76.0%) reported by
the Monitoring The Future Study (Johnston, 1994).

Peer Pressure and Drug Use

School districts' 12th graders perception of peer pressure to use drugs was examined with marijuana, cigarette, and alcohol use. Crosstabulation and chi-square bivariate analysis procedures were utilized to test the strength and significance of these relationships. Thus, these procedures test the attachment element of the social bond's impact upon self-reported drug use.

Table 1 reveals that marijuana usage within a school district increases as the level of peer pressure elevates. Of the districts that reported high peer pressure to use marijuana, 75.0% also reported high marijuana use. Similarly, the majority of districts that reported low peer pressure also reported low twelfth grader marijuana use (66.2%). Thus, bivariate analysis shows a relationship between peer pressure and marijuana.

The chi-square statistic was used to assess the relationship between marijuana and peer pressure. A chi-square value of 23.8 was obtained. A critical value of 10.82 with one degree of freedom at a .001 significance level led to the decision to reject the null hypothesis of independence. Marijuana usage is clearly related to levels of peer pressure in this population. Thus, hypothesis 1, that school districts with higher levels of peer pressure will have higher levels of reported marijuana use, is supported.

When peer pressure and cigarette use are examined, a few
expected patterns are revealed, as indicated in Table 2.

Table 1
The Impact of Peer Pressure on 12th Grade Marijuana Use

<table>
<thead>
<tr>
<th>Level of Peer Pressure to use Marijuana</th>
<th>Percents and (Frequencies) of School Districts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marijuana Use</td>
<td>Low</td>
</tr>
<tr>
<td>Low</td>
<td>66.2 (51)</td>
</tr>
<tr>
<td>High</td>
<td>33.8 (26)</td>
</tr>
<tr>
<td>TOTAL %</td>
<td>100</td>
</tr>
</tbody>
</table>

N = 141 School Districts

Table 2
The Impact of Peer Pressure on 12th Grade Cigarette Use

<table>
<thead>
<tr>
<th>Levels of Peer Pressure to Smoke Cigarettes</th>
<th>Percents and (Frequencies) of School Districts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cigarette Use</td>
<td>Low</td>
</tr>
<tr>
<td>Low</td>
<td>60.0 (45)</td>
</tr>
<tr>
<td>High</td>
<td>40.0 (30)</td>
</tr>
<tr>
<td>TOTAL %</td>
<td>100</td>
</tr>
</tbody>
</table>

N = 141 School Districts

Of the school districts that reported low cigarette use, 60.0% contained seniors which felt low peer pressure to smoke. The percentage of cigarette use increases as the level of peer pressure to smoke cigarettes increases. Results of the bivariate analysis does
show a relationship between peer pressure to use cigarettes and twelfth grade cigarette use.

The chi-square statistic was utilized to test the relationship between peer pressure to use cigarettes and reported cigarette smoking in the past month. A chi-square of 5.12 was obtained. A critical value of 3.84 with one degree of freedom at the .023 significance level led to the rejection of the null hypothesis of independence. The statistic reveals that hypothesis 1, that school districts with higher levels of peer pressure will have higher levels of reported cigarette use, is also supported.

Table 3 displays a fairly even distribution of values across the categories of the variables. The expected pattern of districts' alcohol use increasing as the level of peer pressure increases is not reflected in the data. Since this pattern is not consistently observed throughout the table indicates a weak association, if any, between the two variables. Thus, the bivariate analysis did not reveal a strong relationship between peer pressure to use alcohol and alcohol use.

The chi-square statistic was utilized to test the relationship between peer pressure to use alcohol and twelfth grade alcohol usage. The obtained value of chi-square was .851. A critical value of 1.07 with one degree of freedom at the .356 significance level lead to a decision to fail to reject the null hypothesis of independence. This leads to the conclusion that in this population, hypothesis 1, that school districts with higher peer pressure will
have higher alcohol use, is not supported.

Table 3
The Impact of Peer Pressure on 12th Grade Alcohol Use

<table>
<thead>
<tr>
<th>Level of Peer Pressure to use Alcohol</th>
<th>Percents and (Frequencies) of School Districts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol Use</td>
<td>Low (41)</td>
</tr>
<tr>
<td>Low</td>
<td>53.9</td>
</tr>
<tr>
<td>High</td>
<td>46.1 (35)</td>
</tr>
<tr>
<td>TOTAL %</td>
<td>100</td>
</tr>
</tbody>
</table>

N = 141 School Districts

Perception of School Drug Policy Enforcement and Drug Use

Perception of drug policy enforcement in the schools was examined with school districts' senior students marijuana, cigarette, and alcohol use. Crosstabulation and chi-square procedures were utilized to test the strength and significance of these relationships. Thus, these procedures test the belief element of the social bond's impact upon self-reported drug use.

It was expected that the school districts' marijuana usage will decrease as the perception of illegal drug school policy enforcement increases. Table 4 does not show this pattern consistently in the marijuana usage categories, but rather a fairly even distribution. Therefore, bivariate analysis of perceptions of illegal drug school policy enforcement and marijuana use does not reveal any
relationship.

Table 4

The Impact of Perception of Illegal Drug School Policy Enforcement on 12th Grade Marijuana Use

<table>
<thead>
<tr>
<th>Perception of Illegal Drug School Policy Enforcement</th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marijuana Use</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>46.4 (32)</td>
<td>48.6 (35)</td>
</tr>
<tr>
<td>High</td>
<td>53.6 (37)</td>
<td>51.4 (37)</td>
</tr>
<tr>
<td>TOTAL %</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

N = 141 School Districts

The chi-square statistic was utilized to confirm the independence observed between student perception of illegal drug school policy enforcement and marijuana use. A chi-square value of .070 was obtained. Due to the critical value of .148 with one degree of freedom at the .790 significance level, a decision was made to fail to reject the null hypothesis of independence. Therefore, hypothesis 2, that school districts with higher student perceptions of drug policy enforcement in school will have lower levels of marijuana use, is not supported.

Table 5 does not demonstrate any expected patterns of cigarette use decreasing as perception of policy enforcement increases. The percentages vary uniformly throughout the variable categories ranging from 34.0% to 37.0%, displaying no associations. Then, the
bivariate analysis did not reveal any relationship between a district's seniors perception of cigarette policy enforcement and cigarette use.

**Table 5**

The Impact of Student Perception of Cigarette School Policy Enforcement on 12th Grade Cigarette Smoking

<table>
<thead>
<tr>
<th>Perception of Cigarette Policy Enforcement</th>
<th>Percents and (Frequencies) of School Districts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cigarette Use</td>
<td>Low</td>
</tr>
<tr>
<td>Low</td>
<td>51.4  (37)</td>
</tr>
<tr>
<td>High</td>
<td>48.6  (35)</td>
</tr>
<tr>
<td>TOTAL %</td>
<td>100</td>
</tr>
</tbody>
</table>

N = 141 School Districts

The chi-square statistic was used to confirm the independence between cigarette use and perception of policy enforcement. A chi-square of .006 was obtained. A critical value of .016 with one degree of freedom at the .937 significance level led to the decision to fail to reject the null hypothesis of independence. Therefore, hypothesis 2, that school districts with higher student perceptions of school policy enforcement will have lower cigarette use, is not supported.

Table 6 does not demonstrate the expected pattern of level of alcohol use decreasing as perception of policy enforcement increases. That no relationship appears to exist between these var-
iables is observed due to the perception of policy enforcement percentages even distribution among the levels of alcohol use. Thus, bivariate analysis did not identify an association between perception of alcohol school policy enforcement and alcohol use among twelfth graders.

Table 6

The Impact of Student Perceptions of Alcohol School Policy Enforcement on 12th Grade Alcohol Use

<table>
<thead>
<tr>
<th>Perception of Alcohol Policy Enforcement</th>
<th>Low (Percents and Frequencies) of School Districts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol Use</td>
<td>Low</td>
</tr>
<tr>
<td>Low</td>
<td>56.2  (41)</td>
</tr>
<tr>
<td>High</td>
<td>43.8  (32)</td>
</tr>
<tr>
<td>TOTAL %</td>
<td>100</td>
</tr>
</tbody>
</table>

N = 141 School Districts

The chi-square statistic was utilized to confirm the independence between the variables of perception of alcohol policy enforcement and alcohol use. A chi-square of 2.04 was obtained. Due to a critical value of 2.70 with one degree of freedom at the .152 significance level, the null hypothesis was failed to be rejected. Therefore, hypothesis 2, that school districts with higher student perceptions of school drug policy enforcement will have lower levels of alcohol use, is not supported.
Commitment to Education

College bound rates, representing commitment to education, were examined with school districts' senior students marijuana, cigarette, and alcohol use. Crosstabulation and chi-square procedures were utilized to test the strength and significance of these relationships. Thus, these procedures test the commitment element of the social bond's impact upon self-reported drug use.

Although the largest percentage in Table 7, 56.5%, reveals that the majority of districts with low college bound rates have high marijuana usage, this observance suggests a very weak relationship, if any.

Table 7

The Impact of School District College Bound Rates on 12th Grade Marijuana Use

<table>
<thead>
<tr>
<th>Marijuana Use</th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>43.5 (30)</td>
<td>50.7 (36)</td>
</tr>
<tr>
<td>High</td>
<td>56.5 (39)</td>
<td>49.3 (35)</td>
</tr>
</tbody>
</table>

The cells of Table 7 do not show the levels of marijuana use significantly decreasing as the rate of college bound seniors increases. Thus, bivariate analysis did not reveal a substantial relationship.
between school districts' college bound rates and marijuana usage.

The chi-square statistic was used to test the relationship between college bound rates and reported marijuana use. A chi-square value of .733 was obtained. A critical value of 1.04 with one degree of freedom at a .391 significance level leads to a decision to fail to reject the null hypothesis of independence. Therefore, hypothesis 3, that school districts with higher commitment to education will have lower marijuana usage, is not supported.

Table 8 displays no consistent patterns of cigarette usage decreasing as college bound rates increase. Ranges of percentages in all categories were very evenly spread, varying from 34.0% to only 36.0% in the distribution. The bivariate analysis indicated that no relationship between school districts' college bound senior rates and cigarette smoking exists.

Table 8

The Impact of School District College Bound Rates on 12th Grade Cigarette Use

<table>
<thead>
<tr>
<th>College Bound Senior Rate</th>
<th>Percents and (Frequencies) of School Districts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cigarette Use</td>
<td>Low</td>
</tr>
<tr>
<td>Low</td>
<td>50.7 (35)</td>
</tr>
<tr>
<td>High</td>
<td>49.3 (34)</td>
</tr>
<tr>
<td>TOTAL %</td>
<td>100</td>
</tr>
</tbody>
</table>

N = 141 School Districts
The chi-square statistic was utilized in order to confirm the independence between college bound senior rates and cigarette smoking in this population. A chi-square of .000 was obtained. Due to a critical value of .000 with one degree of freedom at the .998 significance level a decision was made to fail to reject the null hypothesis of independence. Therefore, hypothesis 3, that school districts with higher commitment to education will have lower cigarette usage, is not supported.

The expectant pattern of alcohol use decreasing as college bound rates increased did not appear. Table 9 does not demonstrate an association due to the virtually uniform distribution of values across the categories of college bound rates and alcohol use. Again, the bivariate analysis did not identify an association between school districts' college bound rates and drug use.

Table 9

The Impact of School District College Bound Rates on 12th Grade Alcohol Use

<table>
<thead>
<tr>
<th>Alcohol Use</th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>50.7 (36)</td>
<td>49.3 (35)</td>
</tr>
<tr>
<td>High</td>
<td>49.3 (34)</td>
<td>50.7 (36)</td>
</tr>
<tr>
<td>TOTAL %</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

N = 141 School Districts
The chi-square statistic was used to confirm the independence observed in the distribution of the variables. A chi-square of .028 was obtained. A critical value of .064 with one degree of freedom at the .865 significance level led to the decision to fail to reject the null hypothesis of independence. Therefore, hypothesis 3, that school districts with higher commitment to education will have lower alcohol usage, is not supported.

Social Bond Elements and Drug Use

The combined impact of peer pressure, perception of drug policy enforcement in school, and college bound rates was examined with marijuana, cigarette, and alcohol use. Multiple regression and the F statistic were utilized to test the strength and significance of these relationships. In essence, the social bond's influence upon school districts' senior students self reported drug use is tested.

The stepwise regression of school climate variables upon twelfth grade marijuana use produced an R2 of .298. Results presented in Table 10 show that 30.0% of the variance in senior marijuana use can be explained by peer pressure, perception of policy enforcement, and college bound rates. In particular, peer pressure to use marijuana exhibits the greatest power, (.546) with p < .001, in predicting senior marijuana use. The other two variables were eliminated from the regression equation due to the minimal additional explained variance they offered regarding senior marijuana use. Therefore,
hypothesis 4, that school districts with lower peer pressure, higher student perception of school drug policy enforcement, and higher commitment to education will have lower levels of drug usage, is partially supported. Peer pressure exhibited the greatest impact on senior marijuana usage.

<table>
<thead>
<tr>
<th>Climate Dimensions</th>
<th>Standardized Beta Weights</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer pressure to use illegal drugs</td>
<td>.546*</td>
</tr>
<tr>
<td>Perception of illegal drug school policy enforcement</td>
<td>.131</td>
</tr>
<tr>
<td>College bound senior rate</td>
<td>.026</td>
</tr>
<tr>
<td>R2</td>
<td>.298</td>
</tr>
</tbody>
</table>

* p < .001

When the school climate dimensions were entered into a step-wise regression with twelfth grade cigarette smoking, the result was an R2 value of 17.0%. Table 11 displays findings indicating that perception of cigarette policy enforcement and college bound rates did not have much power in predicting cigarette use, and were essentially eliminated from the regression equation. Again, the climate dimension that yielded the greatest impact on cigarette use was peer pressure to smoke perceived by senior students, (.410) with a p < .001. Thus, again, hypothesis 4 is partially supported due to the
substantial beta weight of peer pressure, signifying an impact upon twelfth grade cigarette use.

Table 11

Predictive Power of School Climate Dimensions on 12th Grade Cigarette Smoking

<table>
<thead>
<tr>
<th>Climate Dimensions</th>
<th>Standardized Beta Weights</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer pressure to smoke cigarettes</td>
<td>.410*</td>
</tr>
<tr>
<td>Perception of school cigarette policy enforcement</td>
<td>.039</td>
</tr>
<tr>
<td>College bound senior rate</td>
<td>.168</td>
</tr>
<tr>
<td>R2</td>
<td>.168</td>
</tr>
</tbody>
</table>

* p < .001

Stepwise regression of the school climate dimensions upon alcohol use indicated very little predictive power upon senior alcohol use. Only 3.0% of the variance of alcohol use was explained by the climate variables (Table 12). Again, of these variables, perception of school alcohol policy enforcement and college bound rates were eliminated from the equation due to the minimal additional predictive power they provided to seniors' peer pressure to drink. Even this leading predictor displays weak strength with a beta weight of only .175, with p < .037. Hypothesis 4 is again partially supported, although weakly, in that peer pressure is the most substantial school climate dimension that impacts senior alcohol use. Therefore, hypothesis 4 holds true best with districts' senior marijuana
use, less with cigarette use, and least with alcohol use.

Table 12  
Predictive Power of School Climate Dimensions  
on 12th Grade Alcohol Use

<table>
<thead>
<tr>
<th>Climate Dimensions</th>
<th>Standardized Beta Weights</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer pressure to use alcohol</td>
<td>.175*</td>
</tr>
<tr>
<td>Perception of school alcohol policy enforcement</td>
<td>.023</td>
</tr>
<tr>
<td>College bound senior rate</td>
<td>.031</td>
</tr>
<tr>
<td>R2</td>
<td>.030</td>
</tr>
</tbody>
</table>

* p < .037
CHAPTER V

SUMMARY AND CONCLUSIONS

The purpose of this research was to examine the relationship between cultural, social system, and milieu dimensions of the school climate and senior high school students self-reported use of marijuana, cigarettes, and alcohol. The study is based in the social bond theory, which stresses the importance of an individual’s relational bond. Hirschi (1969) links social behavior to the quality of this bond, which includes the attachment, belief, and commitment an individual has with society. Therefore, research was based upon this idea that delinquent acts (drug use) occurs when this bond is weak or broken.

Based upon the literature a theoretical model was developed and analyzed. The independent variables of peer pressure, perception of school drug policy enforcement, and senior college bound rates represent the school climate dimensions and elements of the social bond. Using the 1993-1994 Michigan Alcohol And Other Drug School Survey twelfth grade data, four hypotheses were developed to examine the independent variables impact upon self-reported marijuana, cigarette, and alcohol use.

The first hypothesis developed, based upon the literature, stated that school districts with higher levels of perceived peer pressure will have higher levels of drug use. This was supported
when marijuana and cigarette use were examined as the dependent variables, but not alcohol. In analysis, the percentage of school districts reporting high marijuana use increased from 33.8% to 75.0% as the level of peer pressure to use marijuana increased. Likewise, levels of school districts reporting low levels of marijuana use decreased from 66.2% to 25.0% as peer pressure increased. Similar patterns were observed with senior cigarette smoking. However, analysis did not support this hypothesis when peer pressure and alcohol use were examined.

The second and third hypotheses were not supported after analysis. The second hypothesis, that school districts with higher student perception of school drug policy enforcement will have lower drug usage, was found to represent variables that were independent of one another in this population. Also, the third hypothesis, that school districts with higher commitment to education will have lower levels of drug use, proved to be false in this population.

School districts with lower levels of peer pressure, higher commitment to education, and higher perceptions of school drug policy enforcement will have lower drug usage, which was the fourth multivariate hypothesis, was partially supported. Stepwise regression found peer pressure to be the most powerful predictor of adolescent senior marijuana, cigarette, and alcohol use. This held true the strongest for marijuana use, producing a beta weight of .546 and explained 30.0% of the variance in twelfth grade marijuana use. Perception of school drug policy enforcement and college bound
rate variables were both eliminated from each regression equation.

This research appears to indicate that some aspects of legal and illegal drugs may be viewed differently by high school seniors. Because relationships between the independent variables and marijuana were usually stronger than those with alcohol and cigarettes, could indicate differing norms toward legal and illegal drug use. The relationships between the independent variables and alcohol was extremely weak when compared to their relationships with marijuana. For example, school districts had a mean student alcohol usage of 80.0% compared with marijuana's 35.8%. The mean usage of cigarettes (36.0%), however, was closer to that of marijuana use, though its tested relationships were statistically much weaker in every case. Due to the mixed signals emitted from society about alcohol and cigarettes, they may be viewed as more permissible and socially acceptable than marijuana. Thereby possibly explaining the weak impact of peer pressure, policy enforcement, and higher education goals have on legal drug use. Students may feel less inhibited to use legal drugs, such as alcohol and cigarettes, lessening the impact of deterrent or protective variables. In this way, the same student may feel more inhibited to use illegal drugs, such as marijuana, which may increase the impact of deterrent or protective variables, thereby accounting for the stronger statistical relationships observed.

The conclusion can be drawn from this population that peer pressure is a very strong predictor of adolescent drug use, partic-
cularly marijuana. This research supports the theory that the attachment element of the social bond influences an individual's social behavior. Therefore, this is an area within the cultural dimension of the school climate that school district administrators and educators can devote increased attention to in efforts to decrease twelfth grade drug use.


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